

THE LANGUAGES OF CENTRAL SIBERIA

INTRODUCTION AND OVERVIEW¹

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1. *Introduction*

The peoples of central Siberia – here defined as roughly the large watershed of the Yenisei river, and the adjacent easternmost Ob' watershed and westernmost Baikal watershed regions – constitute a highly varied and diverse group. This understanding of central Siberia encompasses the present-day administrative regions of Gorno-Altai, Tuva, Xakasia, Krasnoyarsk Kray, and Tomsk Oblast', as well as eastern Khanty-Mansi Autonomous Okrug and western parts of Irkutsk Oblast'. Gorno-Altai, Tuva, and Xakasia are quasi-autonomous republics within the Russian Federation. Central Siberia is an area of mountains and steppe land in the south giving way to the birch and larch forests and riverine lowlands and finally tundra in the north. Reindeer husbandry is practiced in the far northern regions, this yielding to subsistence fishing and hunting economies practiced in a wide central band, finally replaced by traditional economies based on pastoral nomadism in the steppes and highland regions in the south.

The far north of central Siberia in pre-Russian times was dominated by northern Samoyedic speakers, in particular, groups of Enets and Nganasan to the east on the Tajmyr peninsula. To their south in a roughly west to east trajectory, with lots of overlapping and intermarrying, etc. lived the eastern Khanty, Selkup, Ket and western Evenki groups, to their south lived other Yeniseic and a number of peripheral Turkic speaking peoples. In the southernmost regions were found the Southern Yeniseic, Sayan Samoyeds and a wide range of Altai-Sayan Turkic speaking groups. This is of course a simplified presentation of the facts. In fact, a complex mosaic of languages was spoken in the mountainous regions now occupied by the Shor language alone. This area shows evidence for Yeniseic, Samoyedic, and even Ob-Ugric populations in the pre-historical period, as well as Turkic ones. This is not

¹ Funding for this research was in part provided by IREX, the Wenner-Gren Foundation, and VolkswagenStiftung. This support is gratefully acknowledged.

necessarily atypical of central Siberia, and represents both historical periodicity reflecting successive populations as well as simultaneous inhabitation.

In the following sections, I offer an overview of, and introduction to, the indigenous languages of central Siberia. Section 1 contains an introduction to the languages and their speakers, a brief history of the study of the languages of central Siberia, and finally an introduction to the history of lexical contacts among the various central Siberian peoples. Section 2 discusses a range of topics in the phonology of the languages of concern, in particular, the system of vowels, the extent of the use of contrastive palatalization of consonants, phonotactics, and finally a discussion of a range of morphophonological processes, including stem and affix alternations and vowel harmony. Section 3 addresses the nominal system, in particular the inventory of, and common oppositions within, the case system, some comments on numerals, and finally a brief presentation on the use of relational/auxiliary nouns. Section 4 presents some of the common derivational and inflectional *Aktionsart* and modal categories found in the verbal systems of the indigenous languages of central Siberia, and is followed by a discussion of object-indexing constructions in them. Section 5 presents a brief typology of the syntax of central Siberian languages, including the presence or absence of case concord within noun phrases, negative verbal constructions, case marked clausal subordination and related phenomena, and finally the system and structure of auxiliary verb constructions in the languages of the region.

The languages of central Siberia have undergone centuries of interaction and common development, and not surprisingly, share a number of structural features, regardless of their genetic affiliation. That said, it is still for the most part clear what is characteristically Samoyedic, Turkic, or Yeniseic. For example, Yeniseic (at least Northern Yeniseic) languages have inflectional prefixes, ablaut and tonal alternation. Samoyedic languages exhibit a large range of morphophonologically conditioned alternations of stems and affixes. Turkic languages generally have extensive vowel harmony and/or consonantal assimilation and no non-reduplicative prefixes, and comparatively little morphophonological stem alternation.

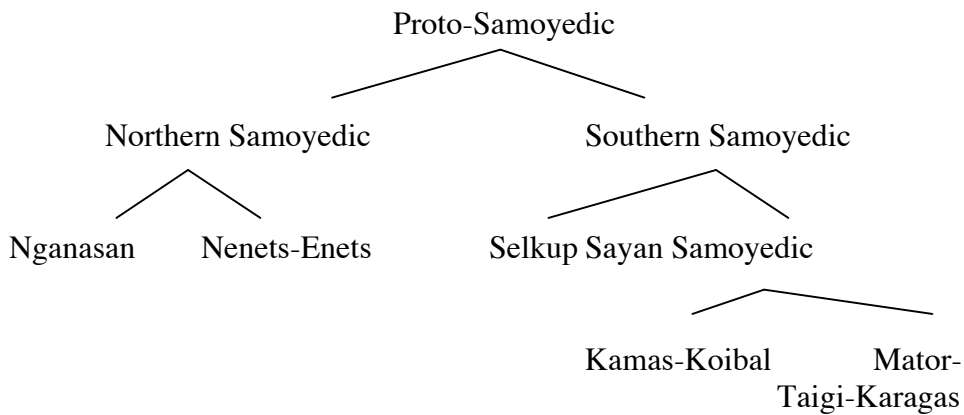
1.1 *Languages and Language Families, Demographics*

The languages of central Siberia belong to at least five valid and distinct genetic units, namely Samoyedic, Ob-Ugric, Yeniseic, Tungusic, and Turkic. The first two are conventionally united under the Uralic language family tree, but even this long established family is debated by specialists, while the still more controversial Altaic family which unites Tungusic and Turkic has generated more than its share of heated exchange. In the present work, these

contentious and, in my opinion, presently unresolvable issues are primarily ignored.

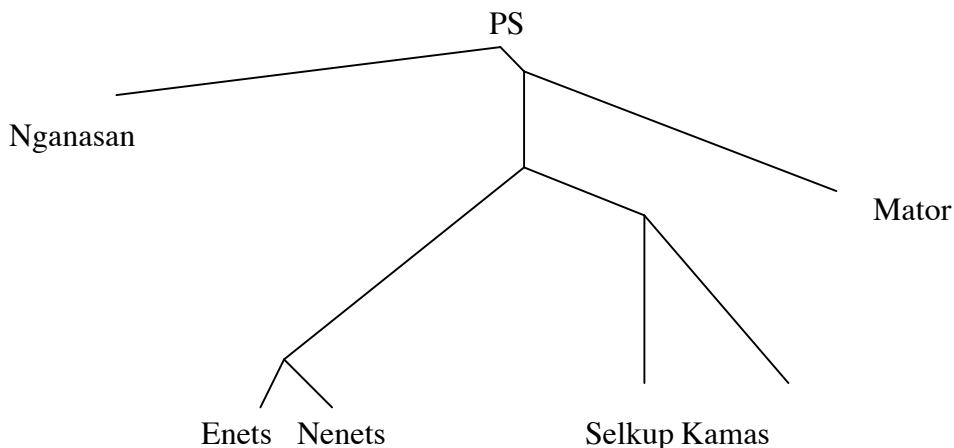
Although no specialists dispute the genetic unity of the attested Samoyedic languages, there is no one opinion about the internal diversification of the Samoyedic language family. There are various schools of thought in this regard. The traditional view isolates a primary split between Northern Samoyedic in opposition to a united Southern and Sayan Samoyedic (Hajdú 1988, Mikola 1988).

(1) Standard View of Samoyedic



A recent proposal by Janhunen (1998) offers a radically revised tree of the Samoyedic language family, based on a number of criteria, both phonological and morpholexical, e.g. reflexes of Proto-Samoyedic **k* and **s*.

(2) An alternative view of Samoyedic



This suggests that the northern and southeastern peripheral languages Nganasan and Mator split off early from the core-Samoyedic base which in turn differentiated into a ‘southern’ branch, at a relatively early period diversifying into Selkup and Kamas-Koibal, and a long undifferentiated ‘northern’ group consisting of Nenets and Enets.

Some of the evidence used by Janhunen to support this revision includes the fact that only Nganasan shows any kind of [±back] vowel harmony, though admittedly this is perhaps a secondary development under Dolgan influence, as this was not even followed in Proto-Samoyedic stem forms, given the standard reconstructions (Janhunen 1998:462), e.g. PSam **kalä* “fish” < Proto-Uralic **kala*. Some evidence of rounding harmony is also attested in Nganasan lexemes, e.g. from Proto-Samoyedic **sira* “snow” (cf. Nenets *sira*) the following Nganasan forms are found (Janhunen 1998:467) *siru* > *sirü* > *siirü*, in the 18th, 19th, and 20th centuries, respectively. The robust presence of Round harmony in Dolgan may have played some role in the development of this in 20th century Nganasan. Note that Kamas shows a different but probably similarly contact-induced use of rounding harmony; see 2.4 below.

Among the features attributed to the Proto-Samoyedic level by Janhunen (1998:462) is the four-way nasal contrast of *m/n/ñ/ŋ* so common to the indigenous languages of Siberia (Anderson 2003a/b) or the presence of an elaborate case system, including among other features, dative, locative, ablative, and most importantly from a Siberian areal perspective, a prolative case as well (Janhunen 1998:469), in addition to dual number in the nominal system.

Starting in the far north of central Siberia, indeed the farthest north of anyone in Eurasia originally, the Nganasan traditionally nomadized in the tundra of the Taimyr. There are two main Nganasan varieties, Avam spoken by three-quarters of the Nganasan and the (at least in the east) strongly Dolganized Vadey Nganasan. Both are spoken in the village of Volochanka and the town of Khatanga. Most now live south of their traditional territory; only several dozen families still nomadize in the original Taimyr territory (Janurik 1985:292).

Traditional bilingualism has been in Dolgan, among whom all Nganasan now live, and Enets. For example, in the Vadey speaking village of Novaya most Nganasan speak Dolgan, but not vice versa (Helimski 1998:481) while the W. Taimyr (Pyasina) was an area of Enets-Nganasan bilingualism. There are only really very minor phonological and lexical differences among the Nganasan dialects.

Enets, a close linguistic relative of Nenets, is the most endangered of Samoyedic languages. There are two Enets dialects, usually variously called Bai or Forest and Mad[d]u ~ Somatu ~ Khantajka ~ Tundra. Both however

have been confusingly called Mangazeja and Karassin (Helimski 1985:303). All Enets speak Nenets and/or Russian, in part also Nganasan. Dialectal differences are mainly lexical and phonological. Forest Enets has some lexical items suggestive of Ket influence; cf. ‘s/he’ and ‘you’ below. Note that Tundra Enets was spoken in Pura, Gol’chikha, Malaja Kheta, and Dudinka, Forest Enets in Dudinka and Karasino, where Selkup and Ket were also spoken (Janurik 1985:292).

(3) Forest Enets: Tundra Enets correspondences (Künnap 1999a:4-5; Helimski 1985:303-4)

<u>Forest/Bai</u>	<u>Tundra/Maddu</u>	<u>gloss</u>
<i>kadaʔa</i>	<i>karaʔa</i>	“grandmother”
<i>sira</i>	<i>silra</i>	“snow” ²
<i>mese</i>	<i>medʼe</i>	“wind”
<i>osa</i>	<i>udʼa</i>	“meat”
<i>eba</i>	<i>abun</i>	“head”
<i>baða</i>	<i>nau</i>	“word”
<i>obu</i>	<i>mīʔ</i>	“what”
<i>koddo-jʔ</i>	<i>koddo-bo</i>	“my sledge”
<i>ū</i>	<i>todʼi</i>	“you (sg)”
<i>bu(ʔ)</i>	<i>ñitoda</i>	“s/he”

The Selkup live in the taiga region between the Ob’ and Yenisei in what is perhaps the original Proto-Samoyed territory. There is Selkup-Khanty bilingualism in the Vakh-Vasjugan region, Selkup-Ket bilingualism in the Yeloguj basin, Selkup-Evenki bilingualism in Krasnoyarsk Kray and the Taz river basin, Selkup-Nenets bilingualism in the middle Taz basin among reindeer herders, and Selkup-Chulym and Selkup-Tatar bilingualism in central and southern Tomsk region. In the northeast of western Siberia and northwest of central Siberia, Selkup served as a lingua franca among the indigenous peoples of the region (Helimski 1998b:548-9) in the past. It thus could have served as a conduit for certain of the common central Siberian features described herein (e.g. prolative case).

The dialect situation of Selkup is particularly complicated. Janurik (1978) set the standard, followed by Katz (1979) and Künnap (1985).³ Indeed, as with

² Note that Donner apparently recorded *əira* for ‘snow’ (Helimski 1985:306).

³ For example, the transitional zone between the central and southern Sel’kup areas is particularly difficult to untangle. Evidence of the complexity of the Sel’kup dialect situation is that the speech in the village of Ivankino was placed into the Southern dialect by Janurik

Khanty and Mansi, while it is conventional to discuss dialects of Selkup, it is likely that there are at least three Selkup languages, perhaps four, each with its own range of dialects and sub-dialects. Oversimplifying somewhat, the following picture emerges: The three biggest divisions are frequently called the Northern or Taz Selkup, the Central or Tym-Narym dialect, and the Southern dialect, to which is sometimes added the so-called Ket' dialect spoken in northeastern Tomsk region. It is Northern Selkup that is best preserved. Nenets influence is found in the west, and Ket and Evenki influence in the central and eastern parts of the Northern Selkup territory. The Central Selkup have had a long interaction with local Khanty (and Ket) speakers, while the Southern Selkup show considerable lexical influence from local Turkic varieties. Indeed, even the native ethnonyms of the different Selkup groups vary considerably:

(4) Autonyms among Selkup varieties (Helimski 1998b:550)

<u>“Dialect”</u>	<u>Ethnonym</u> (<i>qup/m</i> = “man”)
Northern:	<i>šöl' qup</i>
Central:	<i>čuməl qup</i>
Southern:	<i>süsöqə(j) qum</i>
Chulym:	<i>t'uj qum</i>
Ket':	<i>süs(s)ü qum</i>

Mator, Taigi, and Karagas(-Soyot) are three local varieties of a Samoyedic language spoken originally in a large area across southern Krasnoyarsk Krai into western Irkutsk Oblast' along the eastern Sayan mountains. The Mator were in the west in the Tuba river basin, the Karagas in the East along the Birjus' the Uda and Kan, while the Taigi occupied the taiga in between. The language was replaced by Altai-Sayan Turkic varieties: Shor, Xakas, Altai, in the western part, Tuvan (Todzhu) in the central part and Tofa in the east, mostly by the late eighteenth century; some Karagas and the Soyot shifted to Buryat as well.

Dialectal differences were mostly minor, and sometimes different investigators recorded different forms for the same ‘dialect’ so the real situation is far from clear. Compare the following M[ator], T[aigi], and K[aragas] forms from M[iller], P[allas], and S[passkij] forms for “hair”.

(1978) but the Central zone by Katz (1979). As Künnap demonstrates, this transitional zone is itself characterized by a set of features, for example a shift of the prolativ to an ablative and the innovation of a secondary ablative form (Künnap 1985:311).

(5) “hair” in MTK (Khelimksij 1993b:374)

MP	<i>ibde</i>	TM	<i>öbdeṭä</i>	KM	<i>ööpte</i>
MM	<i>ipte</i>			KP	<i>obtida</i>
MS	<i>ipti ~ ipti</i>				

There appears to be various assimilations to voice of the cluster, perhaps originally the Karagas form in Pallas with *bt-* yielding via progressive or regressive voice assimilation *bd-* or *pt-*. The Taigi and Pallas Karagas words appear in a third singular possessive form. This may represent an active [in]alienability distinction in the language, whereby certain body parts and kin-terms always appear in a possessive form; such a system is found in both Xakas and Tofa; interestingly, these are two Altai-Sayan Turkic languages with known Samoyedic substrata.

The different dialects sometimes show different voice features in cognate words, word-initially. Thus voiced elements in Karagas correspond to voiceless ones in Taigi and Mator. However, as all the Sayan Samoyedic languages were attested at an advanced stage of language shift to and dominance by local Altai-Sayan Turkic languages, in this case Tofa and Xakas, two languages with a lexically defined alienable/inalienable distinction as a salient feature. Which influenced which is therefore impossible to identify (if this correspondence even reflects borrowing and not diffusion).

(6) Karagas : Mator correspondences (Khelimksij 1993b:374, 379)

KP	<i>dun</i>	MS	<i>teñ</i>		“tendon, sinew”
KM	<i>dürmjä</i>	MM:	<i>türmä</i>	TM: <i>türmjä</i>	“roe”

Stress could vary in cognate forms among the various dialects as well.

(7) Differential stress in MTK (Khelimksij 1993b:375)

TM	<i>ilinde</i>	KM	<i>illende</i>	KP	<i>ilindé</i> “alive”
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One noteworthy feature with respect to the southern part of the central Siberian region is loss of palatalized **ñ* in Mator. Compare the following forms for “horse”. Note that these all come from the same source so the opposition is likely to be accurately recorded.

(8) Mator *n*: Taigi/Karagas *ñ* (Khelimksij 1993b:379)

MM: *nunda*

TM: *ñüüdä*

KM: *ñunda* “horse”

Kamas and Koibal are dialects of a language belonging to a distinct branch of Samoyedic. Both are extinct, their speakers mostly having shifted to Xakas and/or Russian already by the mid-19th century. Koibal is very poorly attested, but Kamas actually survived in the form of a single speaker in the village of Abalakovo until the 1980’s; this speaker worked with Ago Künnap, and we now have a somewhat better understanding of the language than could be gleaned alone from Castrén’s and Donner and Joki’s materials.

Khanty is a complex of language/dialect continua spread over a large area in the central Ob’ region and adjacent areas. The only varieties of Khanty belonging to the Eastern Khanty dialect cluster that fall into Central Siberia, and are therefore of concern to the present study, are the dialects spoken along the Vakh-Vasyugan watershed. These show a range of features, some of which are areally typical in central Siberia, that distinguish this group from the Northern and Southern Khanty groups (e.g. expanded case systems, certain case contrasts, etc.).⁴

Yeniseic as a language family was first identified by von Klaproth. Today Yeniseic is represented only by the northernmost language, Ket, which is spoken mostly in the Southern Ket variety in such tiny villages as Sulomaj and Kellog in northern Krasnojarsk Kraj. Yugh (self-designation *kand’ey*) extinct since the late 1980s, is also known as Sym Ket. It was spoken from Yeniseisk to Vorogovo, Yarcevo and the Upper Ket’ river. The extinct Arin were north of Krasnojarsk, while the also now extinct Assan and Kott peoples occupied the territory south from Krasnojarsk, east of the Yenisei to the Kan[a]. Pumpokol was formerly spoken along the Upper Ket’ slightly to north and west of Arin.

Ket and Yugh form a clear subgroup as Northern Yeniseic. Kott and Assan straddle the dialect/language border, but also are a clear subgroup as Southern Yeniseic. The standard Yeniseic language taxonomy coordinates a third branch to these, linking Arin and Pumpokol (e.g. Verner 1997e). Kostjakov (1976) suggests rather that Pumpokol belongs with Northern Yeniseic because it appears to have had prefixal verb morphology, which the other three lack. Phonologically, Pumpokol is divergent in a number of ways so perhaps it should be considered its own subgroup (and by default Arin as well). A precise

⁴ Note that Southern Mansi actually shows more common structural features with Eastern Khanty than either does with their more close genetic units (viz. other Mansi, Khanty dialects). Many of these are central Siberian-looking features. An explanation of this awaits further research.

understanding of the structure of the *Stammbaum* of the Yeniseic languages has so far remained elusive, and may remain so forever given the paucity of data on the extinct Yeniseic languages.

All southern Yeniseic languages were extinct by the 18th century except Kott which survived into the 19th century in the village of Agul'skoe along the Agul river. The Arin and Pumpokol mainly shifted to Chulym Turkic, Xakas (or Russian), the Kott and Assan primarily shifted to Xakas (or Russian). Also, some Shor, Bachat Teleut and even Koibal (Samoyedic) groups probably originally spoke Yeniseic. Indeed Yeniseic languages must have been once spoken over an extensive area in western and central Siberia in Tomsk oblast or Xakasia, etc., or, more likely, the known Yeniseic language groups, and probably also some unknown ones, once occupied these areas. Evidence of this comes from the far-flung and extensive Yeniseic hydronyms, Keto-Yughic, Arinic, Kottic, Assanic and Pumpokolic; see also Werner (1996:3-4) for maps of the Yeniseic languages in historic times and the extent of Yeniseic hydronyms in central and western Siberia.

The name Kott is probably from Buryat *Koton*. Spoken in villages between the Kan[a] and Biryus along the Agul river, as well as on the left bank of the Middle Tom' river (Verner 1997c:195). The two attested dialects are conventionally called Kott A and Kott B. Assan is closely related to Kott and it is debated whether it is to be considered a separate language or not. Some differences between Assan and Kott (9i) and Kott A vs. Kott B (9ii) are offered below.

(9) Kott-Assan and Kott A-Kott B Correspondences (Werner 1997b/c:5ff)

i. <u>Kott</u>	<u>Assan</u>	<u>gloss</u>
<i>xončig</i>	<i>xondži</i>	“yesterday”
<i>f/pfun</i>	<i>pun</i>	“daughter”
<i>d'al</i>	<i>jali</i>	“child”
<i>xatu/uja</i>	<i>bari</i>	“he”
<i>ti</i>	<i>kolti/e</i>	“cap”
<i>djagat/d'a:taŋ</i>	<i>jahátan</i>	“I lie down, sleep”

ii. <u>Kott A</u>	<u>Kott B</u>	<u>gloss</u>
<i>šuli</i>	<i>šul'e/i</i>	“hook”
<i>fal</i>	<i>p^hal</i>	“hot”
<i>o:bal</i>	<i>o:pal</i>	“sin”
<i>ke:gär</i>	<i>ke:žär</i>	“hand”
<i>t^hempul</i>	<i>t^he:mpul</i>	“root”

Kott is known from Messerschmidt, Pallas, Müller, Fischer, Gmelin and Castrén. Verner (1990)/Werner (1997b) has synthesized the extant materials. Kott is more phonologically archaic than Ket (for example in the preservation of second syllables in a number of lexemes (*t^he:g/?är* “otter” vs. Ket *³ta:lʲ* Yugh *⁴ta^h:r*; Kott *ega/e:gä* “sun” Ket/Yugh *¹i*; but probably more innovative from Proto-Yeniseic structure in verb morphology (e.g. strict suffixal inflection). Due to the language’s poor attestation and early extinction, much of Kott structure will however remain forever little known.

The Tungusic language Evenki is spoken over a vast expanse in Siberia, and, hardly surprisingly, shows a range of dialects. The westernmost dialects of Evenki are spoken in central Siberia. As is the case with Eastern Khanty, these western Evenki varieties show a small number of features more typical of the central Siberian area than their more eastern Siberian sisters.

