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MASTER THESIS

A comparative study on the Sayan
languages (Turkic; Russia and Mongolia)

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For Tuba, Leo Hollemans, my students and dear family

“Dus er is een taal die hetzelfde heet als ik? En u moet daar een groot werkstuk over schrijven? Wow, heel veel succes!”

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Abstract

In this study, the grammar and basic lexicon of the Sayan languages (Turkic), spoken in Russia and Mongolia, are compared by means of the features found in WALS (Dryer & Haspelmath 2013). The main goal of this thesis is to provide a comparative study on four Sayan languages, namely Tuvan, Tofa, Soyot, and Dukha. Tuba, the fifth Sayan language, became extinct before it was described and studied and, therefore, it is excluded from the linguistic study. The data in this study came from the grammars by Anderson & Harrison (1999 and 2006, Tuvan), Rassadin (1971, 1978 and 2010, Tofa and Soyot) and Ragagnin (2011, Dukha). Another question that will be discussed in this thesis is the reason why Tuvan is not moribund, while its sister and daughter languages are. To answer this question, I looked at the history of the Sayan peoples and their current social status.

Of all Sayan languages, Tofa showed the least Mongolian influences. This is probably because the Tofa people moved away from the Tuva Basin before the Mongols had a linguistic influence on the Tuvan language. Together with data from the grammars and historical information, a Sayan tree diagram is reconstructed.

From the history and the current social status of the Sayan peoples could be concluded that the number of speakers and isolation together form the reason why Tuvan is not extinct and flourishes, while the other Sayan languages struggle to survive.

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Glosses and symbols

ABL	ablative	HORT	hortative	PRO	pronoun
ACC	accusative	IMP	imperative	PROB	probabilitive
ADJ	adjectival	INCH	inchoative	PROX	proximal
ADJZ	adjectivizer	INDIR	indirective	PRS	present
ALL	allative	INF	infinitive	PRSP	present participle
ASS	assertative	INS	instrumental	PTCL	particle
AUX	auxiliary	INT	interrogative	PURP	purpose
CAUS	causative	INTJ	interjection	Q	question word
CES	cessitive	IPVF	imperfective	REC	recent past
COM	comitative	ITE	iterative	RECP	reciprocal
COMP	complementizer	LIM	limitative	RED	reduplication
CONC	concessive	LK	linker	REFL	reflexive
COND	conditional	LOC	locative	REM	remote past
CONT	continuous	MED	medial	RES	resultative
COP	copula	MOD	modal	SBEN	self-benefactive
CMPL	completive	NEC	necessitive	SG	singular
DAT	dative	NEG	negation	SJV	subjunctive
DES	desiderative	NMLZ	nominalizer	VBLZ	verbalizer
DIST	distal	NOM	nominative	VIS	visible past
EMPH	emphatic	NPP	non-past participle	1	first person
EPIS	epistemic	NPST	non-past	2	second person
EVI	evidential	NVIS	non-visible past	3	third person
EVIP	evidential past	OPT	optative	//	phonological notation
EVIR	referential evidential	PASS	passive	[]	phonetic notation
EVIV	visual evidential	PFV	perfective	<>	infix; transcription
EQU	equative	PL	plural	.	separation of
FUT	future	POSS	possessive		grammatical
GEN	genitive	PP	past participle		information in one
GER	gerund	PPP	past passive participle		morpheme
HAB	habitual	PRED	predicative		

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1. Introduction

In this section, I will discuss the social, historical and linguistic background of the Tuva, Tofa, Tuba and Soyot indigenous peoples living in Siberia and of the Dukha,¹ who live in Mongolia. The section will end with a research question, whereafter the method used for this thesis will be discussed.

1.1 Geographical and demographic situation

The Tuva, Tofa, Tuba, and Soyot live at the southern Russian border with Mongolia, Kazakhstan and China. These four indigenous groups are closely related to each other by history, culture, language, and genes (Forsyth 1992; Hammarström et al. 2016; Lewis et al. 2016).

The Tuva Republic is a geographical basin, also known as the Tuva Basin or Tuva Depression. The basin is surrounded by three mountain ranges. From the southwest, clockwise, these are the Altai Mountains, the Sayan Mountains in Russia and the Hangayn Mountains on the border with Mongolia. The highest peaks of these mountains reach over 4,000 meters (Bosatlas 2003: 118-119). The Tuva Republic is therefore very isolated. This is also reflected in the numbers of the population. Out of the 307,930 people that live in the Tuva Republic, 283,400 are ethnic Tuva, a number equal to 92% (Census 2010).

North to the Sayan Mountains at the foothills of the mountain range, the Tofa live in a region called Tofalaria, in the Irkutsk Oblast'. The region is situated in the (south-)west of the Bratsk Reservoir (Bosatlas 2003: 118-119). Although Tofalaria is not as mountainous as the Tuva Republic, it is still very scarcely populated. Only 1,020 people live in an area of 21,400 km² and out of the 1,020 people living in that area, 508 are ethnic Tofa. The remaining 329 Tofa live in the Novosibirsk Oblast' (Census 2002). This data is from 2002, but the census of 2010 gives 762 Tofa, which is a decline of 75 people.

The Tuba live on the western side of the Altai mountains in the Altai Republic. According to the censuses from 2002 and 2010, all Tuba live in the Altai Republic. The Tuba have a growing population. In 2002 there were 1,533 Tuba, eight years later there are 1,965 Tuba (Census 2002, 2010).

The Soyot live at the border of the Tuva Republic in the Oka region in Buryatia. Even in the Oka region, the Soyot are a minority, numbering somewhat over 3,600, which means only 42% of the inhabitants of the Oka region. Although this does not sound promising, the number is growing and the Soyot were recognized as an ethnic minority in 2001 (Census 2010; Rassadin 2010: 7).

The Dukha people are the only people in this thesis that do not live in Russia. The Dukha live in the Kövsgöl region at the Kövsgöl Lake in Mongolia. This area borders with the Buryat Republic (Ragagnin 2011: 13) and more specifically with the Oka region where the Soyot live. Somewhat less than 115,000 people live in the Kövsgöl region (100,628.82 km²), which means that this area is scarcely populated with an average of 1.1 people per km². According to Ragagnin, there are around 500 Dukha, but the Mongolian census mentions only 282 Dukha (Mongolian Census 2010).

The international borders of Kazakhstan, China, and Mongolia touch the Altai Republic. The Tuva Republic and the Oka Region share an international border with Mongolia. Tofalaria is landlocked by Russia and does not have any international borders (Bosatlas 2003: 118-119).

¹ In the grammar by Ragagnin (2011), these people are called *Dukhan*. However, the final *-n* seems to be the adjectivizer, for the Dukha call themselves *tu^hha*, without final *-n*. Therefore, I choose to follow the transliteration of Ragagnin, but without the final *-n*.



Map 1: Tuva Republic (khomei.com). The Altai Republic north to the left orange border; Kóvsgöl Lake on the right edge; Buryatia north to the right orange border; Tofalaria in the right upper corner of this map.

1.2 History of the Tuvan people²

The arrival of the Russians in Siberia is often seen as the end of the prehistoric era of Siberia. The Russians arrived in the seventeenth century in the Tuva Basin. However, this is not the starting point of the history of the Tuvan people. According to Forsyth, the Turkic peoples have lived in Siberia since the second century BC, and maybe even earlier (Forsyth 1992: 21). Together with other Turkic people, the Tuva settled in Siberia and became pastoral nomads in the Tuva Basin (Forsyth 1992: 22). In the thirteenth century AD, the Mongols invaded this area, as well as the Altai-Sayan lands. The Mongolian-Chinese regime had a deep impact on the Tuva, for their land was now organized as an agricultural colony and Tibetan Buddhism was introduced. When the Mongolian dynasty in China ended, chieftains of western Mongolian took over the power in these outskirts of the Chinese empire and dominated the area till the first half of the eighteenth century (Forsyth 1992: 24).