The self-designation of the Dolgan (the name of one of the clans, *Dulgan*) is *tia kihite* “forest man”. They are thought to have been originally Evenki speakers who shifted to a Yakut- (Sakha)-like Turkic variety; also Enets elements are present in Dolgan (Ubrjatova 1985:5-6) and from a more recent historical period, Nganasan elements as well. Many Dolgan in Noril’sk region speak Evenki.

While the southern part of central Siberia was originally home to Yeniseic and Samoyedic groups, various Turkic languages and Russian dominated the entire region by the 19th century. The Altai-Sayan mountain complex proved with its high valleys and forests and steppelands a fertile ground for the development of many different speech varieties including at least four different major Turkic varieties (as well as two known Samoyedic varieties, and at least one known Yeniseic group). Thus, the split between the Tuvan, Xakas, Altai, and Chulym sub-types is as great linguistically, if not greater in many respects, than those between Turkish, Uzbek and Tatar. This is in part obscured by a greater than millennial-old interaction between the various languages in the area. This interaction includes also the gradual and only recently completed process of linguistic ‘Turkicization’ alluded to above, which has yielded not only a shared substrate (albeit locally varied and/or originally distinct), but also numerous interactions between the Turkic languages themselves. This in turn means that a *Sprachbund*-like region of Turkic speech varieties has emerged, with languages on the periphery, e.g. Chulym or Tofa, showing fewer shared features than those in the core (Xakas, Altai, Tuvan). In addition, although the particular history of individual phenomena within the structure of a given Altai-Sayan Turkic language is known, much remains unclear, with substrate influence frequently invoked as an explanation, without attaining a sufficient level of supporting evidence in favor of this. For example, the curious and

characteristic series of low pitch vowels of Tofa and Tuvan (Anderson & Harrison 1999, in preparation) have been attributed to a number of factors, including both archaic and innovative internal causes, or either Yeniseic (Verner 1972) or Sayan Samoyedic (Schönig 1998) substrate influence. In the lexica of the modern Altai-Sayan Turkic complex, one finds many Mongolic loans, as well as a small number of Yeniseic and Samoyedic words; Russian loans as everywhere in the languages of the former Soviet Union dominate technical spheres and modern urban speech varieties.

The demographic or level of endangerment status of the central Siberian languages is as follows. There are at least ten known extinct languages (Yugh, Kott, Assan, Arin, Pumpokol, Mator, Taigi, Karagas, Koibal, Kamas). Two are probably extinct (Southern Selkup, Lower Chulym). Five are moribund (Enets, Shor, Tofa, Middle Chulym, Central Selkup). Eight are seriously endangered languages (Tuba, Quu (Chelkan), Qumandy, Teleut, Telengit, Altai, Nganasan, Ket, Eastern Khanty), and four are threatened (Western Evenki, Northern Selkup, Dolgan, Xakas). Only Tuvan is thriving.

The statistics from the 1989 census of the USSR are as follows. There are three entries in the table below: total number, total number of speakers, and rate of language retention. These data must not be necessarily taken at face value, but rather, should be interpreted with the following in mind: The total number represents members of the particular ethnicity; it is an issue of self-identification, and shifts according not only to strict, quantifiable demographic factors such as birth and death rates, etc., but rather is subject to dynamics of conscious manipulation or trends in the status of indigenous identity for mixed-ethnicity individuals, for example. The question has significantly greater impact in the post-Soviet period due the emergent debate on land use and mineral rights on traditional territories used in the economies of the indigenous minority groups. This is actually a particularly acute issue in central Siberia, but it resonates in many indigenous communities across Siberia; see Kasten (2002) for more on these issues.

Table 1: Census Data on Total Number, Total Speakers of central Siberian languages. Extracted from Anderson (1999)

	<u>Altai</u>	<u>Dolgan</u>	<u>Enets</u>	<u>Evenki</u>	<u>Ket</u>	<u>Nganasan</u>
Total Number (1989)	69,409	6,584	198	29,901	1,084	1,262!!
Total Speakers (1989)	59,084	5,532	92	9,075	529	1,052
Retention Rate (1989)	85.1%	84.0%	46.5%	30.4%	48.8%	83.0%
	<u>Selkup</u>	<u>Shor</u>	<u>Tofa</u>	<u>Tuvan</u>	<u>Xakas</u>	<u>Khanty</u>
Total Number (1989)	3,564	15,745	722	206,160	78,500	22,283
Total Speakers (1989)	1,701	9,051	309	203,208	60,168	13,542

Retention Rate (1989) 47.7% 57.5%! 42.8%! 98.6% 76.7% 60.8%

A number of details need to be added to the information given in Table 1.

- The Chulym have not been registered in the census since 1959. The Chulym were reclassified as Xakas in 1959, only in 1999 being officially again recognized in Tomsk Oblast' (Harrison & Anderson 2003).
- The Enets only began being re-classified as Enets in 1989. For most of the Soviet period; they were classified as Nenets.
- The Evenki and Khanty numbers include many that are not in central Siberia but rather eastern and western, respectively.

Also, the total number of speakers is always inflated because it answers the question "what is your mother tongue", the answer to which is again often a question of self-identity, not linguistic competence. Thus, many people will be registered as having the indigenous language as their mother tongue, when they in fact cannot speak their ancestral language.

To give an idea of how inflated or inaccurate the total speakers data are in Table 1, I offer some revised estimates of number of speakers from published sources and personal communication from recent fieldworkers (including myself).

- Nganasan does not have 1,000 speakers; the actual number appears to be fewer than 600 (Helinski 1998:480).
- Tofa, which according to the census has over 300 speakers, actually has fewer than 40.
- Enets has fewer than 50, not the nearly 100 reported.
- Shor may have less than 1,000 speakers remaining, not the 9,000 offered in the census.
- Altai surely has less than 25,000 total speakers in 6 disparate varieties.
- Chulym, which as mentioned above has not appeared since 1959 in official records, and has fewer than 50 remaining speakers (Harrison & Anderson 2003).
- Ket may have as few as 120 speakers (Krivonogov 1995c), not the 500 reported.

As alluded to above, given the discouraging endangerment situation of the majority of these languages, the chance of the vast majority surviving another 100 years is very small (Tuvan being the obvious exception in this regard).

1.2 *History of the Study*

In this section, I give a cursory overview of the history of the study of the languages of central Siberia and offer some of the major names and works associated with the study of these languages. It should be noted that this is neither an annotated nor a critical bibliography of the languages of central Siberia, but rather an overview of the types of studies that can be consulted by someone interested in pursuing research on these languages. Some groups receive longer or shorter treatments below, but this is not to imply that these languages have a larger or smaller body of literature. Thus for example, the Samoyedic, Ob-Ugric and Turkic languages have generated enormous bodies of literature, while Tungusic and Yeniseic have generated less but still a substantial amount of investigation nevertheless. A full history of the study of the languages of central Siberia, with appropriate annotations or commentary would necessitate a monograph length study in its own right, and remains outside the scope of this modest introduction.

The history of the study of Yeniseic languages follows much the same pattern as that of most other central Siberian languages; it will be therefore be presented in some detail to serve as an example. For a complete annotated bibliography of Yeniseic linguistics up to 2000, see Vajda (2001).

While strictly speaking, the first attestation of a Yeniseic language may go back to early Chinese sources (Ligeti 1950-1951; Vovin 2000), the first secure attestations of Yeniseic are to be found in various traveler's journals, diaries, histories, etc. from starting in the late 17th and early 18th century up through the first quarter of the 19th century. To this era belong the following lexical sources: Messerschmidt (1723) [von] Strahlenberg (1730), Miller (1750), Gmelin (1751-52), Fischer (1768), Pallas (1787-1789), von Klaproth (1823), also Middendorf (1847-1875). It will be seen that these sources are the starting point of the documentation of virtually every language of central Siberia. These wordlists have some grammatical information, mainly the plurals of nouns, first person singular forms of verbs, etc., but are mainly just wordlists rendered by a range of people, all of whom were not necessarily phonetically competent transcribers. This is to be expected, given among other facts that the unusual tonemic structure of Yeniseic languages was likely to have sounded very odd and difficult to deal with for someone without extensive training. To these early 18th and 19th century lexical materials belong the only data on the Arin, Assan, and Pumpokol languages (cf. Helimski 1986; Toporov 1967, 1968).

The first investigator of Yeniseic grammatical structure, as is generally the case with the indigenous languages of central Siberia, was the renowned Finnish linguist M. A. Castrén, whose posthumously published 1858 work is

the first description of Ket grammar. After Castrén, the next real investigator was another Finnish linguist, Kai Donner (1916-1920, 1930, 1931, 1955).

Donner in turn was followed by the renowned A. P. Dul'zon who is being honored in this volume and who published numerous works on Ket and other Yeniseic languages (e.g. 1959, 1961, 1964, 1966, 1968a, 1968b, 1969a, 1969b, 1970a, 1970b, 1970c, 1970d, 1971, 1972a, 1972b, Dul'zon and Verner 1978). The celebrated Siberianist E. A. Krejnovich investigated the puzzling and complex Ket language as well, contributing several important studies (1965a, 1965b, 1968a, 1968b, 1968c, 1969). Earlier Soviet works include those by Karger (1934, 1937).

Dul'zon's student G. K. Verner (H. K. Werner), the outstanding figure in Yeniseic linguistics, has done numerous valuable studies on the full range of topics in Ket and Yeniseic linguistics (Verner 1969, 1971a, 1971b, 1972, 1973, 1974, 1977, 1979a, 1979b, 1980, 1984, 1985, 1989, 1990a, 1990b, 1991, 1993a, 1993b, 1995, 1997a, 1997b, 1997c, 1997d; Werner 1972, 1974, 1994, 1995, 1996, 1997a, 1997b, 1997c, 1998, 2003). Werner discovered the areally and typologically unusual tonal system of Ket and Yugh (as well as Kott and the poorly attested extinct Yeniseic languages). He also oversaw the development of the Ket literary language and the creation of pedagogical materials for use in the instruction of Ket in Kellog (Verner 1989, 1993, 1995; Verner and Nikolaeva 1991, 1993).

A team headed by M. Vall and I. Kanakin proposed an alternative view of Ket structure to Verner's work in the Soviet/Russian tradition (Vall and Kanakin 1985, 1988, 1990). Other names commonly found in (mostly) Russian-language works associated with Ket in the last thirty-five to forty years include E. I. Belimov (1991), R. F. Denning (1973), R. S. Gajer (1981), N. M. Grishina (1977), T. A. Kabanova (1978), M. M. Kostjakov (1976, 1979, 1981a, 1981b), V. Minaeva (2003), L. G. Pavlenko (2003), G. T. Polenova (1986), V. A. Poljakov (1987, 2003), T. I. Porotova (1990), V. G. Shabaev (1987), V. E. Sherer (1978, 1984), L. G. Timonina (1978, 1979, 1983, 1985), and L. E. Vinogradova (1971).

In terms of particular specialists and subfields within Ket or Yeniseic linguistics, the following general comments can be made regarding the Soviet/Russian experts just enumerated. Dul'zon's, Verner's, and to a lesser extent Vall's work have covered the full range of Yeniseic grammar and structure. Among the specialists in phonetics and phonology Denning and B. Feer stand out. Nominal morphology (including adjectives) in Ket has been the focus of the research of Bibikova, Porotova, Sherer, Vinogradova and Zhivova. The complex and puzzling structure of the Ket verb has been the object of investigation of the following Ket specialists: Gajer, Kostjakov, Pavlenko, and Shabaev. The syntax of Ket has occupied the attention of Belimov, Grishina,

and Kabanova. The semantic structure of Ket has been explored in the work Poljakov. The history of Ket lexical contacts is examined in Timonina's work.

With regards to the influence of modern Ket-Russian bilingualism and non-lexical contacts in Ket, one must first and foremost mention Minaeva, whose work on the influence of Russian on Ket structure has begun the process of illuminating this complex, fascinating and increasingly common phenomenon which reflects the contemporary sociolinguistic reality of the majority of central Siberian languages (e.g. the use of clause-initial subordinators and negative operators in "until"/"before" clauses instead of case-marked verbs as was previously the case; cf. also similar phenomena in Xakas (Anderson 2004) and Selkup; see 5.3 below for further discussion).

To be sure, the Yeniseic linguistic specialists have examined a number of topics in the historical and comparative/typological analysis of the languages, e.g. Verner 1990a, Werner 1996, etc. or the work of Polenova and especially Kostjakov. In addition, various typologists, long-range comparativists and Indo-Europeanists such as S. Starostin (1982, 1995), G. Starostin (1995), V. V. Ivanov (1969, 1971, 1976) and V. N. Toporov (1964, 1967, 1968, 1971), have each contributed typological and historical-comparative studies on Ket.

Among latter-day researchers of Ket/Yeniseic, one must first mention the native Ket linguists Zoya Maksunova (2001; 2003) and G. Kh. Nikolaeva (1994, 1996, 1998).

Recent noteworthy sociolinguistic studies on Ket include V. Krivonogov (1995a, 1995b, 1997, 1998, 1999) and O. A. Kazakevich (1994).

Scholars from outside of the former Soviet Union that have had their attention on the Yeniseic languages include K. Bouda (1936, 1937a, 1937b, 1957, 1968, 1970, 1971, 1973, 1974, 1979), G. O. TAILLEUR (1958, 1964, 1994), E. Hamp (1960, 1979), K.H. Menges (1971, 1974) B. Comrie (1982, 2003), T. Ikeda (1995), G. D. S. Anderson (1993, 1996a, 1996b, 2003), M. Stachowski (1996) and S. Georg (2000). Besides Heinrich Werner, who continues to be extremely prolific since emigrating to Germany more than a decade ago, the American scholar Edward Vajda stands out as the current leading Ket specialist. His work offers a new analysis of Ket verb agreement and suggests possible external relations of the Yeniseic family as well (Vajda 1999, 2000, 2001a, 2001b, 2002, 2003; Vajda and Anderson 2003).

I will not give such a detailed presentation on the history of the study of the other genetic groups of central Siberian languages as was offered for Yeniseic. However, a few brief comments on the history of the study of the other language groups need to be made.

Data on Evenki, or Tungus as it was generally known prior to the founding of the USSR, comes from the earliest lexical materials on central Siberian languages, viz. Witsen (1692), as well as Messerschmidt, von Strahlenberg,

Miller, Fischer, and Pallas. Interestingly, Soviet studies of Evenki have always been dominated by women, beginning with G. M. Vasilevich who was the original leading Soviet specialist (e.g. Vasilevich (1940), (1948), (1958/9a), (1958/9b), and her contemporaries Bojtsova (1940), Gortsevskaja (1936), (1941)) followed by E. Lebedeva, and, in the subsequent generation, by O. Konstantinova, A. Romanova and A. Myreeva and in the current generation the tradition has been continued by Gorelova (1979), Brodskaja (1988) and Bulatova & Grenoble (1998). The largest treatment of Evenki grammar to date in English is Nedjalkov (1997). Evenki language data figures prominently in the work of pan-Tungusic specialists like V. Tsintsius, J. Benzing, and O. Sunik, etc (Xasanova 1986). Precise dialect data on the western Evenki dialects remains an object for future linguistic field expeditions.

The highly mobile Evenki, who have had interaction and bilingual relations with numerous other Siberian groups, and whose language reflects virtually all of the core pan-Siberian linguistic features, has been put forth as a likely conduit for the diffusion of the features across the Siberian macro-area, or at least within the eastern Siberian region (Anderson 2002, 2003d). Its role in the diffusion of features in central Siberia is more tenuous. As mentioned above, Selkup probably had an important role in the diffusion of certain features across the languages of the northern and central part of central Siberia.

The study of Khanty, also known as Ostyak, has a long and storied history. Spoken over a large area in western and central Siberia, only the Eastern varieties of Khanty are of concern here. These dialects have had an extensive and ever growing body of literature dedicated to them. As with most central Siberian languages, Castrén offers the first description of Khanty. Wolfgang Steinitz (1937, 1950; 1966-1989) was the leading Khanty language scholar of the 20th century. Other prominent figures in the 1960's through the 1990's in Khanty studies include Tereshkin (1961, 1966) in the USSR, Gulya (1966, 1970) and Honti (1977, 1981, 1998) in Hungary, and Veenker (1973) in the Germany. A team of young linguists, including A. Filchenko and N. Shalamova based out of the Siberian Language Laboratory at Tomsk State Pedagogical University are engaging in the documentation of the Eastern Khanty varieties presently.

The Samoyedic languages studied intensively for 150 years. Beginning with Castrén (1854; 1855; cf. also Castrén and Lehtisalo (1960)), whose excellent and groundbreaking work remain the standard reference materials to this day for all Samoyedologists, a wide range of pan-Samoyedic studies or materials have emerged over the past century. These include such works by Finnish, Hungarian, German, and Soviet scholars as Donner (1932), Hajdú (1963, 1988); Janhunen (1977a, 1977b, 1998), Katz (1975), Katschmann (1986), Mikola (1988), and Tereshchenko (1973).

The vast majority of research effort that has been devoted to Samoyedic languages has been directed toward Nenets, the most numerous and currently only thriving Northern Samoyedic ethnos and/or speech variety. Its close sister language Enets has not received a similar degree of academic attention, and as mentioned above, is near extinction. The Enets materials, though few in number provide a decent, but far from complete view of the structure of this moribund language. Grammatical, lexical, and text materials on Enets include Sorokina (1974a, 1974b, 1981a, 1981b), Tereshchenko (1966, 1993a); Künnap (1999a), Khelimskij (1985), Prokof'ev (1937), Glukhij (1981), Glukhij & Morev (1987), Glukhij and Sorokina (1985), Labanauskas (1987), Mikola (1967, 1984, 1989, 1995), Katschmann and Pusztay (1978). However, it should be said that there are indeed many holes in the corpus of data on Enets and much that will likely remain unknown, given the moribund state of the language. Fieldwork is urgently needed on the language to document what remains of both dialects and stands as an urgent priority for future field-based linguistic investigation in north-central Siberia.

Nganasan similarly has received less attention than its larger western sister language Nenets. While the number of studies is not small and contains such noteworthy works as Dul'zon (1974), Tereshchenko (1979, 1986, 1993b), Kovalenko (1986), Helimski (1998), Futaky (1983, 1990), Khelimskij (1994), Janhunen (1991), Katschmann (1986, 1990), Mikola (1986), and Prokof'ev (1937), there are still outstanding questions about a number of features of the language. Nganasan demographically speaking is in far better shape than Enets, and although it is still endangered, work could still be effectively carried out on Nganasan; this stands as a priority in future field research among languages of the region.

Selkup with its central position within central Siberia has generated by now a large body of specialist literature. The first grammatical materials of course are found in Castrén (1854). The early Soviet period was dominated by Prokof'ev, the leading Samoyedologist of the era; see Prokof'ev (1935, 1937); cf. also Prokof'eva (1966). The Tomsk research group originally started by Dul'zon has spawned a large number of works. Noteworthy names associated with the research on Selkup from this period includes Bekker (1965, 1974, 1978, 1980), Bykon'ja (1978), N. V. Denning (1969, 1979, 1980); Dul'zon (1966c), Dulson (1971, 1972); Kuz'mina (1969, 1974); Kuper (1985), Kuznetsova et al. (1980, 1993), Morev (1977a, 1977b, 1982); cf. also Toporov (1964); Künnap (1971, 1980, 1982, 1985). The next generation of Soviet/Russian specialists, whether at the Siberian Languages Laboratory in Tomsk, or other research centers include Kim (1980, 1983), Irikov (1988) and in particular Eugene Helimski/Evgenij Khelimskij whose many works on the language include Khelimskij (1982, [1983, 1985a, 1985b,] 1993a) and

Helimski (1998). The Hungarian school of specialists has yielded such important works as those by the following scholars Erdélyi (1969), Hajdú (1963, 1973, 1975), Janurik (1978, 1985) and Szabó (1967). Selkup has not enjoyed considerable specialized research among Finnish linguists after Castrén, although all Uralic/Samoyedic comparativists must and do consider Selkup data; Joki (1965) is a noteworthy exception to the general lack of specialist studies on Selkup among Finnish scholars. Janhunen, as the leading figure in Finnish comparative Samoyedology, has naturally included significant quantities of Selkup data in his numerous studies. The leading German specialist on Selkup has clearly been Hartmut Katz, whose many important works include Katz (1975-1988, 1979a, 1979b), etc.

The extinct Samoyedic languages of the Altai-Sayan region of south-central Siberia have naturally enjoyed significantly less attention than their still living cousins spoken further to the north. Kamas (-Koibal) has received the greater of the attention of the two Sayan Samoyedic languages. A range of early lexical sources contain Kamas data, e.g. Miller, Adelung, Fischer, Pallas, and von Klaproth. The first real investigator, as is commonly the pattern in central Siberia, was M. A. Castrén. Donner followed in the early 20th century, pronouncing the language basically dead. Joki studied the extensive loan strata in the Sayan Samoyedic languages (1952). To everyone's surprise two speakers were located in the early 1960's. The Estonian linguist Ago Künnap worked with these speakers and produced a range of works (Künnap 1971, 1977, 1978, 1984, 1999b; Kjunnap 1965, 1967a, 1967b, 1970, 1975, 1993a, 1993b). In the most recent period, the young German linguist Gerson Klumpf has worked over the available materials and has begun to produce a range of quality works and conference presentations. The Hungarian tradition is represented by Simoncsics (1998).

The other Sayan Samoyedic language Mator (or MTK) is known from three early lexical sources, two commonly referred to in this section Miller, Pallas and one special source, Spasskij (1806). Other sources include Joki (1952), Janhunen (1989); Helimski (1986, 1991, 1992-1993); and Khelimskij (1993b).

The study of the Turkic languages of Siberia has a long established tradition. The languages of southern central Siberia are known from the usual 18th and 19th century lexical sources, but Dolgan was not really known until the 20th century, and indeed the Soviet period. Names at various periods include V. Vasil'ev between 1900-1920, while in the period between the 1960's and 1990's, one must mention the names, E. Aksenova (et al. 1992), S. I. Androsova (1997), N. Bel'tjukova (1975), Z. Dem'janenko (1973, 1975a, 1975b), T. Kosheverova (1975), A. Petrov (1993) and especially E. Ubrjatova (1966, 1985). A. Popov stands out among early Soviet ethnographers studying

the Dolgan in the 1930's-1950's when little linguistic investigation was carried out.

As for the Altai-Sayan Turkic languages, the history of their study begins, like most other central Siberian languages, with Castrén, who studied (published posthumously in 1857) both a dialect of Xakas (Koibal, already shifted to Turkic by the mid 19th century) and an early variety of Tofa, Karagas (already also shifted to Turkic by this time). A missionary grammar of Altai appeared in 1869 and Verbitskij published an Altai-Shor-Russian dictionary in 1884. Radloff produced a number of quality works in the late 19th century (Radloff 1866, 1882, 1899), a period that also saw the development of the first indigenous Siberian scholar of Turkic languages, N. F. Katanov (1884, 1903, 1973). In the middle of the 20th century, most of those non-Russian Turkologists who have dealt with the languages of the southern Siberian Turks, e.g. K. H. Menges (1955, 1956, 1958, 1959) or O. Pritsak (1959) have had little or no actual contact with speakers of these languages.