Since the second half of the sixteenth century, the Russians started their journey to the East (Forsyth 1992: 28). When the Russians arrived in the Tuva Basin, the Mongols had already dominated this region for 400 years. However, the Mongols were weakened by the new Manchu dynasty in China, which invaded the eastern part of Mongolia. Eventually, all of Mongolia was politically subjugated to China. Using this weakness, the Tsar reached an agreement with the Mongols and the Russians were permitted to trade in Mongolia. The Mongols, on the other hand, were allowed to trade in Siberia. This resulted in a lot of traffic in the Tuva Basin, for the area is situated on the way to the bigger cities Tomsk and Krasnoyarsk. In the 1630s, the Cossacks penetrated western Mongolia and therefore also the Tuva Basin. This allowed the Cossack Yakov Pokhabov to submit the Tuva to *yasak* in 1661 (tax paid to the Russians by the Siberian indigenous peoples in the form of fur). However, the Tuva Basin was under the *yasak* jurisdiction of the Irkutsk and Krasnoyarsk districts. This meant that the Tuva had to pay double *yasak* to the Russians, although the Tuva Basin was still officially regarded as a part of Outer Mongolia, in the meantime a province of China (Forsyth 1992: 93-95). The Tuva did not accept the *yasak* and annihilated the Russians who came to collect the *yasak* in 1663. Until 1914, the Russians did not come back to the Tuva Basin officially (Forsyth 1992: 125-126). The Russians were not the only ones, who entered the Tuva Basin. The Kirgiz often raided the lands in the Altai region and Tuva Basin. The political situation was quite tumultuous: Kirgiz raids, the Mongols still demanding loyalty from the Tuva, and the Russians demanding *yasak*. Because of this, some Tuva clans who called themselves Tuba decided to leave the Tuva Basin and cross the Sayan Mountains in order to live under the Russians (Forsyth 1992: 126). Most likely, the Tuba chose to live under the Russian to live under only one power instead of three different powers. However, their decision did not immediately work out positively. The Kirgiz not only raided the Tuva Basin and the Altai Mountains, but also Russian cities in the south, such as Tomsk and Krasnoyarsk. Because the Russians wanted this to end, they fought a war with the Kirgiz in 1690-1692. It took a large Russian army, auxiliaries, and many lives to end the Kirgiz raids. The Tuba clans were one of the victims of this war and their tribe was almost wiped out (Forsyth 1992: 127). Now the Kirgiz were gone, the Russians could 'finally' consolidate their power in the Altai-Sayan region with its many natural resources. However, the Mongols still had their rights over this region. The Khan of the Mongols, inspired by his predecessors and Genghis Khan, was determined to claim that area and also started a war with China to expand his empire. Both Russia and China were too strong and after the death of Khan Galdan Tseren in 1745, the weakened Mongols ended up in a civil war. This was perfect for the Russians, who wanted the Altai-Sayan region and the Tuva Basin, and the Chinese, who finally conquered the Mongols – a dispute which went on for centuries. The Russians and Chinese decided in a treaty who would get the 'leftovers' of the Mongolian empire. This treaty did not solve the claims that both countries had on the Tuva Basin and the Altai-Sayan region. As a result, the

² This section draws heavily on Forsyth (1992), who gives a very clear overview of the history of the Siberian peoples.

indigenous peoples (i.e. the Tuva) who lived in those regions were subjugated to the Russian *yasak* and the obligations demanded by the Chinese (Forsyth 1992: 130).

The Tuba, small in number, survived by hunting and gathering and performing primitive agriculture. They kept their shamanic religion and withdrew further into the Altai forests (Forsyth 1992: 183). Already in the nineteenth century, the Tuba adapted to a more Russian way of living. They settled in log huts and wore Russian clothes (Forsyth 1992: 184). It did not help the Tuba that the Russians decided in 1879 that the Altai region was open for every Russian. About 200,000 Russians moved to the Altai region (Forsyth 1992: 185-186). In some cases, Russians simply claimed land, cut down the hay for the hurdles of the indigenous peoples and destroyed their hurdles. In the 1890s the Altai region was even more opened up by the Trans-Siberian railway. Because of this, the Altai region became one of the regions with the highest density of Russians.

The Tuva on the other side, were still a part of the Chinese empire. Except for the financial and material support that was demanded every now and then, the Tuva were more or less left alone. The Tuva Basin was still an ambiguous territory for both the Russians and the Chinese. Neither of them wanted a real confrontation in the Tuva Basin, so they left the Tuva isolated (Forsyth 1992: 224-225). This does not mean that the double tax demanded from both Russia and China made life easy for the Tuva. Some clans crossed the mountains to avoid the double tax. Some joined the Tuba on the western side of the Altai Mountains, others crossed the Sayan Mountains and moved to Russia, where the Russians called them Tofa (in the Irkutsk province) and or they joined the Soyot (in Buryatia). However, the new neighbors did not give them a warm welcome. Many Tofa and Soyot were forced to give up their hurdles because the indigenous peoples of Buryatia and the Irkutsk province oppressed and exploited them (Forsyth 1992: 225). When the *yasak* was abolished by the Bolsheviks, the Tofa could not believe it and kept bringing fur to the officials, because they were so used to the exploitation. The Bolsheviks helped the Tofa restore their reindeer herds and hunting skills, but the Tofa were forced to settle on the collective farms (Forsyth 1992: 302). Because the Tofa were severely impoverished by the earlier treatment, they could do nothing but accept the Russian help. The 'assistance' was so successful that within five years 90% of the Tofa was settled or collectivized, which meant for the Tofa that they had to give up their traditional nomadic life and were forced to settle on the collective state farms, called kolkhozes. The Tofa even served as an example for the rest of Siberia. Because the area in which they lived was very remote, the Tofa preserved their language fairly well. However, the Tofa children were sent to boarding schools and the degeneration of the Tofa language started there (Forsyth 1992: 303).

Because the Tuva Basin was officially still a part of the Chinese Empire, all actions of the Russians in the Tuva Basin, such as imposing *yasak*, were illegal. However, the Chinese did nothing to stop this. In the second half of the nineteenth century, the presence of the Russians in the Tuva Basin was undeniable, so in 1860, the Russians forced a treaty with the Chinese to make their activities more legal. In 1881, it became completely legal for the Russians to live and trade in the Tuva Basin (Forsyth 1992: 226). What happened to the Tuba earlier, now happened to the Tuva, although on a smaller scale. In 1911, the emperor of China was dethroned and the Chinese empire fell apart. Mongolia gained independence and the new leaders of Mongolia wanted the Tuva Basin to be a part of their country. According to Russian sources, the Tuva felt "more affiliated with the Russians" and therefore declined the offer (Forsyth 1992: 227). Nonetheless, it was not until 1914 when the Russians annexed the Tuva Basin. However, at the time the Russian Revolution and the Civil War took place, the Russian power vanished and the Chinese brought the Tuva Basin, together with Mongolia, back under its control in 1918 (Forsyth 1992: 228). The Russians did not stop infiltrating the Tuva Basin and sent communist guerrillas. In 1925, the People's Republic of Tannu Tuva, protected by the USSR, was founded. In reality, the People's Republic was no more than a puppet state. The Russians kept infiltrating the youth with Soviet propaganda and wanted to weaken the strong bonds the Tuva had with the Mongols and made sure that the Tuva developed their own distinctive culture. In 1930, a Roman alphabet was introduced and the Tuvan language replaced the official Mongolian language (Forsyth 1992: 281). Because of the 'independent' republic, the Tuva were safe of the political repression by Stalin during the 1930s and collectivization. By the end of the Second World War, 88%

of the population were still nomadic and only 6.5% belonged to the kolkhozes (Forsyth 1992: 282). This was not the result of not trying since the Russians did try to force the Tuva to collectivize. At some point, three-quarters of the Tuvan population was collectivized by force, but the Tuva simply left the farm and went back to their nomadic life. During the Second World War, the Russians tried one more time to get the People's Republic to do what the USSR wanted and they forced the Tuva to give up a large part of the natural produces for war purposes. The Tuva gave up over a third of their stocks, but the Russians also wanted their natural resources. In 1944, the People's Republic was incorporated into the USSR and the Russians could start to exploit the mineral resources (Forsyth 1992: 355-356). The Second World War took its toll of the Tuva and their wealth was diminished (Forsyth 1992: 373). The Russians tried once again to collectivize the Tuva. And again, the Tuva did not want to move to the kolkhozes. This time the Tuva slaughtered their stocks to avoid that their livestock was taken by the Russians. It took almost a decade and a lot of force to get the Tuva settled, but in 1955 the Tuva were finally collectivized. At the same time, the Russian alphabet was introduced for the Tuvan language (Forsyth 1992: 357). This is not as negative as it sounds; the Tuva already recognized the Russian letters and the literacy rate in 1949 was claimed to be 90% (Forsyth 1992: 373). What helped the 'survival' of the Tuva is that they form a very homogeneous group. In 1989, the vast majority of the people living in the Tuva Basin was ethnic Tuvan. Only 16% lived in towns and up to 99% claimed that they spoke the Tuvan language. In the 1970s, there was only one motor road from the capital Kyzyl to the outside world. Being so isolated, the Tuva preserved their language and culture very well (Forsyth 1992: 374, 406).