The study of Altai-Sayan Turkic blossomed in the Soviet period. The larger languages (Xakas, Tuvan, Altai) were given literary forms, first in Cyrillic, then in Latin, and finally again in a Cyrillic-based orthography. This has generated a substantial body of scientific literature on these languages, both by indigenous intelligentsia and by other Soviet linguists. It is not the place here to elaborate on the rich investigative history most of these languages have witnessed in the last seventy-five years, but again a general overview will be given. Primarily non-indigenous Soviet scholars pioneered the study of the Altai-Sayan Turkic languages. Among the active scholars of the middle and late twentieth century must be included Baskakov (1973, 1978b, 1985), Karpov (1955 et seqq.), Dul'zon (1952 et seqq.), Ubrjatova, Cheremisina, Dmitrieva (1973, 1981), etc. Thus, the standard Soviet grammar for Xakas is Baskakov et al. (1975) and Iskhakov and Pal'mbakh (1961) for Tuvan. Baskakov has produced materials on each of three N. Altai varieties (1966, 1972, 1985).

The largest two languages, Xakas and Tuvan, have a considerable number of native-speaking competent linguists who have offered a number of quality studies on a range of linguistic topics in the analysis of their native tongue. These works are usually in Russian, but may also appear in the Turkic language as well. For Tuvan, the names of Bicheldej (e.g. 1980 a, 1980b, 1985), Mongush (1983), Sat (1966, 1973, 1983), or Martan-Ool (1986) come to mind. Among the Xakas speaking scholars that have distinguished themselves over the past 60 years are included M. I. Borgojakov (1960, 1962, 1964, 1974, 1975a/b, 1976a/b/c, 1981), O. V. Subrakova (1970, 1980, 1981, 1984, 1992), D. F. Patachakova (1962a/b, 1963, 1964, 1965a/b, 1974, 1975, 1977, 1980, 1984, 1987, 1992), and N. Domozhakov (1948, 1954, 1960). Shor-

speaking linguists include F. Chispijakova (1977, 1979, 1980) E. Chispijakov (1973, 1976, 1979, 1983) and especially N. P. Dyrenkova, who wrote in the 1930's and published posthumously mainly in the 1940's (she starved to death in the blockade of Leningrad), grammars for Altai, Xakas, and Tofa, as well as her native Shor (Dyrenkova 1941, 1940, 1948; 1963). Native Altai-speaking linguists include Toshchakova (1969) (+ Baskakov 1947), Tybykova (1966, 1989) and Kuchigasheva (1961). There have been no native-speaking Tofa or Chulym linguists to date.

A not inconsiderable body of literature exists on the Altai dialects and Shor, while Tofa and Chulym have enjoyed relatively little attention. Altai, as the language with the greatest number of speakers in this group naturally has the largest body of literature. It is traditional to distinguish the N. Altai dialects Tuba, Quu, Qumandy from the S. Altai dialects Altai, Teleut, and Telengit and I will follow this division in the discussion below.

As for N. Altai, the best sources are from Baskakov (1966, 1972, 1973, 1985). Other works of note include Kokorin (1980, 1986), Mandrova (1986), and Seljutina (1984, 1986a, 1986b). Some young researchers at Novosibirsk are apparently engaging in research among N. Altai speaking communities again. For S. Altai varieties (also known as Ojrot (not be to be confused with correctly named Mongolian language Ojrot/Ojrat) the following sources should be noted Baskakov (1958), Filistovich (1983), Fisakova (1977a, 1977b, 1980a, 1980b, 1984, 1986) Mashtalir (1985), and Mekur'ev (1976). Menges (1958), Rachmatullin (1928), and Simpson (1956) represent highlights in the non-Russian language literature of the twentieth century on S. Altai.

Among the works of note that have appeared on Shor in the Russian/Soviet tradition must be included Babushkin and Donidze (1966), Babushkin (1968), Borodkina (1977), Pospelova (1977, 1980), Sharlova (1986), Ubrjatova (1977), Amzorov (1992), Kurpeshko-Tannamasheva and Apon'kin (1993), Donidze (1997) and especially Nevskaja (1993, 2000). Pritsak (1959) is basically the only entrant in the non-Russian linguistic tradition apart from some recent work by Nevskaja. This latter scholar has recently produced a first-rate CD-ROM filled with Shor materials to serve as a basis for language revitalization programs, among other purposes.

The study of Tofa, like so many of its fellow central Siberian languages, began with Castrén (1857). V. I. Rassadin stands out as the leading expert on Tofa in the Russian language literature (1969, 1971, 1976, 1978, 1995, 1997).

With regards to Chulym Turkic, according to A. P. Dul'zon (1966:446), the first Chulym forms ever mentioned were a few toponyms in 17th century Russian documents. The first real lexical materials date to German explorer D. Messerschmidt's journal from the early 18th century, a significant portion of

which were published on pages 224-226 of J. Klaproth's *Asia Polyglotta*. Middle Chulym lexical materials also may be found in the *Sravnitel'nyj slovar' vsekh jazykov i narechij* commissioned by Catherine the Great and appearing in 1789 under the editorship of P. Pallas. Some 150 words and 60 expressions appeared in the anonymously authored *Jazyk chulymskikh inorodtsev* from the annals of the Tomsk governate of 1858. The Russian scholar V. V. Radloff visited the Chulym in 1863 and published an excerpt from an epic tale "Taska Mattyr" in *Obraztsy narodnoj literatury tjurkskikh plemen* (1868 vol. II, pp. 689-705). He added some brief phonological and lexical materials in his *Opyt slovarja tjurkskikh narechij* (1882-1899) and *Fonetika severo-tjurkskikh narechij* (1882). A tiny amount of Chulym data appears in N. F. Katanov's 1903 study of Tuvan and in S. E. Malov's 1909 field report. The scholar A. P. Dul'zon renewed the study of Chulym in the 1940's and 1950's, undertaking field expeditions to the Chulym, and producing a range of short works (cf. Dulson [Dul'zon] 1952, 1956, 1957, 1966, 1973). His student R. M. Biryukovich produced a variety of studies in the 1970's and 1980's (e.g. 1972, 1973, 1975, 1980a, 1980b, 1979a, 1979b, 1981, 1984, 1997, Serebrennikov and Biryukovich 1984).

In the post-Soviet period, there has been a veritable renaissance in the study of the Turkic languages of south central Siberia. The Altai-Sayan Language and Ethnography Project, headed by two young American scholars, D. Harrison and G. Anderson, have produced monograph- and article length-studies on a range of Siberian Turkic languages, notably Tuvan, Xakas, Tofa and Chulym. These include such works as Anderson (1998; 2001c, 2001d; 2003, 2004) Harrison & Anderson (2002, 2003); Anderson & Harrison (1999; 2001, 2002a, 2002b), etc.

1.3 *Lexical Contacts*

The lexical interactions among the indigenous languages of central Siberia form a complex mosaic. All families have basically borrowed from all others at some point or another. There are thus, different historical layers of loans from Turkic into early Samoyedic, into Northern Samoyedic languages, Selkup, Kamas and Mator (-Taigi-Karagas), as well as borrowings from various Samoyedic languages into both Altai-Sayan Turkic and Dolgan. Indeed, Yeniseic, Tungusic and Ob-Ugric languages likewise show borrowings from Turkic, which in turn shows a small number of loans (primarily local cultural or floral/faunal) from these varied Siberian linguistic sources. Tungusic in the form of Evenki has supplied loans to basically all other languages of central Siberia as well. Indeed, the Ob-Ugric and Samoyedic, as well as the Yeniseic languages find small to large numbers of their words amongst the lexical inventory of any number of other indigenous languages of central Siberia.

Important sources for data on borrowing among the languages of central Siberia include Paasonen (1902), Winkler (1913-1918, 1923), Toivonen (1944) Joki (1946, 1952, 1977), Steinitz (1959, 1962), Menges (1971, 1974), Fillipova (1973, 1976, 1980), Rassadin (1973), Dem'janenko (1973, 1975a) Futaky (1975, 1983, 1990), Timonina (1978, 1979, 1986), Sydykov (1983, 1984), Khelinskij (1985a), Katschmann (1986a), Oruzbaeva (1987), Mikola (1988), Janhunen (1989), Stachowski (1996), Abonodolo (1998), and Helinski (1998a, 1998b).

Loans from Russian, which constitute a significant layer belonging to several loan strata are quite widespread in all languages of central Siberia in their current state. These Russian-Siberian lexical contacts have been the object of numerous studies as well (e.g. Donner 1931, Tatarintsev 1974a; cf. also Anderson (1995b)).

In addition, there is a range of both *Wanderwörter*, such as *kanza*, *kanča*, *xinsi*, *ɣassa* etc. “pipe” of Chinese origin. In the northern part of the area Nenets and Komi influence is found, particularly in Selkup, Khanty, and Ket, particularly in the domain of reindeer husbandry (from Nenets); various cultural vocabulary items from Komi, some of them ultimately of distant (e.g. Iranian) origin have entered the lexica of various central Siberian languages (for example Ket ²*nä?ñ* “bread”). In the southern part of central Siberia, Mongolic lexical influence is pronounced (Rassadin 1973, 19), Joki 1952, Sydykov 1983), e.g. in Tuvan or the Karagas dialect of Mator.

Perhaps a fairly typical situation is presented by Selkup, where one finds Turkic loans *mãâtir* “hero, warrior”; Khanty loans *purqi* “smoke” *nurik* “straight”; Ket loans *qəq* “pine forest”; and Evenki loans *ol'qan* “small wooded area in tundra” *kuja* “birch bark box for beating down and gathering berries” *č'ããwiri* “to step aside”. As in Nganasan and Mansi there are also numerous substrate words of unknown origin in Selkup (Helinski 1998b:577).

As might be expected, Nganasan has several words of Dolgan origin, e.g. *buluñə* “bastard”, words of Enets origin *ukud'ari* “white-nosed loon” < Enets *uyoseri*, and possibly of Ket origin as well *bi'a* “wind” < Ket *bei?* (Helinski 1998a:513).

Altai-Sayan Turkic languages gave many loans to the local southern Yeniseic and Sayan Samoyedic languages (Castrén 1857, 1858a, Donner 1944, Dul'zon 1971, Filippova 1973, 1976, 1980, Hajdú 1953, Joki 1952, Kálmán 1988, Khelinskii 1993, Künnap 1993, 1994, Mikola 1988, Potapov 1957, Rona-Tás 1988, Timonina 1978, 1979, 1986, etc.). As noted by Anderson (2004:5), even a cursory inspection reveals numerous Turkic items in the lexical lists of these languages. Examples include those in (10). As Janhunen (1989) has suggested, these may be just code-switching or effects of late stage language shift in the community, or at least this may have contributed to the

high number of Turkic words in the materials (these languages were as noted above shifting to Turkic (or Russian) by the time most of the lexical materials were being gathered in the eighteenth century

(10) Sayan Samoyedic loans from Turkic (Anderson 2004:5)

Taigi: *kustuk* “iron arrow”, *siir* “steer”, *xairaxan* “bear” (taboo word)
 Kamas: *tegei* “summit, peak”, *azak* “foot”, *xartuga* “hawk”
 Mator: *kok* “blue, green”, *sal* “raft”
 Koibal: *sas* “swamp”, *takak* “hen”

There are a small number of words of Samoyedic origin in various Altai-Sayan Turkic languages, e.g. Tuvan *xem* “river” or *buluk* “ice-coating, edge of ice” (Terent'ev 1989), a small number of words of Yeniseic origin in western Altai-Sayan Turkic (Butanaev 1973, 1992) and a large number of Mongolisms in all of them.

Dolgan has a number of Tungusic (Evenki) loans, e.g. *öldiün* “roof of tent” (Androsova 1997:237). Like its southern central Siberian neighbors, from where the Turkic-speaking ancestors of the Dolgans moved, many Mongolism, and a small number of Yeniseic and Samoyedic words are found in the Dolgan lexicon as well.

The southern Yeniseic languages shows numerous Turkic loans, e.g. Kott: *kulun* “colt/foal”, *šoška* “pig”, *ala* “piebald”, *itpak* “bread”, *pai* “rich”, *ko(o)pur* “bridge, *komtu* “grave”; Arin: *bugday* “wheat”, *kayak* “fat”; Assan: *šut* “milk, etc.

Russian loans abound as well. Mixed or semi-calqued forms are also encountered in Kott, e.g. with the Russian indefinite pronoun formant *ašig-ñebut* “someone, anyone” (Verner 1997b:203).

The word for “sled” in various Altai-Sayan Turkic languages may well be a Yeniseic loan word. It is found in cognate forms in all the attested Yeniseic languages (Werner 1996:99). The sound correspondences suggest a reconstruction back to Proto-Yeniseic. Starostin (1982) makes the improbable suggestion of **soʔol*, more likely something like **šOʔaL* **šOgaL* perhaps also dialectally in PY already alternating with **č-*.

(11) “sled” in Yeniseic

<u>Ket</u>	<u>Yugh</u>	<u>Kott</u>	<u>Assan</u>	<u>Arin</u>	<u>Pumpokol</u>
³ <i>š'u:lʲ</i>	³ <i>soulʲso:l</i>	<i>čogar/čugar</i>	<i>čegar/čogar</i>	<i>šal</i>	<i>cel</i>

Some Altai-Sayan Turkic forms are obviously related to the Yeniseic forms; they are likely loans from Yeniseic. The word for “sled” in selected Altai-Sayan Turkic languages appears in (12). Note also that the ethnonym Shor derives from this term.

- (12) Xakas Tofa Shor
 so:r *šeger* *šo:r*

As mentioned above, all central Siberian languages have a small number of Tungusic loanwords. In turn, Evenki has borrowed a small number of words from a range of languages depending on the locale (e.g. Ket, Dolgan, Selkup, Khanty, etc.).

2. *Phonology*

The phonology of the central Siberian languages is naturally highly varied and complex. In particular, the degree of affixal and/or stem alternation varies considerably as do many other phonological features of these languages (stress assignment, syllable structure, etc.). In the following brief sections, I present some data on certain features of the vowel and consonant systems of the languages of central Siberia, a brief section on the phonotactics of these languages, and finally some examples of the complexity of morpho-phonological processes found in certain central Siberian languages. This is to serve as a general overview to the phonological nature of these languages and the kinds of issues relevant to the phonological investigation of them.

2.1 *Vowels*

The vowel systems of the languages of Central Siberia show a range of commonalities. For example, all have more than the five basic vowels. There are such cross-linguistically marked segments as front rounded vowels, high central or back unrounded vowels, as well as contrastive length. A phonemic schwa is also found in numerous central Siberian languages.

(13) Selected Vowels in central Siberian languages

	<u>ü</u>	<u>ö</u>	<u>i</u>	<u>ə</u>	<u>±length</u>
Nganasan	+		+	+	(+)
Dolgan	+	+	+		+
Enets			+	+	+
Selkup +	+	+	+	+	
E. Khanty	(+)	+	(+)		+
Evenki			+	+	+

Ket			+	+	(+) ⁱ
Kamas	+	+			?
Xakas	+	+	+		+

The examples in (13) require several comments.

- i. Length is predictable in Ket dialects, based on the associated tone
- ii. Length contrast is called full vs. reduced in Ob-Ugric linguistics
- iii. Vakh Khanty has *iii* and *ii* but not *ü* and *i*
- iv. Front rounded vowels are mostly lacking in other Khanty varieties
- v. Nganasan has phonetic vowel length but these are treated as phonological sequences, not unit segments (Helimski 1998a:485)

Phonemic schwa is a northern central Siberian feature, seen in Nganasan, Enets, Selkup, Evenki and Ket. Only in Dolgan, a relative newcomer to this area, is it lacking. The marked sound **i* appears to be found reconstructed back to all intermediate and most deep proto-language levels except Tungusic, which is a relatively recent intrusion into the region. The front rounded vowel *ö* is highly marked, being found only in the Turkic languages, Kamas, which is heavily influenced by Turkic, in Vakh Khanty, and in Selkup, where it appears to be old.

Vowel length too is an old feature of all the language groups (perhaps excluding Yeniseic, although this is debatable). Specific instances of vowel length may be “secondary” in Xakas, and Altai-Sayan Turkic languages in general (except in a few oft discussed apparent exceptions), but vowel length may be “primary” in Dolgan, i.e. the forms themselves continue an older Common/Proto-Turkic vowel length contrast, e.g. *at* ‘horse’ vs. *a:t* ‘name’ (cf. Tuvan *ât*, *at*, respectively). It should be noted that although the words manifesting the length opposition in Altai-Sayan Turkic may not have historically had a long vowel, and the length arose as the result of some other sound change (e.g. loss of intervocalic velars common in the area, seen in such examples as Xakas *naax* “cheek”, Tuvan *ool* “son”, etc.), the system itself continues the old opposition short vs. long.

Dolgan, like most other Turkic languages of central Siberia, has a basic eight vowel + length system. Some Turkic languages of the region have a ninth (front) vowel, *ɪ*, *ä*, etc.), for example Tofa or Xakas.

In Enets, $\pm$ length is a marginal contrast but is attested in a small number of minimal pairs: *tos^j* “to come” vs. *tōs^j* “to arrive”; *nara* “spring” vs. *narā* “copper”; note that contrastive stress is also marginal but attested in Enets *módi* “I” vs. *modí* “shoulder” (Künnap 1999a:10). In Nganasan, there appears to have been a vowel chain shift, taking place partly post-Russian contact, of

**ü* > *i*, **u* > *ü*, **o* > *u*, **å* > *o* and also **e* > *i*. (Helimski 1998a:482). The vowel inventories of these two northern Samoyedic languages are as follows.

(14) Vowel inventories in northern Samoyedic languages

i. Nganasan (Helimski 1998a:482)

i ü	ĩ	u
e	ə	o
ⁱ a	a	^u a

ii. Enets (Künnap 1999a:9)

i	ĩ	u
e	ə	O
	a	o

Selkup has a large vowel inventory for the region due to the development of a tense/lax contrast, as well as the presence of a contrastive length contrast for most sounds (all but *åå* (~ [ɔɔ]) which lacks a short counterpart ***å*).

(15) Vowel inventory of Selkup

Selkup

i ü	ĩ	u	
ɪ			
e ö	ə {ë}	o	
ɛ		åå	(õõ in Khelimskij 1993:358)
ä a			

Also, while normally falling either on the rightmost long vowel or the first vowel, minimal contrastive stress is found in a small number of Selkup lexical items

(16) Contrastive stress in Selkup (Khelimskij 1993:358)

čél'čalqo “trample” *čel'čálqo* “stamp”

The Kamas inventory shows the front rounded vowels common to the Altai-Sayan languages, but no central vowels. A reduced *ə* is found in unstressed initial syllables and was frequently lost. Note that there are similar forms showing loss of unstressed vowels in initial syllables in Mator,

and in local Altai-Sayan Turkic varieties as well, e.g. Xakas (Anderson 2004a), see also 2.3 below.

A characteristic feature of Kamas is the presence of a kind of laryngealization or voice quality witnessed with vowels followed by glottal stops. It has been suggested that there is a connection between the realization of Kamas *V?* sequences and the development of low pitch vowels in Tofa and Tuvan (Schönig 1998:404). This hypothesis remains to be adequately demonstrated.

Evenki lacks front rounded vowels, but has the central *ə*. Length is also minimally contrastive: *o:si:kta* “star” vs. *osi:kta* “nail”; *bu:* “give” vs. *bu* “die” (Bulatova & Grenoble 1999:4)

In the northern Yeniseic languages Ket and Yugh one finds, in contradistinction to all others central Siberian languages, a system of lexical tone. Indeed, there is even a minimal quadruplet differentiated solely by the tone associated with the syllable (and concomitant phonetic effects such as lengthening with tone-3): e.g. S. Ket: ¹*sʲulʲ* “blood” ²*sʲuʲlʲ* “white salmon” ³*sʲu:lʲ* “sled” ⁴*sʲulʲ* “cradle hook” (Verner 1997a:173; Vajda 2000:5).

Verner (1997a) describes the Ket tone system as contrasting the following features, a circumflex (i.e. rising or falling) contour, a marked high register and/or interrupted (pharyngealized/laryngealized) feature.

(17) Ket tones according to Verner (1997a)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
circumflex contour	-	+	+	+
high register	+	+	+	-
‘interruptedness’	-	+	-	-

Vajda (2000) has provided the most current assessment of Ket tones. This describes the system of Southern Ket, which is used by the majority of remaining speakers. Ket is neither a canonical syllable tone language nor a pitch accent language in the normal sense. Its prosodic system is similar to that of pitch accent systems, but the four Ket tones are bi-moraic, rather appearing on the two leftmost syllables in a word, if the word has at least two syllables. In S. Ket the tones can be distinguished in the following manner.

(18) S. Ket tones according to Vajda (2000)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
high register	+	-	-	+
pharyngealization	-	+	-	-

falling tone	-	+	+	+
vowel length	+	-	+	-

Tone 1 has often has a “half-long” vowel. Tone 4 is short and falling and non-pharyngealized in S. Ket but appears in the first syllable of a disyllabic word in Central and Northern Ket dialects with a long vowel and a pharyngeal stricture. This latter feature distinguished tone 4 from tone 3 in these Ket dialects. It is also pharyngealized in Yugh, suggesting again that S. Ket is innovative with respect to tone-4.

(19) Fourth tone in Ket dialects

<u>S. Ket</u>	<u>C. Ket</u>	<u>N. Ket</u>	<u>gloss</u>
⁴ <i>sʲɛlʲ</i>	⁴ <i>sʲɛ:lʲi</i>	⁴ <i>sʲɛ:lʲi</i>	“reindeer”
⁴ <i>asʲ</i>	⁴ <i>a:sʲe</i>	⁴ <i>a:sʲe</i>	“feather”
⁴ <i>irʲ</i>	⁴ <i>i:də</i>	⁴ <i>i:rʲe</i>	“spring”

The tonal system of Ket is far too complicated to go into greater detail here, and the interested reader is referred to Werner (1996) and Vajda (2000) for significant detail.

The poorly attested southern Yeniseic languages also appear to have had tones as well (Verner 1990b, 1997c; Werner 1996; Vajda 2000), e.g. Kott *ši:g* “night” > *šag* “nights” probably ¹*ši:g* > ²*šaʔg* (Verner 1997c:197). Note that length may have been marginally contrastive in Kott as well, although, as in Ket and Yugh, this apparent length may be a phonetic concomitant of certain tones.