All three groups, the Tuva, the Tofa and the Tuba, were subjugated by the Russians and forced to pay *yasak*. Slezkine (1994) explains in his book on the small ethnic groups of Siberia what impact this had on these groups. Although he only discusses the Tofa, it is without a doubt that the effects of the actions of the Russians were similar for the Tuba and Tuva. In the first encounters with the Russians, the Tofa, Tuva, and Tuba traded furs for alcohol and later on also for tea and tobacco. As soon as there was a possibility, the Russians subjected the people and forced them to pay taxes in the form of furs. Fur had the same value for the Russians as gold in the West, for it was traded for large amounts of money (Slezkine 1994: 12). The amount of *yasak* increased time over time and for the Tofa, for example, it caused serious poverty (Forsyth 1992; Slezkine 1994). The Tuva were relatively rich and because of their isolation, their culture and to some extent also their wealth could flourish. However, the Tuva were still affected by the demands of the Russians. Alcoholism was a widespread problem and sexually transmitted diseases were spread by assaults and sexual activities which the indigenous peoples were not used to (Slezkine 1994: 268). The Tuba were most affected by wars. From the literature, it seems that the *yazak* was not the biggest problem for them. Being outnumbered by the Russians and remaining a homogeneous group was the biggest challenge for them (Forsyth 1992: 185-189). This is reflected in the censuses. Many Tuba have shifted from their Tuba language to the Northern Altai language (Census 2002, 2010). The Tofa kept their language, but being small in numbers, every negative impact, no matter how small caused a dramatic drop in the population of the Tofa (Slezkine 1994: 269, Forsyth 1992: 302).

History of the Soyot and Dukha people

The Soyot and Dukha are the only groups who did not originally live in the Tuva Basin. According to Rassadin, the Soyot moved from Lake Khövsgöl in Mongolia to the Buryatia region about 400-450 years ago (Rassadin 2010: 7). Rassadin does not give a reason for the movement, but Forsyth suggests that the political changes in China and Mongolia 'forced' the Soyot to move to Buryatia (Forsyth 1992: 224-225). Because the environment changed, some Soyot shifted from reindeer herding to cattle breeding, others assimilate to the Buryats. The Soyot who lived deep in the Oka region maintained the nomadic reindeer breeding lifestyle (Rassadin 2010: 7-8). Due to exogamy, i.e. marriage outside a tribe is obligatory, the Soyot quickly adapted to the Buryats.

Like the Tofa, Tuva, and Tuba, the Soyot had to settle in the 1930s, but it was not until the 1960s that the Soyot stopped reindeer breeding and were fully settled. In the early 1990s there were only

500 Soyot remaining, but, as mentioned earlier, at this moment the number of Soyot is increasing (Rassadin 2010: 7).

The Dukha stayed in the Khövsgöl region. They used to nomadize in the Sayan Mountains, the region west to Lake Khövsgöl. However, when the border between Mongolia and Russia was closed and settled in 1921, their habitat was separated. A part of their habitat was located in the Tuva Basin and another part in Mongolia. The Mongolian government more than once tried to move the Dukha to the Tuva Basin. However, to avoid the Russian army draft for the Second World War many Dukha moved back to Mongolia, where the Mongolian government moved them back again to the Tuva Basin. In 1956, the Dukha were recognized as Mongolian citizens and they were allowed on the Mongolian territory without the fear of being relocated to the Tuva Basin. However, the Mongolian citizenship meant that the Dukha were subjected to the communistic laws and ideology. They were forced to give up their nomadic traditions in order to be collectivized. In the 1990s the collective farms and fisheries closed down and most Dukha returned to their old nomadic lifestyle (Ragagnin 2011: 17-18).

1.3 Linguistic situation

Tuvan and Tofa are Turkic languages, belonging to the Sayan branch (Lewis et al. 2016). The Tuvan language is one of the few indigenous languages in Russia that is not on the verge of extinction (Comrie 1981; Forsyth 1992: 406; Lewis et al. 2016). In the 2010 Census out of the 283,400 Tuva, 261,912 (92%) claimed Tuvan to be their first language. For the Siberian languages, percentage wise this is unusually high. The last two censuses also show that the knowledge of Russian is decreasing (Census 2002, 2010). In the Tuvan society, Tuvan plays a major role (e.g. Tuvan newspapers and broadcasts). According to Lewis et al. (2016), “[t]he language has been developed to the point that it is used and sustained by institutions beyond the home and community” and “[it is] one of the most vital minority languages in Siberia”. This is not a process of the last few years; in 1970, the Tuva already claimed that up to 99% spoke the Tuvan language fluently (Forsyth 1992: 374). Forsyth thinks this is due to the remoteness of the area and the fairly isolated situation of the Tuva (Forsyth 1992: 225, 374, 406).

The linguistic situation of Tofa is less promising. The Tofa language is considered moribund (Lewis et al. 2016). Only 25 Tofa speak Tofa as their first language (Census 2010) and in 2002 there were only 114 people in the ethnic group. Lewis et al. are more positive, but the situation is still hopeless with only 40 people that are able to speak Tofa (Lewis et al. 2016) and the vast majority speaks Russian (Census 2010). Up till the 1930s, the Tofa preserved their language. However, since the 1930s the Russians decided to send Tofa children to boarding schools to give them ‘proper’ education. In these schools, they were taught Russian and it was forbidden to speak another language than Russian (Forsyth 1992: 303; Slezkine 1994: 222-224). This was the starting point of the decline of native Tofa speakers.

For the Tuba, the situation is completely different. According to Forsyth (1992), Lewis et al. (2016), and Hammarström et al. (2016), the Tuba language related to Tuvan is extinct and the Tuba have shifted to Northern Altai, a language that is also endangered (Lewis et al. 2016). The Northern Altai language is closely related to Tuvan, but belongs to another branch (Hammarström et al. 2016). The censuses still list *Tubalarskiy* as a distinct language, but this is a variety of Northern Altai (Lewis et al. 2016). The data from the censuses show that out of the 1965 Tuba, only 421 speak Tuba (*Tubalarskiy*) as a first language. Besides this, there are 364 Tuba who claim Northern Altai to be their first language (Census 2010). The majority has already shifted to Russian (1102 Tuba; Census 2010).

Dukha, also Turkic Sayan, is spoken by approximately 500 people in the Khövsgöl region in northern Mongolia (Ragagnin 2011: 3). Up till the 1950s, the Dukha were not able to express themselves in Mongolian, but only half a century later, the first language of the Dukha is Mongolian and Dukha is moribund (Ragagnin 2011: 31). Tuvan is taught in the local boarding school, but it is a non-compulsory course and it competes together with Russian and English. Although this does not sound promising for the Dukha language, the Dukha are the only reindeer breeding people of

Mongolia and are, therefore, quite famous, which generates positive attention and causes the Dukha to care about their language and culture (Ragagnin 2011: 32).

Soyot (Turkic, Sayan) died out somewhere in between the 1970s and 2000. Rassadin states in his grammar that in the 1970s only elderly people were able to speak Soyot (Rassadin 2010: 7). The Soyot are quite recently recognized as an ethnic minority. It should be mentioned that this came from the people themselves. The Soyot also actively try to revive their language and it is taught in local elementary schools since 2005 (Rassadin 2010: 9). According to the census of 2010, two people speak Soyot (Census 2010).

Soyot and Dukha have no ISO-codes in the Ethnologue database. The request for an ISO-code for Dukha was rejected in 2012 by SIL.

1.4 Previous studies

The Tuvan language is best described in the literature. There are several dictionaries and grammars, also from recent times and in English. The first dictionary is a Russian-Tuvan one by Palmbach from 1953 and 1955. These two volumes have about 20,000 entries. The first grammar sketch was constructed by Iskhakov and Dmitriev in 1957. Four years later, in 1961, Iskhakov and Palmbach publish a thorough grammar on the Tuvan language. In the course of the years, two dictionaries (Mongus 1980; Anderson & Harrison 2003), and various grammars and grammar sketches (Sat 1966; Krueger 1977; Mawkanuli 1999; Wu 1999; Anderson & Harrison 1999; Harrison 1999; Harrison 2000; Anderson & Harrison 2002) were published.