(20) Contrastive Length in Kott? (examples from Verner 1997c:197)

ulaj “rib” vs. *ula:j* “song”
ko:ja “reindeer” > *ko:ja:* “reindeer”.GEN
 Kott A *šuli* “oat” *šu:li* “hook” (Kott B *šulʲeli* : *šu:lʲeli*, respectively)

2.1 *Palatalization and consonantism*

Among the most noteworthy typological features of the consonant systems of the languages of central Siberia is the presence of contrastively palatalized segments. This is found throughout the languages of the area to some degree north to south; however, some languages in the southern part of the region make little or no use of palatalization. Note that non-distinctive palatalization of consonants associated with the processes of [back] harmony is not uncommonly attested in Turkic varieties.

The most common palatalized sounds found are the nasal $\tilde{n}$ and the stops d^j and t^j . These latter two are found dialectally and/or idiolectally in virtually every central Siberian language, often resulting from a historical deaffrication of $*\check{c}$ and $*d\check{z}$, respectively (Anderson 2001a).

The palatal nasal is old in some families of the region (Tungusic, Ob-Ugric, Samoyedic), lost or restructured in others (Turkic) and secondarily derived in still other groups (Yeniseic); cf. Anderson (2003a, 2003b) for details.

Palatalized liquids are found in several unrelated groups, e.g. Northern Yeniseic, southern (Sayan) Samoyedic, Enets and Dolgan. Palatalization of s may have appeared in N. Ket under Enets or Selkup influence and is not to be considered old in Yeniseic, unlike in Samoyedic, where it may be (Mikola 1988:226; Janhunen 1977:9).

Enets and Kamas have the most palatalized segments, and Samoyedic languages generally exhibit this areally common feature to the greatest degree. Evenki has the fewest palatalized sounds among the northern central Siberian languages, while some of the southern Altai-Sayan Turkic [AST] languages make little use of them at all. Dolgan on the other hand has a more northern phonological look, while the AST languages that make extensive use of palatalized sounds may also reflect their (here Samoyedic) substratum (e.g. N. Altai, Tofa), or of course may simply reflect a secondary diffusion of this feature. Note that Ket merged the Proto-Northern Yeniseic sounds $*t^j$ with $*t$ (as t) and $*d^j$ with $*d$ (as d), a contrast which Yugh preserved.

Selkup and Khanty—with their dizzying array of local vernaculars and the notoriously nebulous distinctions made within each group between dialects and languages—perhaps not unsurprisingly show considerable variation with respect to the inventory of palatalized sounds. The more northern varieties have more palatalization as a rule. Again, $\tilde{n}$ is everywhere the most common sound, although as in Mator, it is occasionally depalatalized to n . The issues surrounding not only the basic inventory of palatalized sounds in these Samoyedic and Ob-Ugric languages, as well as their respective individual phonological histories has generated a large amount of work and must remain beyond the scope of this modest introduction.

In (21) is offered a list of the palatal[ized] ‘phonemes’ found in the various languages of central Siberia. The data derives from the following sources: (Künnap (1999a:10); Helimski (1998b:552); Simoncsics (1998:583-4); Hónti (1998:330); Ubrjatova (1985:24); Verner (1997a:178), (1997b:188).

(21) Palatalized sounds in central Siberian languages {} = idiolectal () = dialectal

	<u>d^j</u>	<u>t^j</u>	<u>l^j</u>	<u>n^j</u>	<u>s^j</u>	<u>š^j</u>	<u>Other</u>
Nganasan		+					
Dolgan	+	(+)	+	+			
Enets	+	+		+	+	+	č ^j
Evenki				+			
Ket			+	[+]	[+]		
Yugh	+	+	+	+			
Selkup (+)	(+)	(+)	+	(+)			
E. Khanty		+	+	+	(+)		
Kamas	+	+	+	+	+	+	z ^j , ž ^j
Mator	(+)	(+)	+	(+)			
Xakas		{+}					
Shor		{+}					
N. Altai		{+}		+			
S. Altai	+	{+}					
Chulym		{+}					
Tuvan							
Tofa	{+}	{+}		+			

The following notes must be added to (21):

- In many languages (e.g. Nganasan, Dolgan, Evenki, Kamas) $t^j \sim \check{c}^j$
- n^j , s^j may not be contrastive in Ket
- d^j , t^j , l^j , s^j only found in some Selkup dialects
- s^j found in other Khanty dialects
- In Kamas $t^j \sim \check{c} \sim c^j$; $d^j \sim d\check{z} \sim d\check{z}^j$
- d^j , t^j , n^j only in some Mator varieties

As mentioned above, a process of deaffrication may have caused the appearance of the palatalized stops sounds in Samoyedic, Yugh, Evenki, and Dolgan, as well as Altai Turkic on the southern extreme end of central Siberia as well (Anderson 2001a). In many of these languages one still sees local or even idiolectal variation between t^j and $\check{c}^j$.

2.3 *Phonotactics*

To be sure, a description of the phonotactics of each of the nearly two dozen central Siberian languages would require at least a monograph length study to do any justice to the topic. For this reason, in this section I make only

a few cursory comments on the phonotactics of the languages of central Siberia.

First, initial *r*- is found basically only in Russian loans in the languages across the area from the extreme north, Nganasan (Helimski 1998a:482), through the middle part (as in Selkup) and all the way down to the southern end of the area in the form of Xakas (Anderson 1998).

Consonant clusters are rare word-initially and uncommon word-finally in all languages of the region. The Samoyedic languages basically permit no initial clusters and only clusters with glottal stop finally. Evenki only allows medial clusters in native vocabulary. Siberian Turkic too allows no native initial clusters and only very limited final ones. In Tofa, only *-rt* is permitted word-finally phonetically. Underlyingly, *-rk* is also permitted and thus one finds alternations of the following type in Tofa: *dört* “four” and *bört* “cap” > *dörtüm/dördüm* “my four” and *börgüm* “my cap”.

Khanty and especially Ket stand out for their clusters permitted: In the case of Khanty, this is mainly word-finally where a greater variety of clusters are permitted than in most other central Siberian languages, e.g. *jäŋ^wk^w* “ice” *ä(ä)mp* (etc.) “dog”. Ket on the other hand differs markedly from the other central Siberian languages (except Yugh) in allowing both unusual initial and final clusters and final syllabic nasals not typically found in the other languages of the region. Thus one finds Ket words like *ətn* “we” *ekŋ* “days” *tqo* “her mouth” *ks^jraqqajit* “you teach him”, *^lo ks^j* “tree, wood”, *us^jl^j* “birch sap”, *^ltə qt* “wagtail” *tar^s^j* “one who hits”.

In the extreme southern part of central Siberia, surface initial clusters are/were being generated in both Sayan Samoyedic and Altai-Sayan Turkic varieties, through the loss of unstressed/reduced initial syllables. Compare in this regard the following Mator and Karagas forms: MS: *šlëy* “egg” vs. KM: *schîlui* (Khelimskij 1993b:375). Xakas has developed similar forms, e.g. *pray* “all” (Anderson 1998); cf. also Kamas mentioned above.

All languages of the region have phonemic *ŋ*. In the far north, this is permitted word-initially (Nganasan, Evenki, Dolgan, Enets). In the middle zone, the sound is permitted in onset position in word-medial position but not in word-initial position (Kott, Selkup, E. Khanty). In the far southern zone, it is never permitted in syllable onset position (Kamas, Tuvan, etc.). See Anderson (2003a, 2003b, 2004b) for details.

Of course each individual language has its own particular quirks phonotactically speaking. Thus, for example, Nganasan final *-ŋ* is common but *-n* rare to non-existent. In Selkup final stops alternate with corresponding homorganic nasals, e.g. *qontam* ~ *qontap* “I’ll find” (Helimski 1998b:554).

Different dialects of MTK showed variation between allowing and disallowing voiced stops word-initially:⁵

(22) Voicing variation in Mator-Taigi-Karagas initial stops (Khelimskij 1993b:375)

“squirrel”	MM: <i>téren</i>	MS: <i>deran</i>	KP: <i>déren</i>
	MP: <i>taeret</i>	KM: <i>derét</i>	KP: <i>derját</i>

Generally in central Siberian languages, and in the non-northern ones in particular, etymological nasals in stem-initial position are rare. In a number of central Siberian languages, these have been introduced into the system through the distant assimilation of word-initial stops to nasals. An example may be seen in the Sayan Samoyedic languages: Mator *numbo* < **jumpâ* “moss” (> *dʒ-* (~*dʲ-*)) or, in southern Yeniseic: Kott *mon* “no[t]” vs. Arin *bon* “no[t]” and in North Altai varieties:

(23) Distant nasal assimilation in North Altai (Anderson 2003b:20, 26)

<u>Qumandy</u>	<u>Altai</u>	<u>gloss</u>
<i>ñan-</i>	<i>dʲan-</i>	“return”
<i>ñaman</i>	<i>dʲaman</i>	“bad”
<i>ñejil</i>	<i>dʲejil</i>	“green”

2.4 Morphophonology

The Central Siberian languages make extensive use of morphologically triggered phonological alternations. These include such processes as ablaut, tonal alternation, and changes in the consonants and vowels of stems and affixes. In this section, I present data on a small number of aspects of morphophonological alternation in the indigenous languages of Central Siberia to give an idea of the range of phenomena encountered when studying these languages. The first is the positively dizzying amount of stem and affix variation seen in the northernmost language of the region, Nganasan. The second topic examined is vowel harmony.

⁵ Note the Northern Sel’kup like alternations between nasals and stops in these Mator forms (although this could be a singular plural opposition not fully understood by the recorder of the materials).

2.4.1 *Morphophonology of Nganasan*

The northern Samoyedic language Nganasan makes use of a complicated and now lexicalized set of morphonological alternations in both its nominal and verbal systems. As has been often discussed in descriptions of these languages, Samoyedic languages usually have three variants of a stem that are used in certain sets of morphological environments, probably phonological in origin. Nganasan is no exception in this regard. In nouns, these are the nominative singular, the genitive singular + nominative plural, and the genitive plural. With verbs, the three stem types correspond to the ones used in verbal adverbs, the connegative, and the perfective, respectively.

In Nganasan, a variety of historical developments have yielded a system with two formal types of alternation, called rhythmic and syllabic gradation (Helimski 1998:487) both of which operate in opaque sets of morphological forms. The morphophonological processes which operate on particular lexical + operator combinations in Nganasan have two sets of realizations, based on two now opaque harmonic stem classes (*U* and *I*).

The harmonic stem classes, historically apparently [$\pm$ round]-stems, affect the realization of the archiphonemes *A*, *A_I*, *U*, *Ü* and partially *U_o* in the Taimyra Avam sub-dialect (Helimski 1998a:490), where it is fronted to *ü* following high front vowels. Following Helimski (1998a:490), example (24) shows vowel alternations triggered by harmonic stem classes in Nganasan; the first vowel shown is Class-s1, the second Class 2.

(24)	<u>A</u>	<u>A_I</u>	<u>U</u>	<u>Ü</u>
–front or –high	<i>a^h/a</i>	<i>a/i</i>	<i>u/i</i>	<i>ü/i</i>
+front, +high	<i>a^h/a</i>	<i>a/i</i>	<i>ü/i</i>	<i>ü/i</i>

Rhythmic gradation is based on the moraic or syllabic structure of the word. The strong grade is realized if an odd number of syllables precede, and the weak grade if an even number of syllables precedes. The affected archiphonemes manifesting this pattern of gradation are *(m)H*, *(n)T*, *(N)K*, *(n)S*, and *(ñ)S^j*.

(25) Rhythmic gradation in Nganasan consonants (Helimski 1998a:490)

<i>ni-ti</i>	<i>bini-di</i>	<i>hiad^h-ti</i>	<i>kərigəli-ði</i>
“his wife”	“his rope”	“his thumb”	“his march”
<i>ni-rəgi</i>	<i>bini-rəki</i>	<i>hiad^h-rəgi</i>	<i>kərigəli-rəki</i>
wife-SIM	rope-SIM	thumb-SIM	march-SIM

Note that this alternation in the affix in Nganasan is blocked by a preceding consonant usually, and by a preceding long vowel always.

(26) Blocking of rhythmic gradation in Nganasan (Helimski 1998a:491)

<i>tər-tu</i>	<i>kaðar-tu</i>	<i>latəð-ðu</i>	<i>biria-ði</i>
“his hair”	“his light”	“his bone”	“his wound”

In so-called ‘syllabic’ gradation, the strong grade actually has the same realizations as in rhythmic gradation and appears before an open syllable; the weak grade however is different, and appears before a closed syllable (27). Note that the two types of gradation are found with both stems and affixes. In the following examples, singular and plural of nouns are offered and the verbal adverb vs. the connegative forms of verbs.

(27) Syllabic gradation in Nganasan (Helimski 1998a:491)

kuhu “skin, hide” > *kubu-ʔ* “skins, hides”
kəntə “sledge” > *kəndə-ʔ* “sledges”
kaðar “light” > *katar-əʔ* “lights”
heñdʲir > *hensir-əʔ* “shaman’s drum”
kotudʲa : *koðuʔ* “kill”
dʲembiʔsʲi : *dʲephidʲəʔ* “gets dressed”

An extreme example of the range of regular alternations in a given Nganasan morpheme comes from the renarrative suffix, which varies in realization between *-hʷambu-* and *-bʲahi-*. The set of variants included in this morpheme in Nganasan is as follows:

(28) Conditioned variants of the renarrative suffix in Nganasan

-bayhu-/bʲaɣhi-
-bambu-/bʲambi-
-bahu-/bʲahi-
-hayhu-/hʲaɣhi-
-hʷambu-/hʲambi-
-hʷahu-/hʲahi-

The forms represent the variant used with the two different harmonic stem classes in the following contexts:

(29) Contexts conditioning variation in (28) above

2nd {stem} syllable open	i, iv
2nd {stem} syllable closed	ii, v
stems with odd number of vocalic morae	iii, vi
stems with even number of vocalic morae	i, ii, iv, v
vowel-final stems	i, ii, iii
consonant-final stems	iv, v, vi

The two harmonic stem classes are partially phonetically opaque in terms of vowels in the stems in the present day language, e.g. *hon* (class-1/*U*) “plait” vs. *hon* (class-2/*I*) “have”: *honsuəðu* “s/he plaited it” vs. *honsiəði* “s/he had it”. Also, some Nganasan stems have the shape of vowel-final stems but the alternations show consonant-final stem behavior.

Extensive alternation in the shape of affixes is common in most central Siberian languages, and the alternation of stems is found in most of the northern languages, Samoyedic and Khanty, and within a different formal and functional system, in Ket as well, and to a much lesser extent in Dolgan. Here one finds minor stem alternations such as the following, based on a continuation of the extensive assimilation processes at work in the language: Dolgan: *it* “dog” *it-im* “my dog” *ippit* “our dog” *ikkit* “your (pl) dog” (Ubrjatova 1985:84).

In Yeniseic Kott, there was an alternation between *š* and *č* in inflected forms.

(30) Kott alternations (Verner 1997b:197)

ha:š > *hačan* “Dachs-pl” *huš* > *hučan* “horses”

Similar alternations are found in the Xaas or Kachin dialect of Xakas. This may well reflect a substratal feature in this variety.

(31) Xaas (Kachin) Xakas alternations (Baskakov et al. 1975:65)

ayas “tree” > *ayači* “his tree”
sas (~*šaš*) “hair” > *sačim* ~ *čačim* ~ *čečim* “my hair”

The distant nasal assimilation process that operated on the lexicon of a range of southern central Siberian languages mentioned above can be seen in morphophonological alternations in Kott as well.

(32) Distant nasal assimilation in Kott inflected forms (Verner 1997c:197)

bapukɣ “I will find” > *ma:mpukɣ* “I found”

Ket shows a range of tonal and ablaut alternations in the formation of plurals, often together and in combination with affixation, e.g. ¹*sʲeʲsʲ* “river” ²*sʲaʔsʲ* “rivers” or ¹*iʲ* “day” > *εk-ɣ* “days”, ¹*teʲtʲ* “husband” > *tátɲ* “husbands” (see Anderson 1996a, 1996b for further details and examples).

2.4.2 *Vowel harmony systems*

Vowel harmony is a characteristic of numerous languages of Central Siberia (Harrison 2004). There are at least three types of vowel harmony attested in the languages of the region. These include palatal or back harmony, round harmony and ATR or height/tenseness harmony.

Both back and round harmony are family characteristics of Turkic and thus found to some degree or another in both the Altai-Sayan Turkic languages in southern central Siberia and in Dolgan far to the north. The Turkic languages are the canonical vowel harmony languages both in central Siberia, as well as cross-linguistically. The Turkic languages of central Siberia show considerable variation with regards to the nature of the harmony system involved. Virtually all the languages make use of back-harmony to one degree or another. Rounding harmony is also found in at least dialects of each language (some Xakas varieties lack it). Typically in the Turkic languages of central Siberia, both stems and suffixes show vowel harmony, with varying degrees of violations and deviations from the idealized system (Harrison 2004).

One way the Turkic languages of central Siberia vary in their vowel harmony systems involves the behavior of round vowels, or round harmony patterns. There are languages that show round high vowels following high round vowels only in stems (Xakas), ones that round high vowels after any round vowel in both stems and affixes (Tuvan), ones that round a low vowel after a low round vowel but don’t round a high vowel after a low round vowel (Altai), or round both high and low vowels after low round vowels (Dolgan). Examples exhibiting the various systems include the following:

(33) Round harmony in Turkic

- i. Xakas: *püür-nɪ* “wolf-ACC” < **pügür* (some Xakas still say this)
- ii. Tuvan: *Ogl-um* “my son”
- iii. Altai: *kör-gön-lör-döɣ* “from the seen ones” *oniɣ* “his”
- iv. Dolgan: *kör-üük-püt* ~ *kör-üök-püt* “we will see”

Note that due to a variety of factors, including both language contact and language obsolescence, there is a fascinating degeneration of the system operative in such languages as Tofa (Anderson & Harrison 2003a/b) and Chulym (Harrison & Anderson 2003). Xakas dialects show various decaying and reanalyzed systems as well (Anderson 2004a).

(34) Breakdown of back harmony in Tofa (ASLEP field notes)

ñeš-ta “in the tree”

körvææn vs. *korvææn* “didn’t see”

In example (34i), there has been a sound change in present-day Tofa as spoken in Alygdzher, Irkutsk oblast’, that fronts /a/ between two palatal sounds to [e]. This /a/ remains back for vowel harmony purposes and takes back vowel suffix variants. A different kind of breakdown in the system is seen in (34ii). Here a semi-speaker has lost the characteristically Turkic but distinctly un-Russian front rounded mid-vowel /ö/ but still retains the frontness value of morphemes it occurs in for the purposes of the operation of Back Harmony.

Back harmony may have been found in Proto-Samoyedic affixation (but already not in stems, e.g. “fish”), but has broken down or been restructured in all the attested Samoyedic languages. Its presence in Mator or Kamas is probably secondary, influenced by local Altai-Sayan Turkic languages. These latter languages have also developed a limited degree of Round harmony also presumably under Turkic influence. A similar development appears to have occurred independently in Nganasan, again most likely under influence of a Turkic language, although in this specific case the language is most likely to be Dolgan, not the Altai-Sayan Turkic languages as is the found among the Samoyedic languages of the Sayan region.

The Mator dialect cluster seems to have had back harmony operative in the third singular possessive marker.

(35) Back Harmony in Mator (Khelimksij 1993b:375)

baga-da

“his back”

gok-ta

“his ear”

schünü-dä

“his penis”

hüngür-tä

“his shaman’s drum”

As alluded to above, some rounding harmony is evident in Karagas, for example in the realization of the infinitive *-sI* which appears with a rounded high vowel following a round vowel.

(36) Round Harmony in Karagas (Khelimskij 1993b:375)

djási [časi] “to go” *namnírschi* “to speak” *hórsu* “to be”

The system of [±back] harmony in Kamas operated as follows. The archiphoneme -A is realized as -a with back vowels and -ä with front vowels. The vowels *i*, *e*, and *ə* are neutral with respect to this pattern, unless a stem consists of only these vowels in which case they appear to be treated as front.

(37) Back Harmony in Kamas (Simoncsics 1998:582-3)

<i>tura-zay</i>	<i>kaləš-(z)ay</i>	<i>üžü-zäy</i>	<i>sirä-zäy</i>
“houses”	“swords”	“caps”	“snows”

nere-l'ä-m
“I am frightened”

There is also some evidence that an emergent system of [±round]-harmony seems to have developed in Kamas. Back harmony is followed as usual, but there is rounding (and raising) of the affixal vowel after high round vowels, otherwise it appears as a low unrounded vowel. Examples of round harmony in Kamas (Simoncsics 1998:583) are given in (38):

(38) *num-bu* *kama-ba* *miit-pü* *šärgät-pä*
“my God” “my mountain” “my liver” “my elbow”

The development of ‘vowel harmony’ in Yeniseic is probably secondary, and whether one even wants to call the full assimilation of various (including) epenthetic vowels to the quality of salient tense/aspect markers actually [round] vowel harmony is debatable in Yeniseic. Examples of the alternation in question may be found in (37). In a number of Ket verb forms, there is an alternation between *a* in the non-past and *ɔ* in the past. It spreads the *ɔ* to a following syllable with *a*.

(39) Round harmony in Ket? (Werner 1997a:213; 219)

<i>t-k-a-v-i-t</i>	>	<i>t-k-ɔ-v-i-nⁱ-t</i>
“I’m ripping it”		“I ripped it”

dɔnⁱ-ku-g-d-a-kan > *dɔnⁱ-ku-g-d-ɔ-kan*
“you will get a knife” “you got a knife”

Kott appears to have shown a similar alternation. Whatever the historical source of this alternation is, or whether one even should properly call this vowel harmony, even within a local or restricted domain of applicability, viz. spreading roundness of [o] to an adjacent *-a-* in the following syllable, the alternation itself either belongs to the level of Proto-Yeniseic or represents a parallel but independent innovation in Northern and Southern Yeniseic. Similar alternations are found in many local languages however, within definable harmonic systems. Thus, pseudo-round harmony in Yeniseic seems an unlikely coincidence, as shown in these Kott examples (Werner 1997b:128).

- (40) *hap-a:k-u* *hap-o:l-o:k-u*
 “you buy” “you bought”

ATR harmony is characteristic of the whole Tungusic family and Evenki is no exception in this regard. The alternation primarily consists of *a ~ e/ə*; this archiphonemic element rounds following [o]. Similar low-to-low rounding phenomena are found in Altai and Dolgan in Turkic, where the pattern is robust.

- (41) ATR and rounding harmony in Evenki (Khasanova 1986:21)

<i>garpa-kal</i>	<i>emep-kel</i>	<i>erdet gundekso-kol</i>
Shoot-2SG.IMPER	bring-2SG.IMPER	immediately fasten-2SG.IMPER
“shoot!”	“bring (it)!”	“fasten (it) immediately”

Note that ATR harmony in Evenki is lacking in suffixes with high vowels; thus, case suffixes like *-tki* ALL and *-nu:n* COMIT are non-alternating.

Eastern Khanty has either retained (along with Southern Mansi) an archaic (Proto-Ob-Ugric) back harmony system, or has innovated a system of this. In either event, certain suffixes show a characteristic alternation based on the frontness or backness of the preceding vowel. In Vasjugan Khanty (Harrison 2004; Filtchenko in preparation), an ATR or ‘height harmonic’ pattern appears to be operative in certain morphemes (42v).

- (42) Back harmony in Eastern Khanty

i. <u>Vakh-Vasjugan Khanty</u>	<u>Kazym Khanty</u> (Hónti 1998:331)
<i>äämp-äm ~ iimp-əm</i>	<i>aamp-əm</i>
Dog-1	dog-1
“my dog”	

- | | | | |
|---|-------------------|--------------------------------------|--------------------------|
| ii. <u>Vakh-Vasjugan Khanty</u> | | <u>Kazym Khanty</u> (Hónti 1998:331) | |
| <i>kaat-am ~ kuut-âm</i> | | <i>xâât-am</i> | |
| House-1 | | house-1 | |
| “my house” | | | |
| iii. <u>Vakh Khanty</u> | | iv. <u>Vasjugan Khanty</u> | |
| <i>lâl-im</i> | <i>qul-im</i> | <i>köy-öy</i> | <i>juy-oy</i> |
| in-/exhale-PRF.1 | spend.night-PRF.1 | “of stone” | “of wood” |
| (Filtchenko in preparation) | | (Filtchenko in preparation) | |
| v. <u>Vasjugan Khanty</u> (Filtchenko in preparation) | | | |
| <i>čök-âl-tä</i> | <i>čüy-il-tä</i> | <i>jal-äl-tä</i> | <i>likr-il-tä</i> |
| “to grieve” | “to faint” | “to make wet” | “to make someone a sled” |

3. *Nominal morphology*

In this section I present a range of data from the nominal systems of the languages of central Siberia. This includes data on case systems, numerals, and the characteristic postpositional relational or auxiliary nouns.

3.1 *Case*

Below I briefly examine certain features of the case systems of the indigenous languages of the central part of Siberia. This includes the range of systems found and in particular three characteristic features of Siberian case systems, viz. use of prolativ case, an opposition of dative and allative cases, and an opposition between instrumental and comitative case forms.

Case inventories increase as one heads north in central Siberia. Selkup and Evenki have the largest number, followed by Ket. Xakas ranks first among southern central Siberian languages. The number decreases again at the northernmost edge of the region in Nganasan and Enets. Total number of cases range from 5 in Altai (Baskakov 1997) and Shor varieties (Donidze 1997) to 12 in Selkup (Helimski 1998) and Evenki (Bulatova & Grenoble 1998). Ket has 10 cases (Werner 1997a) while its sister languages Kott (Werner 1997b) and Yugh (Werner 1997c) have 9 each, as does Tremjugan Khanty (Abondolo 1998) and Xakas (Anderson 1998). Seven cases are found in Dolgan (Ubrjatova 1985), and if counting the obsolescent prolativ, Tofa as well (Rassadin 1997). Six cases is common in south central Siberia, e.g. in Tuvan (Anderson & Harrison (1999); other Shor varieties, which, like Tofa have an obsolescent prolativ case form; Kamas (Simoncsics 1998, Künnap 1999b); and Chulym (Birjukovich 1997). Kamas and Chulym have identical case inventories. Six is also a common number of cases in the north central Siberia, notably Enets (Tereshchenko 1997, Künnap 1999a) and Nganasan

(Tereshchenko 1979). Below is a list of case categories found in central Siberia; parentheses enclose marginal cases, {} indicates obsolescence.

(43) Case Inventories in Central Siberian Languages

<u>Selkup</u> ⁶	<u>Nganasan</u>	<u>Enets</u>	<u>Trem. Khanty</u>	<u>Ket</u>
Acc[usative]	Abl	Abl	Abl	Abl
Car[itive]	Acc	Acc	Approximative	Adessive
Coordinative	Dat	Dat	Car	Ben[efactive]
Dat[ive]/All[ative]	Gen	Gen	Com[itative]	Car
Elat[ive]/Abl[ative]	Loc	Ins/Loc	Expletive/Distributive	Com
Gen[itive]	Prol	Prol	Ins	Dat
Illative			Lative	Gen
Ins[trumental]			Loc	Loc
Loc[ative]			Trans	Prol
Prol[ative], Trans[lative], (Voc[ative])				(Voc)

<u>Dolgan</u>	<u>Evenki</u>	<u>Yugh</u>	<u>Kott</u>
Abl	Abl	Abl	Abl
Acc	Acc	Ben	Car
Com	All	Car	Com
Comp[arative]	{All/Loc}	Com	Comp/Prol
Dat	{All/Prol}	Dat	Dat
Ins	Com	Gen	Gen
Part[itive]	Dat	Loc	Ins
	Elat	Prol	Loc
	Indefinite Acc	(Voc)	(Voc)
	Ins, Loc, Prol		

<u>Xakas</u>	<u>Kamas</u>	<u>Tuvan</u>	<u>Shor</u>	<u>Altai</u>	<u>Chulym</u>	<u>Tofa</u>
Abl	Abl	Abl	Abl	Abl	Abl	Abl
Acc	Acc	Acc	Acc	Acc	Acc	Acc
All	Dat	All	Dat	Dat	Dat	Dat
C/C	Gen	Dat	Gen	Gen	Gen	Gen
Dat	Ins	Gen	Loc	Loc	Ins	Loc
Gen	Loc	Loc	{Prol}		Loc	Part
Ins, Loc, P/E						{Prol}

⁶ In singular, non-possessed forms, where the maximal number of case distinctions are found in all the Samoyedic languages.

As mentioned above, both Khanty and Mansi are not single languages but clusters of related dialects and each probably constitutes three or four separate languages. In general, there is considerable variation among the number and types of case forms found among the Ob-Ugric languages. Mansi varieties tend to have six to seven, but Khanty variants can range from 3 up to 11 distinct case forms.

Large inventories are mainly achieved, as is common cross-linguistically, by various fine gradations of locational/directional semantics. All the languages use an ablative case and all but Khanty and the Yeniseic languages use an accusative. This latter fact is hardly surprising, as it is well known that eastern Khanty varieties show ergative alignment and the alignment of Ket (and Yeniseic generally) has been the subject of much debate (see Vajda 2003). Dolgan stands out as the only language lacking a locative case form, while the genitive is lacking only in Dolgan, Evenki, and Khanty. Ablative (sometimes in the guise of an elative) is found within the case system of each of the languages of the region. A range of other case categories are examined in slightly more detail below.

3.1.1 *Prolative Case*

Among the case features commonly found in Siberian languages generally (Anderson 1997a, 2002, 2003c), and the central Siberian languages are no exception in this regard, is the prolative (prosecutive, vialis) case to mark motion along or through something. Prolative is found in all the Samoyedic languages except those in the Altai-Sayan region (Kamas, and perhaps Mator although the data on the latter is too sparse to really know). This is perhaps expected as in general the southern central Siberian languages either do not show this case at all or show it preserved in only a few frozen expressions (Shor, Tofa, and perhaps Kott as well). Xakas stands out as a notable exception in this regard. On the other hand, prolative case forms are common in the northern languages, lacking only in Khanty and Dolgan.

Prolative case can be reconstructed in form and function for the Tungusic and Samoyedic proto-languages, perhaps also Yeniseic, at least Northern Yeniseic.

(44) Prolative in Tungusic (Bulatova & Grenoble 1999:10)

Evenki

oro-r hoktoron-duli: hukti-žə-tʃə:-tin

deer-PL path-PROL run-IMPF-PST-3PL

“deer were running along the path”

(45) Prolative in Samoyedic (Prokof'ev 1937a:26, 1937b:62; Castrén 1854:177)

<u>Nenets</u>	<u>Nganasan</u>	<u>Enets</u>
<i>to-wna</i>	<i>turku-manu</i>	<i>Tau-mone</i>
lake-PROL	lake-PROL	Nganasan-PROL
“along the lake”	“along the lake”	“along the Nganasan”

(46) Prolative in Yeniseic (Werner 1997c:105; Werner 1997a:79)

<u>Ket</u>	<u>Yugh</u>
<i>baŋ-bes</i>	<i>beij sez-bes ɔŋ-ɔ^h:n-de</i>
ground-PROL	they river-PROL PL-3.PAST-go
“along the ground”	“they went along the river”
<u>Yugh</u>	
<i>bu lez-bes ɔ-a-de</i>	
he forest-PROL 3.-PRES.3-go	
“he is going through the forest”	

In Kott, the basic function of the case element that is cognate with the Northern Yeniseic prolative case was equative/similative (‘like X, as X’). In Turkic, the prolative is found as an active case only in Xakas, where of course Samoyedic or even Yeniseic influence is possible. Indeed the prolative case marker also encodes equative functions (cf. the Kott-Northern Yeniseic correspondences just mentioned); perhaps it bears mention in this context that many of the Kott shifted to Xakas linguistically. However, one argument against this explanation for the occurrence of the prolative in Xakas is that the attested Samoyedic and Yeniseic languages of the southern central Siberian region either lack this (Kamas), or it appears only in a small number of expressions (Kott). However, this fact could always reflect the later loss of a marked feature in these languages, which presumably, based on the available comparative evidence, had this case category at an earlier period. Such a loss might come about, for example, during the process of advanced language obsolescence that both Kott and Kamas were in during the period of their attestation. In this case, Xakas may well reflect an earlier areal trend, now submerged by a later areal trend, the latter development possibly partly motivated in individual languages of the southern part of central Siberia by both normal processes of ‘internal’ language change as well as structural consequences of sociolinguistic processes of language death (where marked features are not infrequently lost).

(47) Prolative in Turkic (Pritsak 1959b)

Xakas

kök is saray üst-ün-je kölečke-le-n-ıp par-čatxan
 blue smoke barn top-3-P/E ring-VSF-RFLXV-CV PRFV.II-IMPERF
 “the pipe gurgled, the blue smoke ringing along the top of the barn”

Another frequently encountered feature of case systems in the indigenous languages of Siberia is the opposition of a dative and an allative case form. Thus, this opposition is to be reconstructed for Proto-Tungusic.

(48) Proto-Tungusic DAT vs. ALL

- i. Evenki (Bulatova & Grenoble 1999:9)
nuɣartin bəyətkə:n-du: oron-mo ani:-ra
 they boy-DAT deer-ACC give-AOR
 “they gave the boy a deer”
- ii. Evenki (Bulatova & Grenoble 1999:10)
tirgaka:kin bira-tki: ollo-mo:-sina-β
 noon river-ALL fish-GO-INCEP-1 PLEX
 “at noon we went to the river to fish”

In Samoyedic, the formal contrast of a dative and an allative case is limited to the Ket’ (river) dialect of Selkup

(49) Dative vs. Allative in Ket’ Selkup (Kuper 1986)

<i>kula-niŋ</i>	vs.	<i>kula-ni</i>
crow-DAT		crow-ALL
“to the crow”		“towards the crow”

Old Turkic possessed an opposition between dative <-GA> and allative <-GARU> cases, the latter apparently derived from the former. The dative case has been preserved intact in all the modern Siberian Turkic languages. On the other hand, the old allative has lost its case function, preserved in a lexicalized manner in only a small number of adverbial expressions, e.g. Xakas *taxsar* “to the outside”, *isker* “to the east” (Anderson 1998:13). However, Tuvan and Xakas have reintroduced the formal opposition into their case systems. In the former language, an earlier equative case has taken on the function of the allative, while the latter language innovated a new form completely,

representing a grammaticalization and subsequent fusing of an earlier ‘auxiliary’ noun meaning ‘side’.

(50) Dative vs. Allative in Turkic

i. Tuvan (Shamina 1993:65)

sen klub-če bar-ba-an-iŋ-da, men baza baziŋ-ga olur-ayn
 you club-ALL go-NEG-PAST-2-LOC I also house-DAT sit-1.INT
 “if you’re not going to the club, I’m going to stay home too”

ii. Tuvan (Shcherbak 1977:68)

xoy börü-ge či-dir-t-ken
 sheep wolf- DAT eat- CAUS- (CAUS)-PAST
 “the sheep was eaten by the wolf”

iii. Xakas (field notes)

ol pis-ke čooxta-an
 s/he we-DAT say-PAST
 “he told us”

iv. Xakas (Cheremisina 1995:20)

min ije-m a ɣir-čatxan üčün klub-sar par-bas-pın
 I mother-1 be.ill-PRS.PRTCPL for club-ALL go-NEG.FUT-1
 “because my mother is sick I’m not going to the club”

Some Tuvan dialects show a different new allative form, as in Xakas arising from the relatively recent fusing of a postposition/auxiliary noun. The suffix takes the shape *-DivA*, and examples include *day-diva* “towards the mountain” and *ot-tuva* “towards the fire” (Anderson & Harrison 1999).

The final case feature to be examined here is the opposition of an instrumental with a comitative form. Such a contrast is found in Evenki.

(51) Instrumental vs. comitative in Tungusic

i. Evenki (Bulatova & Grenoble 1999:9)

si: tara bər-it-pi: garpa-kal
 you that gun-INS-REFL shoot-FUT.IMPER.2SG
 “shoot that one with your gun”

ii. Evenki (Bulatova & Grenoble 1999:9)

asi: kiŋnə:-l-ʒi ami:n-dula:-βi: is-ča:-n

woman ski-PL-INS father-LOC-POSS go-PST-3
 “the woman on the skis went up to her father”

iii. Evenki (Bulatova & Grenoble 1999:12)

bi: əkin-nu:n-mi: təβlə:-m

I sister-COM-REFL.SG collect.berries-1SG

“I went with my sister to pick berries”

The comitative/instrumental opposition is found in Eastern Khanty varieties (and the now often extinct southern varieties of Mansi).

(52) Instrumental vs. comitative in Ob-Ugric (Honti 1998: 344)

	<u>E. Khanty</u>	<u>Tavda Mansi</u>
COM	- <i>naat/-näät</i>	- <i>naat/-näät</i>
INS	-(<i>t</i>)ə/ə̃	-(<i>t</i>)əl

This correspondence suggests a fairly straightforward reconstruction to Proto-Ob-Ugric of both the functional opposition of instrumental and comitative, as well as formal markers indexing this contrast. In terms of the origin at the Proto-Ob-Ugric level, it is often suggested that the comitative derives from a either a pronominal base or a fused postpositional element. One western Khanty variety, Sherkal, actually shows a postpositional construction for the comitative with pronouns, e.g. *maa naataaŋeem* ‘with me’ (Honti 1998: 345), where the first syllable of the postpositional element is cognate with the comitative case suffix in eastern Khanty and southern Mansi.

Various Selkup dialects make use of an instrumental-comitative opposition. The comitative may sometimes attach to a genitive, not a nominative, form of the stem, suggesting a possible recent origin in a particular postpositional or auxiliary noun formation.⁷

⁷ Ikeda (1995) suggests that a formal opposition of cases attaching to a genitive vs. a nominative/absolute stem is a substratal feature in various N. Eurasian languages. This may be the case, but typological evidence suggests this is not the only explanation. Such a system of cases attaching to either an absolute/nominative or a genitive/oblique stem is characteristic of numerous languages, e.g. Burushaski, a language isolate of northern Pakistan that even at remote time depths has little to do with the inter-language dynamics of central Siberia (Anderson forthcoming; Anderson & Eggert 2001).

(53) Instrumental vs. comitative in Samoyedic (Bekker 1978:136; 139)

i. <u>Selkup (Ust'-Ozornoe)</u>	ii. <u>(Tjuxterevo)</u>	iii. <u>(Karelino)</u>
<i>golaj ü:da-n</i>	<i>tobə-n</i>	<i>tobe-t</i>
bare hand-INS	leg/foot-INS	leg/foot-INS
“with bare hands”	“with his foot”	“with his foot”
iv. <u>Selkup (Laskino)</u>	v. <u>Ust'-Ozornoe</u>	
<i>ad i-n-opti</i>	<i>tan-opti</i>	
father son-GEN-COMIT	YOU-COM	
“the father together with this son”	“(together) with you”	

The historical situation is significantly more complicated than it would first appear. To begin, the instrumental has the appearance of the genitive, and it is not clear whether these case forms are to be considered historically separate or connected. Secondly, Nenets has a postposition/adverb *ηōbt* “together” (Bekker 1978:140) which appears cognate with the Selkup element. Thirdly, most Selkup dialects have innovated a new instrumental/comitative case form, possibly from a fusing of another, different adverb/postposition that might historically derive from a non-finite form of “be”, i.e. “being” > INS > INS/COM. This may in fact be a common Southern Samoyedic innovation, as a cognate element seems to have existed in the extinct Kamas (Künnap 1971). An example of a Selkup form with the new instrumental/comitative is (Ust'-Ozornoe) *inne-za-t* [brother-INS/COM-PL] “with the (five) brothers” (Bekker 1978:144).

The instrumental/comitative opposition is generally otherwise lacking in the case morphology of Samoyedic languages, e.g. Nganasan has a comitative but no instrumental, while Kamas has an instrumental but no comitative (Simoncsics 1998; Künnap 1971). The opposition is indeed lacking in many dialects of Selkup as well (Helinski 1998a). According to the latter researcher, the instrumental/comitative opposition outlined above in Selkup is mainly found in lexicalized expressions, and the active case systems employ a single instrumental/comitative/sociative form.

A comitative case form is found in numerous attested modern Uralic languages, e.g. Saami (Sammallahti 1998), Estonian (Viitso 1998), or Mari (Kangasmaa-Minn 1998), but instrumental cases *per se* are not overly common in Uralic (but so-called ‘instructive’ (or pure instrumental) cases are found in various languages, including Khanty dialects). An opposition of instrumental and comitative is found however in Komi (Hausenberg 1998) and Komi-Permyak (Riese 1998), but Udmurt (Csúcs 1998) lacks a comitative, while the divergent Yaz'va dialect of Komi lacks an instrumental (Riese 1998). The Ob-

Ugric developments were discussed above. Unfortunately the details of the case systems of the various daughter languages of Proto-Uralic in general, and of the Samoyedic languages in particular, is highly complex and space does not permit us to pursue these issues to the degree of specificity necessary here.

Within the Turkic family, only the most northeastern languages show such an opposition.⁸ In Dolgan, there are two variants of the comitative case in contrast to a single instrumental case form. In the case of the so-called second comitative, this is an element historically used to mark attributive or possessive adjectives (cf. Yukaghir), still used as such in various other Turkic languages of Siberia. Dolgan's close sister language Yakut (Sakha) has this opposition between comitative and instrumental as well, with formally cognate elements.

(54) Instrumental vs. Comitative in Turkic

i. Dolgan (Ubrjatova 1985:121)

munu ikki ilii-tinen kusput
 this.ACC two hand-3.INS grab-PAST.II
 "he grabbed this with both hands"

ii. Dolgan (Ubrjatova 1985:122)

oyo-luun beye-liin ooññu-ur *kiih-a kihi-leek olor-or*
 child-COMIT self-COMIT play-PRES daughter-3 person-COMIT.II sit-PRES
 "he himself is playing with the child" "his daughter is sitting with the person"

3.2 Numerals

It is a well-known and oft discussed fact (see for example Ivanov 1976) that languages of Northern Eurasia often use the word "2" in the word for "8" (from "10 lacking 2", or something similar) and the word for "1" in the word for "9". e.g. Finnish *yksi* "1" *kaksi* "2" *kahdeksan* "8", *yhdeksän* "9". The Samoyedic languages of central Siberia all show this to some degree.

The northernmost Samoyedic languages of central Siberia show this pattern in the word for "8". The form for "8" is semi-opaque and lexicalized, i.e. its etymology is not entirely transparent to speakers, but its similarity to "2" obvious.

⁸ In Altai-Sayan Turkic, there has been an interesting development whereby the original instrumental was lost, preserved frozen only in a range of adverbs. However, a new instrumental has developed based on a form with original comitative semantics, an enclitic postposition meaning '(together) with'; à *propos* to note 6, this apparently attached to a nominative stem of nouns and a genitive forms of pronouns. This new instrumental form is found in Xakas and Middle Chulym.

(55) “8” in Nganasan and Enets

Nganasan (Helimski 1998a:500)*sʲiti* “2” *sʲitiðətə* “8”Enets (Künnap 1999a:19)*siðe* “2” *sidiʔeto* “8”

Selkup explicitly shows this pattern for both “8” and “9”. Their etymologies are transparent to Selkup speakers.

(56) Selkup “8” and “9” (Helimski 1998b:563)

“8” *šʲitti čʲäykitilʲ* *köt* [2 lacking 10]“9” *ukkir čʲäykitilʲ* *köt* [1 lacking 10]

In Mator a more typical situation emerges, where again “8” and “9” have become opaque and their etymologies partially obscured.

(57) “8” and “9” in Mator (Khelimskij 1993b:377)

op “1” *kídde* “2” *kitn-déite* “8” *optinjaschto* “9”

Other languages in north-central Siberia show this pattern, e.g. Yeniseic and Ob-Ugric. Thus, in Ket both “8” and “9” show this; like Selkup the etymology of these numerals remains transparent to speakers. This is unlikely to be a coincidence, and one must assume that there has been a direction of influence from one to other, most likely, although far from assuredly, from Selkup to Ket.

(58) “8” and “9” in Ket (Werner 1997a:125)

²*qɔʔk* (anim) ¹*qusʲ* (inan) “1” *qusʲam bənʲsʲaj ʲqo* “9” [one-without-ten]
¹*in* “2” *inam bənʲsʲaj ʲqo* “8” [two-without-ten]

Kott on the other hand, as well as Khanty only show this pattern with the numeral “9”.

(59) “9” in Khanty (Abondolo 1998:370; Honti 1984:77)

ej “1” *jerjeɲʷ/iirjeɲʷ* “9” < **ej+ör.t-jeɲʷ* “one short of ten”

(60) “9” in Kott (Werner 1997b:70)

hu:ča “1” *čumna:ga* “9” < **hu:ča mon ha:ga* [one not ten]

Note that the word for “8” in Kott is *χalto:ŋa* < **χel+toŋa* literally “5+3”. Thus Kott is like the graphic system of Roman numerals where “8” is 5(+)3 [VIII] but “9” is “1 from 10” [IX].⁹

This type of numeral system is lacking in Turkic, which has independent words for “1”, “2”, “8”, “9”, e.g. Xakas *plɪr lɪl sɪɣlɪs toɣɪs*, respectively. Evenki *ʃu:r* “2” and *ʃapkun* “8”, although beginning with the same initial sound, are probably not related.

Various Samoyedic (61) and Ob-Ugric (62) languages of central Siberia show plural (or dual) forms of nouns after numerals, as well as case concord.

(61) Plural/dual after numerals in Samoyedic

i. Nganasan (Helimski 1998a:495)

nakürəʔ basutuəʔ

3 hunter-PL

“three hunters”

ii. Enets (Künnap 1999a: 36)

sɪðe kora-hiʔ

2 reindeer.oxen-DL

“2 reindeer oxen”

iii. Kamas (Simoncsics 1998:589)

nayur koʔbdo-t

three daughter-PL

“three daughters”

Note that in Khanty, plurality is optional after numerals and the noun may rather appear in a singular form.

(62) Plural after numerals in Khanty

Khanty (Khonti 1993:314)

ʈäpət kâr ~ ʈäpət kârət “7 bull(s)”

⁹ Thanks to M. R. Bachvarova (personal communication) for this observation.

7 bull 7 bull-PL

In Turkic, singular is found after a numeral even with animate beings, but these latter often trigger semantic plural agreement.

(63) Singular noun and plural verb agreement with numeral in Turkic

Dolgan (Ubrjatova 1985)

iis at tur-al-lar

three horse stand-AOR-PL

“three horses stand”

Note that in modern urban varieties of Xakas, possibly under influence of Russian, plural after numerals may be found (Anderson 2004a).

In Evenki, plural after numerals and concord are common. Evenki thus patterns with Samoyedic in this way.

(64) Plural nouns after numerals + case concord with numerals in Evenki

Evenki (Bulatova & Grenoble 1999:18; 8)

ilan metri-l

three meter-PL

“three meters”

tunŋa-βa ñami:-βa

five-ACC female.deer-ACC

“five female deer”

Yeniseic languages, like their northern central Siberian neighbors Samoyedic and Evenki, also generally show plural forms after numerals.

(65) Plural after numerals in Yeniseic

i. Kott (Werner 1997b:72)

in čapkej

“je zwei Hunde” < ²čaʔp “dogs”

ii. Ket (Werner 1997a:127)

¹a ²tʌʔŋ

six stone.PL-PL “six stones”

3.3 ‘Relational’, ‘relator’, ‘postpositional’, or ‘auxiliary’ nouns

Among the most characteristic features of the nominal systems of the languages of central Siberia is the use of so-called ‘relational’, ‘relator’, or auxiliary nouns that serve as inflectable stems to expand the system of local and directional case semantics. These often appear in a head relation to the lexical noun, which may be overtly marked in a genitive case form, particularly if it is definite. Such auxiliary noun forms are found especially in

Samoyedic, Turkic, and Tungusic.

(66) Relational nouns in Samoyedic

i. *Enets* (Künnap 1999a:30)

<i>pə-ʔ ir-ʔ</i>	<i>pə-ʔ ir-on</i>
tree-GEN under-LAT	tree-GEN under-LOC
“to under the tree”	“under the tree”

ii. *Enets* (Künnap 1999a:30)

<i>pə-ʔ ir-oð</i>	<i>pə-ʔ ir-oon</i>
tree-GEN under-ABL	tree-GEN under-PROL
“from under the tree”	“through under the tree”

iii. *Selkup* (Helimski 1998b:571)

<i>poo-n il-qin</i>	<i>poo-n il-qini</i>
tree-GEN below-LOC	tree-GEN below-ABL/ELAT
“under the tree”	“from under the tree”

(67) Relational nouns in Tungusic and Turkic

i. *Evenki* (Bulatova & Grenoble 1999:13)

urə ojo-du:-n
 mountain top-DAT-3
 “at the top of the mountain”

ii. *Tuvan* (Sat 1997:387)

xem kidinda
 river by-3-LOC
 “by the river”

In Yeniseic these elements mainly appear in lexicalized adverbial expressions or postpositions, e.g. Ket *ʌlʲ-ga* “out[side]” *ʌlʲ-a* “out [there], beyond” *qot-ka* “in front”, *ətka* “on”, etc. (Werner 1997a:145).

4 *Verb morphology*

In the following paragraphs, I intend to give but a fraction of the detail involved in the vastly complex verbal systems of the central Siberian languages. This involves first a brief description of certain voice, *Aktionsart* and modal categories found in central Siberian languages and then a short presentation on the encoding in the verb form of properties of the object in

transitive constructions. Before turning to this, I first give an example of the diverse kinds of categories that one finds in the verbal systems in the central Siberian languages, viz. the use of a suffix meaning “to smell of something”. This is found in such a range of central Siberian languages as Tofa, Evenki, and Selkup.

(68) “to smell of X” in central Siberian languages

i. Tofa (Rassadin 1978:239; ASLEP field notes)

balik-si “smell of fish”

ii. Evenki (Bulatova & Grenoble 1999:27)

ollu-mu:- “smell of fish” cf. *ollo-mo*:- “go fishing” *ollo-mi*:- “catch fish”

iii. Selkup (Helimski 1998b:572)

kana-ñi

“smell of dog”

Some Samoyedic languages e.g. Enets or Selkup (cf. Helimski (1998b:566)) have another sensory verbs, “to be heard Xing”.

(69) More sensory verbs in Samoyedic

Enets (Künnap 1999a:29)

meðo-ʔ taha-n tia-ʔ dʲaðo-õnu-ðuʔ

tent-GEN behind-LOC reindeer-PL walk-AUDIT-3PL

“the reindeer are heard walking behind the tent”

4.1 *A sample of inflectional and derivational voice, Aktionsart, and modal categories*

All central Siberian languages to some degree or another encode a range of verbal categories within the derivational and/or inflectional apparatus available. In addition, the voice category ‘reciprocal’ with extended meanings of “X together” or “help X” is found in numerous central Siberian languages. It is for example found in all the Turkic languages of the region, here represented by Tofa.

(70) Reciprocal in Turkic

Tofa (Rassadin 1978:135)

karlaʃ-

kõtiriʃ-

brush.snow-RECIP	lift-RECIP
“brush snow of e.o.”	“lift together”

Evenki also used morphological reciprocals, as is typical of Tungusic.

(71) Reciprocal in Tungusic

Evenki (Bulatova & Grenoble 1999:10)

*omo:gi-tʃa:-r əβikə:n-mə tantʃa-**ma:t**-tʃa-tʃa:-tin*
 boy-DIM-PL toy-ACC take.away-RECIP-IMPF-PST-3PL
 “the little boys took the toy from one another”

Another commonly found pan-Siberian feature, also shared by Tungusic and Turkic in central Siberia is a desiderative mood affix.

(72) Desiderative in Tungusic

i. Evenki

*ɨŋə-**mu:*** *ʒaβa-**ksa***
 laugh-DESID catch-DESID/ATT
 “want to laugh” “want/try to catch”
 (Bulatova & Grenoble 1999:10)

ii. Udihe

*xai tukä-**mu:i**-mi*
 again run-DES-1
 “I want to run again”
 (Nikolaeva/Tolskaja 2001:319)

(73) Desiderative in Turkic

i. Tofa (Rassadin 1978:228)

oŋ *bar-**iksa**-sa* *bar-sin*
 he go-DES-COND go-3.IMP
 “if he wants to go, let him go”

ii. Tuvan (Anderson & Harrison 1999)

ol *ulustar* *čedip* *keliksep* *tur(u)gan*
 that people-PL arrive-CV CLOC-DES-CV AUX-PAST.I
 “they wanted to come”

Sayan Samoyedic also had a morphological desiderative, as seen in the following Kamas forms.

(74) Desiderative in Kamas (Sayan Samoyedic)

kono-nza-lʲə-m *konō-nzə-lʲa-m*

sleep-DESID-PRES-1
 “I would like to sleep”
 (Simoncsics 1998)

sleep-DESID-PRES-1
 “I would like to sleep”
 (Künnap 1999b:32)

Two other common features of central Siberian languages are a conditional conjugation and a special imperative conjugation. Thus, for example in Dolgan, the conditional, representing the Old Turkic form, is *-DAr*.

(75) Dolgan conditional (Ubrjatova 1985:175)

buol-lar-bin
 be-COND-1
 “If I am”

buol-ba-tar-bin
 be-NEG-COND-1
 “If I am not”

Both conditional inflection (76) and special imperatives (77) are found in Altai-Sayan Turkic languages of southern central Siberia.

(76) Conditional inflection in Altai-Sayan Turkic

Xakas (Field notes)

at-sa-m
 Shoot-COND-1
 “if I shoot”

kör-ze-ŋ
 see-COND-2
 “If you see”

(77) Second singular imperative in Altai-Sayan Turkic

Middle Chulym (ASLEP field notes)

at-kil
 Shoot-IMP
 “shoot”

Evenki has a special second imperative form, similar in shape to the above mentioned Turkic one. Note that Evenki also has conditional forms (Bulatova & Grenoble 1999:33).

(78) Second singular imperative in Evenki

Evenki (Bulatova & Grenoble 1999:32)

taɣə-mə'lčə-kəl otu:-βa ila-ma:lčə-kal
 stand.up-SUDN/QCK-IMPER2SG fire-ACC light-SUDN/QCK-IMPER2SG
 “stand up quickly and light the fire”

Other central Siberian languages with special imperative inflection include Khanty and Selkup. Conditional inflectional is also found in Selkup. Nganasan, too, has an inflectional conditional. It makes use of the areally common pattern of complex sentence structure with a locative case marked verb to form conditional sentences; see 5.3 below for more on this system of subordination in central Siberian languages. Note that person and case are fused in these Nganasan forms.

(79) Conditional forms in Nganasan (Helimski 1998a:508)

<i>kotu-biinə</i>	<i>kotu-biinünə</i>
kill-COND.1	kill-COND.FUT.1
“if/when I kill”	“if I will kill”

Nganasan is typical of central Siberian in its use of a very elaborate set of verbal augments to encode a wide range of aspectual, *Aktionsart*, and modal distinctions, including the following, perfective, progressive, duratives, habituais, inchoatives, desideratives, and various other distinctions.

(80) Nganasan verbs showing stem, affix alternations (Helimski 1998a:510-511)

kəmə > “catches”
 >> *kəmiʔəmə* “I have caught”
 >> *kəmiüütüm* “I am catching”
kotugə “kill repeatedly, many times”
kotumumba “kills usually”
kodutə “is in the process of killing, is trying to kill”
koduʔkə “starts killing”
kotunantu “wants to kill”
koduʔhʷan “is going to kill”

Note the characteristically Samoyedic stem-form alternation attested in the above Nganasan forms.

An ‘abessive’ form marking not yet accomplished but anticipated action is found in Nganasan, Enets (81) and in the Altai-Sayan Turkic languages (82), where it is called ‘unaccomplished’ (e.g. Xakas).

(81) Samoyedic abessive: Enets example from Künnap (1999a:27)

əkke nə dire-wəaj
 that woman live-ABESS
 “the woman has not yet lived”

(82) Altai-Sayan Turkic unaccomplished Xakas example (Field Notes)

par-ɣalax-tar
 go-UNACMPL-PL
 “they have not yet gone”

4.2 *Object indexing in the verb*

Another feature commonly found in the verbal systems of the central Siberian languages is the encoding of some (subset of) features associated with verbal objects in semantically transitive or two-argument verbs. The Samoyedic, Ob-Ugric, and Yeniseic languages of central Siberia all mark some property of the object within the verb form. The types of features marked however, vary considerably among the individual languages. The object-marking languages of central Siberia thus fall into at least three broad sets with respect to systems of object indexing in the verb.

One set of central Siberian languages with respect to object marking includes those that basically mark in the verb primarily whether a definite or anaphoric object is present in the clause. Such a system is found for example in Enets and Selkup, as well as Kamas.

(83) Object marking in Enets (Künnap 1999a:14)

- | | |
|---|--|
| i. <i>meʔ kaara-bo</i>
tent strike-AOR.1SG.DEF
“I struck the tent” | <i>meðo-ʔ kaara-ðoʔ</i>
tent-GEN strike-AOR.1SG.INDEF
“I struck a tent” |
| ii. <i>dʲaha-ʔ motə-ðə</i>
river-PL cross-AOR.3SG.DEF
“he crossed the rivers” | <i>dʲahu-ʔ motu-ŋə</i>
river-GEN.PL cross-AOR.3SG.INDEF
“he crossed (some) rivers” |

Note the use of the genitive case on the indefinite object as well as the indefinite conjugational markers in Enets. Thus, the definiteness of the object is indexed in two separate ways formally.

Selkup forms occur in $\pm$ object pairs such as the following four paradigms. Like Enets, the verb encodes the person of the subject of the verb and the presence or absence of a definite object.

(84) Object marking in Selkup (Helimski 1998b:567)

Selkup *qo-* “find/see”

	<u>present</u>	<u>future</u>	<u>past</u>	<u>narrative</u>
1subj	<i>qoŋak</i>	<i>qontak</i>	<i>qoosak</i>	<i>qompak</i>
1obj	<i>qoŋam</i>	<i>qontam</i>	<i>qoosam</i>	<i>qompam</i>
2subj	<i>qoŋanti</i>	<i>qonnanti</i>	<i>qoosanti</i>	<i>qommanti</i>
2obj	<i>qoŋal</i>	<i>qontal</i>	<i>qoosal</i>	<i>qompal</i>
3subj	<i>qoŋa</i>	<i>qonta</i>	<i>qoosa</i>	<i>qompa</i>
3obj	<i>qoŋiti</i>	<i>qontiŋiti</i>	<i>qoositi</i>	<i>qompati</i>

Kamas likewise marked the presence of a definite object in the verb form; sometimes cognate forms with similar functional distribution may be found, suggesting a retention of an earlier form.

(85) Kamas object marking (Simoncsics 1998:593)

<i>paarga-l'a-t</i>	<i>paarga-t</i>	<i>paarga-na-t-sa</i>
cut-PRES-OBJ	cut-OBJ	cut-COND-OBJ-COND
“s/he cuts it”	“cut it!”	“she would cut it”

A further subgroup of object-indexing languages of central Siberia is found in which the number but not the person of an object is indexed in the verb. Such a system is characteristic, for example, of Nganasan and Khanty.

(86) Nganasan object number agreement (Tereshchenko 1993:355)

konduʔsutə-gəj-ñe
lead.away-DL-1
“I will lead those two away”

(87) Khanty object number agreement (Honti 1988:166-167)

<i>wěsem</i>	<i>wěsłäm</i>	<i>wěsɣəläm</i>
take-IMPF-DEF.OBJ-1	-DEF.PL.OBJ-	-DEF.DL.OBJ
“I take it”	“I take them”	“I take those 2’

Finally, a last subgroup is found in which the person of the object may be indexed in the verb. This is found in only in Yeniseic languages, and best attested in Ket and Kott.

(88) Personal object agreement in Yeniseic

i. Kott (Verner 1997c:199; 201)

<i>ač-a-t^hataj-aŋ</i>	<i>hamaʔ-u-t^h-ol-ok-antoŋ</i>
SF-3M-hit-1	love-2-SF-PST-SF.PST-1PL
“I hit him”	“we loved you”

ii. Ket (Verner 1997a:185)

<i>du-t-tet</i>	<i>diñ-di-tet</i>	<i>du-k-tet</i>	<i>diñ-gu-tet</i>
3M.PRES-1-hit	3M.PST-1-hit	3M.PRES-2-hit	3M.PST-2-hit
“he hits me”	“he hit me”	“he hits you”	“he hit you”

Note that the semantic role of the element indexed as the object in these language is not limited to just semantic patients or themes. Rather, especially in Selkup (89) and Northern Yeniseic (90), the presence of an animate non-subject often triggers an overt indexing in the verb, regardless of whether this ‘object’ is direct (patient), indirect (recipient, source, goal), or a benefactive (beneficiary). Such a pattern is not uncommon cross-linguistically (cf. Anderson 1995; 1997b).

(89) ‘Object’ agreement in Selkup (Helimski 1998b:573)

Mat tımña-ni-nik na alako-m iiti=ralti-s-am on-äk č’ââti

I brother-1-DAT/ALL this boat-ACC take-CAUS-PST-1 self-1.GEN for
 “I made my brother take this boat for me”

(90) ‘Primary object’ agreement in Yugh (Werner 1997c:176)

<i>d-b-i-gaŋ-a^h:χ</i>	<i>k-ɔŋ-m-in^j-a^h:χ</i>
1-INAN-EPEN/PRES-2pl-give	2-PST.3PL-INAN-PST-give
“I give it to you all”	“you gave it to them”

Of course, there is a fourth group, comprised of Turkic and Tungusic that do not mark object in the verb form at all. The functional contrast of formal definite vs. indefinite object marking common in the north-central Siberian languages (Enets, Selkup) is not encoded in the verb in these languages, but rather through such morphosyntactic devices as presence vs. absence of accusative case marking.

5 *Syntax*

The syntax of the languages of central Siberia stands out among the areas of structure most in need of further investigation. For some languages, we will probably always have no idea about the syntax, e.g. Mator, Arin, Assan, or Pumpokol, or will know only very little, e.g. Kott or Kamas. Other languages remain open to study in so far as there are speakers remaining, but the languages are at such an advanced moribund state, that only little could ever really be gleaned, and what does exist is likely to be heavily influenced by Russian or other locally dominant languages. Such a situation exists, for example, in Enets or Tofa.

In the sections below I offer some brief comments on a range of topics in the syntax of the languages of central Siberia. I begin first with some comments on basic clausal typology (5.1) and then turn to a brief examination of verbal negation (5.2). I then give a cursory statement on the use of non-finite morphology in complex sentence structure in modern central Siberian languages (5.3) and then finish with a discussion of the inflectional typology of auxiliary verb constructions in these languages (5.4).

5.1 *Clausal typology*

While a variety of constituent or word orders may be found in a given central Siberian language, basic word order (or clausal constituent order) is SOV. This pattern is found as the dominant one in languages across the region.

(91) SOV in Turkic

i. Tuvan (Anderson & Harrison 1999)

<i>ol</i>	<i>ulustar</i>	<i>čedip</i>	<i>keliksep</i>	<i>tur(u)gan</i>
that	people-PL	arrive-CV	CLOC-DES-CV	AUX-PAST.I

“they wanted to come”

ii. Dolgan (Ubrjatova 1985:183)

min taba et-in hie-čči-bin
 I reindeer meat-3.ACC eat-HAB-1
 “I usually eat reindeer meat”

(92) SOV in Tungusic

Evenki (Bulatova & Grenoble 1999:10)

omo:gi-tfa:-r əβikə:n-mə tantfa-ma:t-tfa-tfa:-tin
 boy-DIM-PL toy-ACC take.away-RECIP-IMPF-PST-3PL
 “the little boys took the toy from one another”

(93) SOV in Samoyedic

i. Selkup (Kuznetsova et al 1980:367)

Tat, ɔ̃ña na sənky-p qaj-sä qəs-sa-l

You d-i-l that wood.grouse-ACC what-INS kill-PST-2

“You, daughter-in-law, what did you kill the wood grouse with”

ii. Enets (Künnap 1999a:42)

tə-saj ənče təa kora-da badi-ɕʰ katta-ða

reindeer-ADJ man reindeer ox-3>SG hunt-GER take-AOR.3

“the man with reindeer would take his reindeer-ox hunting with him”

iii. Nganasan (Tereshchenko 1973:31)

Mənə babi didʹüm-əndu-m

I w.r. shoot-PRES.PROG-1

‘I am shooting a wild reindeer

(94) SOV in Yeniseic

Ket (Minaeva 2003:48)

əʔ t̪ uʔ t-sáld-kù-a-bet-n

we you 1-pity-2-PRES-SF-PL

“we pity you”

Note that SOV word order is obligatory in Ket when there would be an otherwise ambiguous reference to person/number of subject and object in both the verb and the noun phrases (e.g. they > them when both are animate or both inanimate).

Central Siberian languages tend to show all of the typical phrase structure characteristics commonly found in Eurasian SOV languages, namely Adjectives, Numerals, Genitives and Demonstratives all precede their accompanying Noun, and Auxiliary Verbs tend to follow Lexical Verbs and Relative Clauses precede head nouns. One notable exception is the negative auxiliary common to Samoyedic languages and Evenki which usually has the order Aux V not V Aux, as is typically the case in the languages across the region (see also 5.2 and 5.4 below).

One way in which the languages of central Siberia show considerable variation is the degree of concord seen between adjectives and nouns. There is roughly speaking a cline from North to South from more to less concord. Thus, in Nganasan and Evenki, both number and case concord is found, while in Ket,

only number concord is found, while in Selkup and the Turkic languages (here represented by Xakas), no such concord is attested.

(95) Concord in central Siberian languages

	<u>Number Concord with Adjective</u>	<u>Case Concord with Adjective</u>
Nganasan	+	+
Evenki	+	+
Ket	+	-
Selkup	-	-
Xakas	-	-

(96) Case and number concord in Nganasan (Helimski 1998a:511)¹⁰

i. <i>nəŋhə taa</i> Bad reindeer	<i>nəmbə taa</i> bad.II reindeer
ii. <i>nəmbə-j taaj</i> bad.II-PL.ACC reindeer-PL.ACC	<i>nəmbu-ʔ taaʔ</i> bad.III-PL.GEN reindeer-PL.GEN

(97) Case and number concord in Evenki

Evenki (Bulatova & Grenoble 1999:8)
akin-mi: min-du: tunŋa-βa ñami:-βa ani-ra-n
 Father-1 I-DAT five-ACC female.deer-ACC give-AOR-3SG
 “my father gave me five female deer”

Evenki (Bulatova & Grenoble 1999:57)
gugda-l-du: mo:-l-du:
 high-PL-DAT tree-PL-DAT
 “at the tall trees”

¹⁰ According to Helimski (1998), concord like this is only found with the grammatical cases (Acc, Gen) in Nganasan. Otherwise the structure looks like the following Adj-Gen Noun-Case (agreeing in number, with the adjective in the genitive case always):

Nganasan (Helimski 1998a:511)
nəmbə taa-tə *nəmbu-ʔ taa-tiʔ*
 Bad.ii reindeer-LAT bad.iii-PL.GEN reindeer-PL.LAT

(98) Number Concord in Yeniseic

i. Ket (Werner 1997a:331)

<i>ugde i'</i>	<i>ugde-ŋ ek-ŋ</i>
long day	long-PL day.PL-PL
“long day”	“long days”

ii. Yugh (Werner 1997c:87)

<i>udgi biŋ-dij</i>	<i>ugdi-ŋ biŋ-in-dijə:r</i>
long hand-GEN.III	long-PL hand-PL-ABL.III
“of the long hand”	“from the long hands”

5.2 *Negation*

Negative constructions are also highly varied across the languages of central Siberia. Virtually all of the major means of forming negatives cross-linguistically are found here, namely negative auxiliaries, negative affixes, and negative particles, as well as some inherently negative verb forms.

The northern Samoyedic languages make use of a conjugated negative verb. The corresponding lexical verb appears in a predetermined ‘connegative’ or marked negative non-finite form. The conjugated negative in Samoyedic generally precedes the lexical verb it has scope over. Selkup, possibly under Russian or Ket influence has innovated a non-inflecting preverbal particle. Kamas shows a range of forms, suggesting an older, more northern-like system undergoing breakdown to a more Selkup style system.

(99) Older style negative in Kamas

i. Kamas (Simoncsics 1998:594)

<i>man e-m šo-ʔ</i>	<i>tan e-l-lə šü-ʔ</i>
I NEG-1 come-CONEG	you NEG-PRES-2 enter-CONEG
“I don’t come”	“you don’t enter”

ii. Kamas (Künnap 1999b:25)

<i>e-m nere-ʔ</i>
NEG-1 be.frightened-CONNEG
“I am not, will not be frightened”

(100) Newer style negative in Samoyedic

Kamas (Simoncsics 1998:594)

<i>oʔb-l</i>	<i>=ej</i>	<i>moo-l'a-m</i>
--------------	------------	------------------

collect-GER =NEG AUX-PRES-1
 “I can’t collect”

Ket, apart from a small number of verbs where the element appears to have been incorporated (101ii), uses a preverbal negative particle immediately before a finite verb form.

(101) Negative marking in Ket

i. Ket (Werner 1997:184)
bu bəñ da-il'-iden
 S/he NEG 3FEM-PST-cry
 “she didn’t cry”

ii. Ket (Werner 1997:)

<i>bəñbaɤɤj</i>	<i>bəñguɤɤj</i>
NEG-1-want	NEG-2-want
“I don’t want”	“you don’t want”

Turkic languages on the other hand, generally use either a negative affix or more rarely a (sometimes secondarily conjugated) negative particle. In either case, these appear after the lexical verb or verb stem they have scope over. Xakas will serve as an example for Turkic. There are three different verbal negative affixes in Xakas, as well as one conjugated negative particle. The three negative suffixes (Xakas like all Turkic languages has no non-reduplicative prefixes) are *-BA*s, *-Bin* and *-BA*. The first suffix is used in opposition to the future *-A/ir* and is found in the future and the subjunctive. The second suffix is the negative converb and occurs in non-finite forms and tenses originally having a converb form (e.g. the present). The last one is the default form and occurs in all other affixally marked negative forms. The negative particle is *čoyil* < **čoq=ol* (the latter still found in Tuvan), is used in a small number of forms including the negative habitual present. It is also found in Middle Chulym.

(102) Xakas negative formations

i. Xakas (Field Notes)

<i>parbaabis</i>	<i>oynabinčam</i>
go-NEG-PST-1PL	play-NEG.CV-PRES-1
“we didn’t go”	“I’m not playing”

ii. Xakas (Field Notes)

<i>körbester</i>	<i>irl-i čoyilbin</i>
see-NEG-PL	sing-CV NEG-1
“they won’t see”	“I don’t sing”

There is an auxiliary verb that is used in Tofa in a semantically negative meaning, but lacking a formal negative marker. This is the negative capabilitive AVC in *-Ip čada*

(103) Inherently negative forms in Tofa

i. Tofa (Rassadin 1978:166)

<i>tup</i>	<i>čada-di-m</i>
find.CV	NEG.CAP-REC.PST-1
“I couldn’t find (it)”	

ii. Tofa (Rassadin 1997)

<i>men al-ip čada-di-m</i>
I take-CV NEG.CAP-REC.PST-1
“I could not take”

5.3.1 *Case-marked clausal subordination*

As pointed out by Anderson (2001b, 2002, 2003a), case-marked verbs are a hallmark of complex sentence structure in the indigenous languages of Siberia. All Central Siberian languages show[ed] this system to some degree. However, any variety that is or was under heavy influence of Russian may show little or no trace of this, e.g. S. Selkup, Abakan Xakas, etc.

There are several different formal subtypes and numerous functional subtypes of case-marked clausal subordination. Thus, cases generally attach to a nominalized verb form, which may index subject through possessive morphology. This is found in Selkup, Kamas, Evenki, and all Central Siberian Turkic languages.

(104) Case Marked Clausal Subordination [CMCS] with Participles in Evenki

i. Evenki (Nedjalkov 1997:47)

<i>si suru-če-le¹¹-s ŋinakin-mi ñan gogo-l-lo-n</i>
you go.away-PRTCPL-ALL-2 dog-1SG.POSS again bark-INCH-NFUT-3

¹¹ Note that *-če-le* is generally listed among ‘converb’ endings.

“after you had left, my dog began to bark again”

ii. Evenki (Nedjalkov 1997:51)

min-duk pekture:vun-me ga-na-duk-in bega itten-e-n
 I-ABL gun-ACC take-PRTCPL-ABL-3 month PASS-NFUT-3
 “a month had passed since he took my gun from me”

iii. Evenki (Nedjalkov 1997:51)

bira dagadun o:-ri-du-v so:t eduuni-l-le-n
 river near become-PRTCPL-DAT-1 very blow.wind-INCH-NFUT-3
 “when I found myself near the river, a strong wind began to blow”

iv. Evenki (Nedjalkov 1997:53)

ajat haval-na-li-v min-du pekture:vun-me bu-re
 good work-PRTCPL-PROL-1 I-DAT gun-ACC give-NFUT
 “they gave me a gun because I’d been working well”

These constructions in Dolgan are extensively discussed in Ubrjatova (1985:160ff.). They are found in all Turkic languages.

(105) CMCS in central Siberian Turkic

i. Dolgan (Ubrjatova 1985:78)

taksarbar
 go-AOR-1.DAT/LOC
 “when I leave”

ii. Dolgan (Ubrjatova 1985:162)

min d^(j)ie-bit-ten bar-bišit-tan huruk il-a ilik-pin
 I house-1-ABL go-PRTCPL-ABL letter get-CV NEG.AUX-1
 “since I left my house, I haven’t gotten any letters”

iii. Tuvan (Anderson & Harrison 1999:73)

<i>men</i>	<i>kel-gen-im-de</i>	<i>ažildaar men</i>
I	come-PST.PRTCPL-1-LOC	work-PRES/FUT 1
“when I come (here), I work”		

Kamas too reflects this areally common construction within its system of complex sentence formation.

(106) CMCS in Kamas

- i. Kamas (Simoncsics 1998:592)
man amor-bi-ñi di šoo-bi
 I eat-PST.PRTCPL-1.LAT/LOC s/he come-PST
 “while I was eating, s/he came”
- ii. Kamas (Künnap 1999b:12)
də būzⁱ-əm am-bī-nan žⁱōr-la-l
 this old.man-ACC eat-PST.PRTCPL-2.LAT/LOC cry-FUT-2
 “when you eat this old man, you will cry”
- iii. Kamas (Künnap 1999b:36)
karo-mə-ndə mā-də tərli-le šō-bi
 open-PST.PRTCPL-3.LAT/LOC tent-LAT roll-GER AUX-PRET
 “when it opened, he came rolling into the tent”

Selkup utilizes both a range of verbal nouns and a variety of case forms to mark a number of functional subtypes of subordinate clauses (causal, temporal, etc).

(107) Selkup CMCS

- i. Selkup (Kuznetsova et al 1980:392)
qälⁱtyry-ptä-nōqo natqo na suryp qətty-nta-m
 hunt.often-ACTION.NOUN-1.TRANSLAT because this animal kill-FUT-1
 “because I hunt often, I kill animals”
- ii. Selkup (Kuznetsova et al 1980:392)
sumpykkoⁱlymp-yptä-nōqo natqo sōⁱ-my passēmpa
 sing.a.lot-ACTION.NOUN-1.TRANSLAT because throat-my hurt
 “because I sang a lot, my throat hurt”
- iii. Selkup (Helimksi 1998b:576)
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”

Another group of central Siberian languages, attach the cases not to nominalized verbs, but either directly to bare-stems (or perhaps Ø-nominalized forms) as in the following Enets form, or a semi-finite form as in Yugh.

(108) Case Marked Clausal Subordination with uninflected Stem in Enets

Enets (Künnap 1999a:35)*sIra? niñ kodia-hað-oñ ηo-ñ desuma?*

snow-GEN on sleep-ABL-PX.1sg leg-1SG get.sick-AOR.3SG

“since I was sleeping on the snow, my leg got sick”

(109) Case-marked clausal subordination in Yugh (Werner 1997:236)

u kidagej ku-daχ-diηa:r

you here 2-live-ABL

“since you lived here”

In Ket and Yugh case marking may also be found on finite verbs. The function of the subordinate clause type is indexed by the case, and this attaches to the head of the clause it has operator scope over. Many different formal and functional subtypes of case marked clausal subordination are found in Ket.

(110) *-diηalʹ* Ablative → “after”, “since”i. Ket¹² (Werner 1997b:353)

bu ətnas du yaraq-diηal dɔŋ sɪkŋ u-γɔñ
 he we-INS/COM I-SEP-PRES-live-ABL three year.PL III-go
 “three years have passed since he’s been living with us”

ii. Ket (Werner 1997b:353)

at kisʲeŋ (t)-lɔver-a-vet-diηal iŋn sɪkŋ u-γɔñ
 I here 1-work-PRES-SF/ITER-ABL two year.PL III-go.PST
 “since I’ve been working here, two years have passed”

(111) *-diηta* Adessive → “because”Ket (Werner 1997b:353)

at t-lɔver-a-vet-diηta at saʔj iñ-d-aq
 I 1-work-PRES-SF-ADESS I tea PST/PRF-1-give
 “because I work, give me tea”

¹² Thanks to Edward Vajda for clarifying certain issues in the analysis of Ket grammar for me.

(112) *-dita* Benefactive → “because”

Ket (Werner 1997c:353-354)

ar^j i:s t-taŋ-u-γ-a-vet-dita, ap dɔγɔt al-il-git
 I meat 1-bring-2-MTS-PRES-SF-BEN I.GEN for cook.soup-PST/PRF-SF
 “because I brought you meat, cook me some soup”

(113) *-ka* Locative → “when”, (+neg) “before”

Ket (Werner 1997c:354)

ɔtn bəñ lɔvet-dʌŋ-g-a-kan bu:ŋ bəñ qa-ñ d-i-m-bes-in-ka
 we NEG work-1PL-MTS-PRES-INCH they NEG EMPH/MOD I-PST-come-PL-LOC
 “we don’t start working until they have come”

(114) *-bes* Prolative¹³ → “while”

i. Ket (Werner 1997c:354)

bu da-lɔver-ɔl-bet da-ses-ta-bes
 s/he II-work-PST.PERF-SF II-sit-SF-PROL
 “she worked while sitting”

ii. Ket (Kostjakov 1976:61)

bu d-ʌla-ŋ-bu-γ-a-vet-bes kravat-d ət^j-ka ses-ol-ta
 he I-out-IIER/PL-RFLXV-MTS-PRES-IIER/SF-PROL bed-3 on-LOC sit-PST-PRET-SF
 “getting undressed he sat on the bed”

Note that Samoyedic languages also show formations of the first type (nominalized verb), and Turkic of the second type (bare stem) to a restricted degree.

(115) Nganasan CMCS (Helimski 1998a:507)

kotu-tu-ndənə
 kill-VN-LOC/LAT.1
 “when I killed”

¹³ Note this is often synchronically considered a ‘converb’ construction, in part because it is used in same subject constructions, see also below.

Note also that case and person are fused forms in Samoyedic, and interestingly often in Dolgan as well, but mainly constitute independently identifiable suffixal elements in Tungusic, Yeniseic, and Turkic.

Finally, as alluded to above, while the diffusion of the features that constitute the diagnostic characteristics of the Siberian linguistic area has occurred over numerous centuries or even millennia, there has been another, more recent and less lengthy, but nevertheless significant homogenizing force operative among the indigenous languages of Siberia, that in certain speech varieties has given rise to further structural convergence, namely the influence of the socially dominant Russian language, which the vast majority of indigenous Siberians speak fluently. In terms of the syntax of the complex sentence, this has resulted in newly emergent, Russian-type syntactic properties appearing commonly in the languages of the central Siberian area. Take, for example, the use of a clause-initial subordinator and a semantically vacuous or scope-less negative operator in the formation of certain kinds of temporally subordinate clauses in a range of modern varieties of various genetically unrelated central Siberian languages. These mark temporally subordinate clauses of the “until”- or “before”-type. Examples of this phenomenon may be found in Turkic (116), Yeniseic (117), and Samoyedic (118)

(116) Russian-style syntax of complex sentence in Abakan Xakas

i. Abakan Xakas (Anderson 2004a)

<i>poka</i>	<i>pis</i>	<i>par-ba-an-de</i>	<i>ib-zer</i>
until	we	go-NEG-PAST-LOC	house-ALL
“until we came home”			

ii. Abakan Xakas (Anderson 2004a)

<i>poka</i>	<i>pol-bas-tar</i>	<i>soox-tar</i>	<i>poka</i>	<i>туру-bas-pin</i>
until	be-NEG.FUT-PL	cold-PL	until	stand-NEG.FUT-1
“until it gets cold”			“until I stand”	

(117) Russian-style syntax of complex sentence in Yeniseic

i. Yugh (Verner 1997b:194)

ətn di-kij-i:r-ge-n poka bəñ us-ən-daŋ-e
 we 1-speak-PST-SF-PL R.until+ NEG sleep-PST-1PL-SF
 “we spoke until we fell asleep”

ii. Baklanixa Ket: (+neg, + subordinator)

dil'get o:l'gə *d-a:n-il-de-n* *as'ka* *es bən*
 Children outside I-play-PST-SF-PL SUBORD sky NEG

qonden *baŋ-diŋa*

get.dark-INF AUX.N-DAT

“the children played outside until the sky grew dark”

(Grishina 1977:105)

iii. Ket [village unspecified] (Kostjakov 1976:59)

as'ka *a(t) bən d-ik-si-vis,* *bu kinil'* *bən* *ɔ-γɔtn*
 SUBORD I NEG 1-PV -PRES-come he from.here NEG I-go

“until I come, he won't leave from here”

(118) Russian-style syntax of complex sentence in Selkup

i. Selkup (Kuznetsova et al 1980:404)

tary kanaŋ-my *ašša apste-nt-ap* *qonty-qo ašša ɔl'čɛ-nt-ak*
 while dog-1 NEG feed-FUT-1>OBJ sleep-INF NEG AUX.FUT-1

“I won't go to sleep before I feed my dogs”

ii. Selkup (Khelimskij 1993:371)

tat tarašša tant-iptää-qänti

you while.NEG find-ACTION.NOUN-2.LOC

“until/before you find”

In all of these sets of examples the following observations can be made: there is variation between a mixed structure with a case-marked verb, a clause-initial subordinator and a scope-less negative operator and a fully finite, case-less form, with the negative and clause initial subordinator. In less Russianized varieties, neither the clause initial subordinator nor the negative operator is found (119-120).¹⁴ Note that the Russian-Aleut mixed language Copper Island Aleut (121) also shows a construction similar to the one of Russian origin, which is given in (122).

¹⁴ E.g Northern Sel'kup is less Russianized than Southern and Middle/Central Sel'kup. In Yugh, there are not really less Russianized varieties, in this construction at least which clearly reflects Russian interference.

(119) Ostensible original construction in Abakan Xakas (Field Notes)

<i>min tur-yan-ja</i>	<i>soox pol-yan-ja</i>
I stand-PST-P/E	cold become-PST-P/E
“until I stand”	“before it gets cold”

(120) Ostensible original construction in Ket (Grishina 1977:105)

<i>dilgit d-a:n-is-ta-n qon-iy-o-v-yon</i>	<i>baŋ-diŋa</i>
Kids I-play PRES-SF-PL get dark STAT-PST-INAN-PST.INCH	AUX.N-DAT
“the kids played (outside) until it got dark”	

(121) Russian syntax in Copper Island Aleut (Golovko & Vaxtin 1990:103)

<i>ya včera abaa-l</i>	<i>poka ni=qaxčakčaa-l</i>
I yesterday work-PST	until NEG=get.dark-PST
“yesterday I worked until it got dark”	

(122) *poka ne* in Russian

<i>poka my ne</i>	<i>priš-l-i</i>	<i>domoj</i>
until... we NEG	come-PST-PL	homeward
“until/before we came (or come) home”		

Yugh and some Selkup varieties are/were fairly Russianized syntactically by the period of attestation. Subordinate clauses with clause-initial adverbial subordinators are the norm in these languages.

(123) Adverbial subordination in Selkup (Kuznetsova et al 1980:403)

kuššat təp mətqyn ɔmtɔ-sa kana-jty mačo-nty pakty-sɔtɔyn
 while he at.home sit-PST dog-3>PL forest-LAT run-PST.PL
 “while he sat at home, his dogs ran into the forest”

(124) Adverbial subordination in Yugh (Verner 1997b:194)

askej bam də:ne abay bile dɔŋ sikŋ
 when my.mother 1-DAT was.R three years
 “when my mother died I was three years old”

5.3.2 *Non-finite forms*

All Central Siberian languages make extensive use of non-finite derived verbal nouns, adjectives, and adverbs. Depending on the grammatical tradition,

these may be variously called participles, gerunds, converbs, verbal nouns, etc. The grammar of any given central Siberian language is likely to have ten commonly used forms. For example, Selkup makes use of the following non-finite verbal forms commonly

(125) Sample non-finite forms in Selkup (Khelimskij 1993:369)

PRS.PRTCPL	<i>pē-ntilʲ</i> “searching”
PST.PRTCPL	<i>qo-(m)pilʲ</i>
debitive	<i>qo-ps̄tilʲ</i>
destinative	<i>qo-pso</i>
negative	<i>qo-kuñč̄tilʲ</i>
infinitive	<i>qo-qo</i>
“for me to find”	<i>qo-qinō(qo)</i>
“before”	<i>qo-ku-ni tatti</i> “before I found”
PRS.GER	<i>qo-lä</i>
PST.GER	<i>qo-lä pū-lä</i>
NEG.GER	<i>qo-kuñč̄lik</i>

The northern Samoyedic languages also make extensive use of non-finite forms of verbs. Enets and Nganasan each use more than a dozen including the following:

(126) Sample non-finite forms in Enets (Tereshchenko 1993a:348)

PRTCPL →	<i>dʲireda</i> “living”
	<i>dʲirē</i> “having been alive”
	<i>dʲireβda</i> “one who must live”
	<i>dʲireβdaj</i> “one who has not yet lived”
GER →	<i>dʲiresʲ</i> “(while) living”
	<i>dʲirebh</i> “if/when live”
	<i>dʲireodʲ</i> “in order to live”

(127) Non-finite forms in Nganasan

Nganasan (Helimski 1998a:507)

kotumungətənə

“so that I do not kill”

Nganasan (Tereshchenko 1993b:354)

xuðurta-sa “harness”

xuðurtə-tuo PRS.PRTCPL
xuðurtə-sodⁱe PST.PRTCPL
xuðurtə-suðə “one who must harness”
xuðurtə-mə passive participle
xuðurtə-mə-tumaʔa “one who hasn’t yet harnessed”

Nganasan (Tereshchenko 1993b:354)

xuðurtəbü? “if/when harness”
xuðurtəbüʔnə “if/when I harness”

Xakas, like most central Siberian languages makes extensive use of non-finite verb forms. According to Anderson (1998), there are at least 14 such forms. These consist of a range of participles (including typologically unusual but areally common ones like unaccomplished/abessive or habitual) and converbs (including one meaning “as soon as”). Many of these are found in the system of case marked clausal subordination. Some examples are offered below.

(128) Some non-finite forms in Xakas

i. -GAn-dA [PRTCPL-LOC] → “because”

Xakas (Anderson 1998:78)

<i>naŋmır</i>	<i>čaa-p</i>	<i>sıx-xan-da,</i>	<i>min</i>	<i>kil</i>	<i>pol-ba-a-m</i>
rain	precipitate-CV	INCH-PST-LOC	I	come	CAP-NEG-PST-1

“because it (started to) rain(ed), I couldn’t come”

ii. -A/ir-GA[FUT-DAT] → “before”

Xakas (Anderson 1998:74)

<i>min</i>	<i>kil-er-ge</i>	<i>pes</i>	<i>odin</i>	<i>sal</i>
I	come-FUT-DAT	stove	firewood	put

“stoke the stove-fire before I come”

iii. -GAIAK-KA [UNACMPL-DAT] → “before”

Xakas (Anderson 1998:76)

<i>xınnıy</i>	<i>tus-tar pıs</i>	<i>töre-elek-ke</i>	<i>irt</i>	<i>par-yan-nar</i>
interesting	time-PL we	be.born-UNACMPL-DAT	pass	PRFV.II-PST-PL

“there were interesting times before we were born”

iv. -AlA → “as soon as”

Xakas (Anderson 1998:56)

<i>sin-I</i>	<i>kör-ele,</i>	<i>toxta-bis-xa-m</i>
you-ACC	see-CV	stop-PRFV-PST-1

“as soon as I saw you I stopped”

5.4 Auxiliary verb constructions

The languages of central Siberia all utilize auxiliary verbs to some degree. In certain languages, e.g. the Altai-Sayan Turkic languages, over twenty of these are used (Anderson 2003d); this number decreases as one heads north within central Siberia, but nevertheless a small number are found in each language. Dolgan is an obvious exception, reflecting, as it does in numerous ways, its more southern (and Turkic) origin.

Auxiliary verb constructions are here defined as consisting of minimally two components, a lexical verb element which contributes content semantics to the construction and an auxiliary verb which by definition has lost some of its content semantics and now serves to contribute some kind of operational semantics to the construction, encoding aspect, mood, tense, etc.

Given the large number of forms used as auxiliary verbs in the various central Siberian languages, it is hardly surprising that one finds most if not all of the verbs commonly used as auxiliaries cross-linguistically, as well as a range of verbs that are not commonly found in auxiliary functions. To the former category belong such verbs as “be”, “stand” “go”, “remain”, “give”, “sit”, “lie”, “come”, “walk”, etc. while to the latter category may be included such an unusual auxiliary as “spend the night”. Further, most of the functions commonly associated with auxiliary verb constructions across the languages of the world are found in one central Siberian language or another, as well as some functions less commonly associated with auxiliary verb constructions, for example, translocative, subject version, etc.

Typologically speaking, auxiliary verbs tend to follow their associated lexical verb in central Siberian languages, with the exception of the negative auxiliaries of Samoyedic and Evenki mentioned above. V Aux order is typical of SOV languages of Eurasia. In terms of inflectional typology, the most common pattern is the AUX-headed pattern (Anderson 1999, 2000), where the auxiliary is the inflectional or morphosyntactic head, and the lexical verb appears in some specific (usually converb or verbal noun) form (or a bare stem form). Split, LEX-headed and doubled inflectional patterns are found to a limited degree with particular constructions in individual languages.

Dolgan utilizes the characteristic Turkic V[erb] plus Aux[iliary] structure, with the lexical verb appearing in one of usually two converb forms, and the auxiliary bearing the tense/mood/aspect and subject markers.

(129) Inflection in Dolgan Auxiliary Verb Constructions [AVCs]

i. Dolgan (Ubrjatova 1985:153)

utuy-an bar-digina munnu-ta tiahaa-bit

sleep-CV AUX-PRTCPL.3.DAT nose-3.POSS snore/make.noise-PST

“when he fell asleep, he snored”

ii. Dolgan (Ubrjatova 1985:154)

ogo-to timir orok üstün kaam-a tur-but

child-3.POSS iron way along step-CV AUX-PST

“his child stepped along the iron path”

iii. Dolgan (Ubrjatova 1985:155)

min bu kihie-ke kinige-ni aag-an bier-bit-im

I this person-DAT book-ACC read-CV OBJ.VERS-PST-1

“I already ready the book to this person”

Such a pattern is found, as mentioned above, in the majority of constructions in Altai-Sayan Turkic as well, e.g. various Altai varieties or Shor.

(130) Inflection in North Altai AVCs

i. Tuba-kizhi (Baskakov 1966a:47)

<i>bir</i>	<i>kün</i>	<i>bis</i>	<i>arakılap</i>	<i>turarısta</i>	<i>Tiynči</i>
one	day	we	drink.wine-CV	AUX-PRTCPL-1PL-LOC	Tiynchi

<i>tur-a</i>	<i>d'ügürdi</i>
stand-CV	run-PST

“once when we were drinking wine Tiynchi [Squirrel-Hunter] (suddenly) stood up and ran”

ii. Qumandi-kizhi (Baskakov 1972:104)

<i>Bis</i>	<i>erte</i>	<i>tur-d-is</i>
We	early	stand-PRES-1PL

“we get up early”

iii. Quu-kizhi (Baskakov 1985:93)

Men andin beri ñan iy-di-m, lar anda
 I from.there from return PRF-REC.PST-1 they there

Turta-p t'ad-a kal-di
 live-CV PROG-CV DUR-REC.PST

“I returned from there, and they kept living there”

(131) Inflection in South Altai AVCs

i. Altai (Dyrenkova 1940:236)

bala kiygrip turi
 child cry-CV AUX

“the child is crying”

ii. Teleut (Baskakov 1958:89)

d'ar-diñ d'aka-zin-da kuznec ište-p otur-gan
 Steep.bank-GEN edge-3-LOC smith work-CV PROG-PST

“the smith was working on the (river) bank”

iii. Telengit (Baskakov 1958:87)

Ačin-a bol-or-do, altin-in al-ala, ayak aš-ka
 Hunger-CV AUX-PRTCPL-LOC gold-3.ACC take-CV bowl food-DAT

D'arad-ip d'i-r bol-up baz-ip d'ür-gen
 get-CV eat-P/F AUX-CV go-CV PROG-PST

“he was hungry, took his gold and was going around to get a bowl of grain”

(132) AUX-headed inflection in Shor AVCs

ii. Shor (Babushkin & Donidze 1966:476)

Men sook-ka too-p par-a čör-im
 I cold-DAT freeze-CV PRFV/TLOC-CV ALMST-1

“I am practically frozen”

Although the AUX-headed inflectional pattern predominates in Altai-Sayan Turkic, it is not the only one. The relatively uncommon LEX-headed pattern is seen in the Shor probabilitive, with tense and subject on the lexical verb.

(133) LEX-headed inflection in Shor AVCs

Shor (Nevskaja 1993:35)

<i>üş</i>	<i>kün</i>	<i>ertip,</i>	<i>aylanmaan</i>	<i>polzam</i>
3	day	pass-CV	return-NEG.CV	AUX-CON-1

<i>men</i>	<i>ažip</i>	<i>ölgem</i>	<i>polar</i>
I	“already”	die-PST-1	PROB

“if three days pass and I don’t return, I am probably dead”

In the cognate form in Xakas, the tense is marked on the lexical verb, but person on the auxiliary. Thus, it shows a canonical split inflectional pattern.

(134) Split Inflection in Xakas AVCs

i. Khakas (Anderson 1998:60)

<i>sin</i>	<i>it-ken</i>	<i>polar-ziŋ</i>
you	do-PST.I	PROB-2

“you probably did it”

ii. Khakas (Anderson 1998:60)

<i>min</i>	<i>nime-e</i>	<i>čobal-čatxan-im-ni</i>	<i>sırer</i>	<i>pil-če</i>	<i>polar-zar</i>
I	what-DAT	be.sad-PRES.PRTCPL-1-ACC	you.PL	know-PRES.I	PROB-2

“you probably know what I am sad about”

Most negative auxiliary verb constructions in Altai-Sayan Turkic show a split pattern with the lexical verb marked for negative and the auxiliary verb marked for tense and subject in the following Tuvan form.

(135) Split inflection with negatives in Altai-Sayan Turkic AVCs

Tuvan (Anderson & Harrison 1999:46)

<i>men</i>	<i>ol</i>	<i>nom-nu</i>	<i>nomču-vastay</i>	<i>ber-di-m</i>
I	that	book-ACC	read-NEG.CV	INCH-PAST.II -1

“I stopped reading that book”

Auxiliary verb constructions in Chulym Turkic show significant variation with respect to the locus of subject inflection. In the pluperfect unaccomplished (pluperfect abessive), consisting formally of the lexical verb inflected for the unaccomplished suffix and the auxiliary verb inflected for the past tense, the subject is typically marked on the auxiliary verb component of the AVC (136). In the regular pluperfect

tense however, there are two variants. The first is like the unaccomplished pluperfect, with subject marked on the auxiliary verb (137), while the latter bears the subject inflection on the lexical verb, followed by a reduced, person-less form of the auxiliary verb (138).

(136) Variation in Chulym Turkic inflection in AVCs

Chulym Turkic (Dul'zon 1960:142)

<i>Män</i>	<i>kel-gelek</i>	<i>pol-ya-m</i>
I	come-UNACMPL	AUX-PST-1

“I hadn’t yet come”

(137) Variation in Chulym Turkic inflection in AVCs

Chulym Turkic (Dul'zon 1960:142)

<i>Men</i>	<i>par-yan</i>	<i>bol-ya-m</i>
I	go-PST	AUX-PST-1

“I had gone”

(138) More on Chulym Turkic LEX-headed inflection in AVCs

i. Chulym Turkic (Dul'zon 1960:142)

<i>Men</i>	<i>ol</i>	<i>dzende</i>	<i>kel=ga:-m</i>	<i>boln</i>	<i>emže:di</i>
I	that	time-LOC	come-PST-1	AUX.PST	EVID

“I had already come apparently at that time”

ii. Chulym Turkic (Dul'zon 1960:142)

<i>Sän</i>	<i>kel-ge-ŋ</i>	<i>boln</i>
You	come-PST-2	AUX.PST

“you had come”

In the following auxiliary verb construction from Middle Chulym, there is double marking of second person subject but a single marking of past tense. This exhibits the so-called ‘split-doubled’ inflectional pattern (Anderson 1999, 2000a).

(139) Split-Doubled inflection in Middle Chulym (Dul'zon 1960:139)

<i>Seŋ</i>	<i>suryaŋ</i>	<i>bolzaŋ,</i>	<i>men</i>	<i>aytır</i>	<i>e:dim</i>
You	ask-PST-2	AUX-CON-2	I	say-FUT	AUX/SBJ-REC.PST-1

“if you had asked, I would have said”

A wide range of inflectional patterns is attested in the elaborate system of Evenki auxiliary verb constructions. Negative formations with the auxiliary *a-* occur with subject (and tense) on the auxiliary; it also appears before, not after, the lexical verb, which in turn appears in the *-rA* form. This Evenki negative construction is highly reminiscent in form to the Samoyedic model, with preverbal inflected auxiliary (AUX-headed pattern, Aux V order, the lexical verb appearing in special non-finite form); see below.

(140) AUX-headed inflection in Evenki; Aux V order in negative

i. Evenki (Bulatova & Grenoble 1999:16)

bəjə a:čin-ma:-n a-čə:-β sa:-ra

man NEG-ACC-3 NEG-PST-1 know-RA

“I didn’t know about the man’s absence.”

ii. Evenki (Bulatova & Grenoble 1999:46-47)

a-kəl ɣəne-rə

neg-IMP2SG go-RA

“Don’t go!”

atirka:n a-či-n sukə-βə ga-mu:-ra

old.man NEG-AOR-3 axe-ACC take-DESID-RA

“The old man did not want to take the axe.”

Another negative auxiliary pattern in Evenki is found with the negative *a:či-* which takes plural marking but no tense marking, and so yields a split/doubled pattern. Note that like the previously discussed auxiliary, this negative auxiliary also appears pre-verbally in Evenki.

(141) Split-Doubled inflection in Evenki (Bulatova & Grenoble 1999:17)

bira-du: kuɣaka:-r a:či-r bi-čə:-tin

river-DAT child-PL NEG-PL be-PST-PL

“the children were not at the river” (?? “no children were at the river”)

Split patterns are the norm in the present and past habitual, the debitive, and the evidential in Evenki.

(142) Split inflection in Evenki AVCs

i. Evenki (Bulatova & Grenoble 1999:35)

bu:-βki: bi-si-m

give-HAB AUX-PRES-1

bu:-βki: bi-čə:-β

give-HAB AUX-PST-1

“I give”

“I used to give”

ii. Evenki (Bulatova & Grenoble 1999:37)

si: əmə-məči:n bi-si-nni

you come-DEBIT AUX-PRES-2

“you should come”

iii. Evenki (Bulatova & Grenoble 1999:38)

nujan ti:ni-βə əmə-čə bi-rkə-n

s/he yesterday-ACC come-PST AUX-EVID-3

“he probably came yesterday”

The pattern in (142) above generally has some kind of tense/aspect marker on the lexical verb, followed by a further tense/aspect marking and subject on the auxiliary verb. Plurality may be marked on the lexical verb, as in (143).

(143) Another case of split marking in Evenki (Bulatova & Grenoble 1999:39)

su: əmə-čə:-l bi-rkə-sun

you.PL come-PST-PL AUX-EVID-2PL

“you probably came”

Other auxiliaries may be basically V Aux but may on occasion also appear as Aux V in Evenki.

(144) Other AVCs in Evenki

i. Evenki (Bulatova & Grenoble 1999:39)

bi: toki:-βa ta:la-du: alba-m ala:t-ča-mi:

I moose-ACC salt.lick-DAT AUX-1 wait-IMPV-CVI.COND

“I couldn’t wait for the moose at the salt lick”

ii. Evenki (Bulatova & Grenoble 1999:39)

huna:t ñami:-βa sir-mi: mulli-rə-n

girl lead.deer-ACC milk-CVI.COND AUX-AOR-3

“the girl was unable to milk the lead deer”

Auxiliaries in Yeniseic are generally fused into single words synchronically. However, it is clear that many of the complex verbs, the discontinuous stems and probably also originally the past tense markers in Ket and Yugh are fused auxiliary forms of the basic or doubled inflectional type.

Although space does not permit an elaboration of this point here, there are at least two layers of fusing of auxiliaries in northern Yeniseic, one operating at a point when there was apparently AUX V structure and another fusing which bespeak rather to a V AUX structure (to which belongs common elements such as *-bet*, *-tet*). The following Ket forms suggest a fused form of the doubled subject inflectional type.

(145) Ket fused auxiliary forms of the doubled type?

Ket (Verner 1997:184)

<i>d-i-l̥-di-ka</i>	<i>k-i-l̥-gu-ka</i>	<i>d-o-l̥-di-ka</i>	<i>k-o-l̥-gu-ka</i>
1-PV-PST-1sell	2-PV-PST-2-sell	1-PV-PST-1-sell	2-PV-PST-2-sell
“I traded/dealt”	“you traded/dealt”	“I sold”	“you sold”

In Yeniseic Yugh of north central Siberia, object was marked on the original auxiliary verb component, but subject was marked on both the original lexical component and the original auxiliary component, i.e. these arose from a fusing of an original auxiliary verb construction of the split/doubled pattern.

(146) Fused split/doubled forms in Yugh? (example from Werner 1997:138)

t-ku-g-di-χ̣ip
 1-2-SUBJ.VERSION-1-sell
 “I sell you”

Other formations result from an auxiliary verb construction of the split type in Yugh. For example, past tense was marked prefixally on certain auxiliary verbs in Yugh, but not on the original lexical verb component at all. Subject may have been marked on either the original lexical verb component or the original auxiliary verb component, even within one and the same synchronic paradigmatic set.¹⁵

(147) Variation in Yugh inflectional patterns in fused AVCs (Werner 1997:141)

χ̣ɔ̣ɔ̣-d̥i-de *di-χ̣ɔ̣dan-a-ge^j* *di-χ̣ɔ̣dan-o^h:r-ge^j*

¹⁵ That these come from prefixed tense markers on the auxiliary verb and not suffixed tense markers on the lexical verb is suggested by the presence of simplex forms of the type in (v) in Yugh, with prefixal inflectional markers. Examples from Werner (1997:141):

(v) <i>du-d-dɔ̣χ</i>	<i>di-r-di-dɔ̣χ</i>
3M-1-eat	3M-PAST-1-eat
“he is eating me”	“he ate me”

be.scared-1-AUX	1-fear-PRES-AUX	1-fear-PAST-AUX
“I am scared”	“I am ever fearful”	“I was scared”

< AUX-headed < split or LEX-headed

Ob-Ugric is mainly V AUX in phrasal structure and of the AUX-headed inflectional type. The lexical verb in the Khanty constructions appears in the nominalized infinitive form.

(148) AVCs in Khanty (Abondolo 1998:378)

jay^wəʈ aʈləŋ-naat pay^wəʈ-taa wär-ii
 bow tip-COM poke-INF begin-PRES/PASS/3
 “s/he began to poke with the tip of the bow”

Like Yeniseic, Kamas materials have registered complex verb forms that appear to be fused auxiliary verb constructions. The fusing of auxiliary verb constructions is also characteristic of most Xakas varieties, to which Kamas speakers ultimately shifted. The auxiliaries used are also the most common ones in the Altai-Sayan area that Kamas speakers inhabited. So, for example, from the auxiliary “to lie” comes the progressive, from the auxiliary “to leave” comes the perfective.

(149) Kamas fused AVCs

i. Kamas (Donner 1944:85, 101; Simoncsics 1998:584)

**mənʒə-lä iʔbe > mənʒ^əʔləβ^ə*
 cook-GER AUX > cook.GER.AUX
 “is cooking”

ii. Kamas¹⁶ (Simoncsics 1998:586)

kuja dʲəmdə-laa-ʔbə
 sun shine-GER-AUX
 “the sun is shining”

iii. Kamas (Künnap 1999b:34)

kəm uʔ-la-ʔbə
 blood flow.GER.AUX.PRES.3
 “the blood is flowing”

¹⁶ The Kamas gerund may either be harmonic *la/lä ʔlaa/ʔlää* or may be non-harmonic *-laa*.

iv. Kamas (Simoncsics 1998:590)*ət'er-laa-wal'a-m*

tie.up-GER-AUX-1

“I have tied it up”

The conditional in Kamas presents an interesting picture. It appears to be a fused form of the verb *i-zä* [AUX-PST] a past form of an auxiliary < “be” > with the lexical verb in a *-na* form, variably labeled “conjunctive”, “conditional”, “optative”. It could be the result of a fused split form, with subject on the former lexical verb and tense on the auxiliary.

(150) A fused split form in Kamas? (Simoncsics 1998:590)

iʔbe-nä-m-zä

lie-CNJCTV-1-AUX.PST

“if I lay”

It is also possible (although perhaps not wholly likely) that the final *-zä* in the Kamas conditional is at least in part influenced or reinforced by neighboring Turkic conditionals which are marked by a formally similar construction.

(151) Conditionals in Altai-Sayan Turkic

i. Tuvan (Field Notes)*Kel-zi-m-ze*

Come-COND-1-COND

“if I come”

ii. Xakas (Field Notes)*Kil-ze-m*

Come-COND-1

“if I come”

The Tuvan form appears to be reconstituted from a split construction in **X-di-m i/e[r]-se* < Old Turkic AUX *er-/är-* (Anderson 2003e). Tofa has preserved something close to the original construction.

(152) Old style conditional in Tofa

i. Tofa (Rassadin 1978:228)*inda bol-di-m er-se sooda-ar men*there be-REC.PST-1 AUX₂-COND say-FUT 1

“when I will be there, I will say”

ii. Tofa (Rassadin 1997:379)*men al-di-m erse*I take-REC.PST-1 AUX₂-COND

“if I take”

Other fused auxiliary verb constructions of the AUX-headed inflectional type in Kamas, with the lexical verb appearing in the gerund form, include the following:

(153) Other fused AVCs in Kamas

i. Kamas (Simoncsics 1998:591)*məl-la-andə-ya-m*

wander-GER-GO.AUX-PART-1

“I go” (wander)

ii. Kamas (Künnap 1999b:23)*ne kunōlamnə < kunō-la am-nə*

wife sleep-GER-AUX-PRES

“the wife sleeps”

šaʔlāmbi < šaʔ-la xam-bi

hide-GER-AUX-PRET

“he hid himself”

iii. Kamas (Simoncsics 1998:591)*kamnəl-də mool'a-m*

cure.w/smoke-PRTCPL AUX-1

“I’m going to/would like to cure with smoke”

iv. Kamas (Künnap 1999b:36)*karo-mə-ndə mā-də tərli-le šō-bi*

open-PST.PRTCPL-3.LAT/LOC tent-LAT roll-GER AUX-PRET

“when it opened, he rolled into the tent”

As mentioned in 5.2 above, the negative in Kamas was apparently undergoing a change in structure, perhaps under Russian influence. In the original, older Kamas style, the negative show typical Samoyedic structure, with a conjugated

preverbal negative auxiliary and the lexical verb in the connegative form. In later forms, the 3rd singular form is used as a frozen negative particle followed by an inflected lexical verb.

(154) Negative AVCs in Kamas (Künnap 1999b:25)

<i>man e-m šo-ʔ</i>	<i>tan e-l-le šü-ʔ</i>
I NEG-1 come-CONEG	you NEG-PRES-2 enter-CONEG
“I don’t come”	“you don’t enter”
 <i>man ej šo-bija-m</i>	
I NEG come-PST-1	
“I didn’t come”	

In Kamas negative imperatives, the third singular marker appears twice; this thus constitutes a doubled inflectional pattern.

(155) Double marking in Kamas negative third imperatives (Künnap 1999b:25)

<i>i-gə xaŋ-gə</i>
NEG.IMP-3.IMP go-3.IMP
“let him not go”

Data on the other Sayan Samoyedic language Mator suggests that fused forms of the AUX-headed inflectional type also were common.

(156) Fused auxiliary forms in Mator (Khelimsij 1993b)

<i>tčëk-si-gan-em</i>
X-INF-AUX-1 AUX < <i>kan-</i> “go”
“I am mistaken”

Selkup too possesses a number of auxiliary verb constructions. Typically, these show both V Aux structure and an AUX-headed inflectional pattern.

(157) AUX-headed AVCs in Selkup (Helinski 1998b:575)

<i>ili-go olap-s-ak</i>	<i>utir-go esimp-ak</i>
live-INF begin-PAST-1	drink-INF AUX-1
“I began to live”	“I am thirsty”

A LEX-headed pattern is found in the past negative in Selkup. A possessed form of a verbal noun, indexing subject of the verb, is accompanied by an invariant form of the negative.

(158) A LEX-headed AVC in Selkup (Helimski 1998b:575)

<i>qo-ptä-mi č'ääŋka</i>	<i>qo-ptä-li č'ääŋka</i>
find-VN-1 be.absent.3	find-VN-2 be.absent.3
‘I did not find’	‘you did not find’

A LEX-headed pattern is also seen in the following Enets form, with tense on the lexical verb. Note the Aux V structure as well.

(159) LEX-headed AVC in Enets (Künnap 1999a:29)

<i>oŋat^j pə-bi</i>
AUX eat-PST
‘he began to eat’

Negatives in Enets follow the typical Samoyedic pattern, with the basic inflectional type, and the lexical verb appearing in a connegative form following the auxiliary verb.¹⁷

(160) Negatives in Enets (Künnap 1999a:22)

<i>obuhOru tedaru neð? modə?</i>
Nothing so.far NEG.1AOR see.CONNEG
‘so far I see nothing’

The negative in Nganasan shows a pattern similar to that of Enets.

(161) Negative AVC in Nganasan (Helimski 1998a:508)

<i>kuəd'üə</i>	<i>ñi'si'ə kuə?</i>
Die-PST	NEG-PST die-CONNEG
‘s/he died’	‘s/he did not die’

¹⁷ The aorist form of Enets *ŋV ~ V* appears to be a fused form of the auxiliary ‘be’ *ŋa* ‘be.AOR’.

6. Summary

In the preceding pages, I have given an overview of a small number of features of the languages of central Siberia. I first presented data on the current demographics and history of study of these languages, and then briefly discussed lexical contacts among the various indigenous peoples of central Siberia. I then presented some information on the vowel and consonant systems and morphophonological processes operative in this disparate group of languages. I then discussed a small number of aspects of their case systems, numerals, and verbal systems. Finally I concluded with some brief general remarks on the syntactic structure of the central Siberian, including such topics as negation, complex sentence structure and types of auxiliary verb constructions.

It goes without saying that the complex history of the interaction between the indigenous languages of central Siberia is a question that largely remains to be answered. It is hoped that this brief study gives the interested reader an idea of the kinds of structures commonly found in these languages, and that this will stimulate a rare few into pursuing the study of the fascinating, challenging, and still understudied languages of the indigenous peoples of central Siberia.

Abbreviations Used

ABL	Ablative	ABS	Absolutive	ACC	Accusative
ALL	Allative	AOR	Aorist	APPL	Applicative
ARTCL	Article	AUGM	Augmentative	AUX	Auxiliary
BEN	Benefactive	CAUS	Causative	COMP	Complementizer
COND	Conditional	CV	Converb	DAT	Dative
DIR	Directional	DL	Dual	DS	Different Subject
EMPH	Emphatic	EVID	Evidential	FEM	Feminine
FIN	Finite	FUT	Future	GEN	Genitive
I	Class-I	III	Class-III	IMP	Imperative
IMPV	Imperfective	INCH	Inchoative	INF	Infinitive
INS	Instrumental	INTR	Intransitive	IRR	Irrealis
LOC	Locative	NEG	Negative	NFUT	Non-Future
OBJ	Object	OBLQ	Oblique	PERF	Perfect
PL	Plural	P/F	Present-Future	POSS	Possessive
PURP	Purposive	PRES	Present	PRED	Predicative
PROB	Probabilative	PROSEC	Prosecutive	PRTCPL	Participle
Redpl	Reduplication	REF	Referential	REL	Relative
REP	Repetitive	RFLXV	Reflexive	SBEN	Self-Benefactive
SF	Stem-Formant	SG	Singular	SUBRD	Subordinator
TEMP	Temporal	TRANS	Transitive	UNACMPL	Unaccomplished
1	First Person	2	Second Person	3	3 rd Person

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