Tofa is less described than Tuvan. But still, there is a dictionary by Rassadin from 1995. The oldest grammar is by Castrén from 1857. More recent linguistic work is done by Rassadin (a grammar from 1997, phonology sketch from 1971, morphology sketch from 1978). Dyrenkova published a grammar sketch in 1963.

The extinct Tuvan related Tuba language is not described in the literature.

The grammar by Ragagnin (2011) is the first systematic linguistic investigation (Ragagnin 2011: 5). Before this work, only grammar sketches by Bold (1964, 1975, 1977ab and 1982) and Seren (1993) were available. There is no Dukha dictionary.

Castrén, who described the Tofa language, mentions in his study on the Tofa that the Soyot speak the same language variety as the Tofa. In the 1970s Rassadin, who also worked on the Tofa language, conducted fieldwork on the Soyot language. Because of the wish to revitalize the Soyot language, a small dictionary, based on the fieldwork by Rassadin in the 1970s was published in 2002 and study material is developed. In 2010 a translation of a grammar sketch based on the 1970s fieldwork of Rassadin was published together with the Soyot-Buryat-Russian word list.

1.5 Research questions

The literature review leads to the conclusion that three languages, Tuvan, Tofa, and Tuba were once one language: Tuvan. However, there is no comparative work done on these three languages, nor on Soyot and Dukha. It is not clear how the five languages vary from each other and how they have developed through time. This study aims to answer the following research questions:

To what extent does the language of the Tuva vary from the language of the Tofa, Tuba, Soyot, and Dukha? And how can these differences be explained?

Why is Tuvan not moribund or extinct, while the related languages Tuba, Tofa, Soyot, and Dukha are?

The second question follows from the history and the current state of these languages. Only Tuvan is not moribund, but the for other languages are. To explain this difference, it is necessary to look at the grammar of the languages and establish which influences they have undergone. The Tuvan people are the only group that has not moved in the past six hundred years, while the other four groups were adrift.

I expect that besides being an isolated area, the fact that the Tuva lived less long under Russian regimes will partially answer the question. Tofa and Tuba have suffered under the Soviet regime and under the czars and the Dukha have suffered from wars and have been deported several times. The Tuva Republic was independent or under Mongolian and Chinese power during those times. The fact that they did not suffer from wars, hunger, and taxes as much as the Tofa, Soyot and Tuba did and the fact that the Tuva were left alone and were not relocated, caused an environment in which the Tuva and their language could flourish, especially compared to other indigenous peoples in Siberia.

1.6 Method

To answer the research questions, I will discuss the grammar of Tuvan, Tofa, Dukha, and Soyot. These grammars will be compared with the grammars of Turkish and Mongolian. Besides the grammar, the basic lexicon of these six languages will also be compared. The grammars will be discussed according to the features described in WALS (Dryer & Haspelmath 2013) plus the additional feature of vowel harmony. A list of the used WALS features can be found in *Appendix A*.

For Tuvan, the grammars by Anderson & Harrison (1999) and Iskhakov & Palmbach (1961) will be used. Tofa will be discussed by means of the works of Rassadin (1971 and 1978). Dukha is discussed by means of the grammar by Ragagnin (2011), which is based on her Ph.D. thesis. Soyot is discussed by means of the fieldwork notes of Rassadin. His fieldwork notes were translated into English and published in 2010. However, one should note that the observations made in this grammar sketch go back to the 1970s.

Because there is no literature of the *extinct* Tuba language, it could not be studied in this thesis. Therefore, this language is excluded from this study.

The word list is a 207-words Swadesh list. The word list is constructed for Tuvan, Tofa, Dukha, and Soyot. For Tuvan, the dictionary by Harrison & Anderson (2006) was used. The Tofa Swadesh list is based on the lexicon by Rassadin (1971). There is no lexicon of Dukha, so this word list has been constructed by the words found throughout the grammar by Ragagnin (2011). Unfortunately, because there is no lexicon or dictionary, this word list misses many words. The Soyot word list is based on the lexicon included in the grammar by Rassadin (2010). The Soyot word list is not complete because not all lexical items were found in that lexicon. For the Turkish word list, I used the dictionary by Van Schaaijk (2003) and for Mongolian, I used the learner's grammar by Gaunt & Bayarmandakh (2004) and the dictionary by Damdinsüren & Luvsandэндэв (1982).

It should be mentioned that for every grammar used in this thesis, I adapted or added the glosses and morpheme boundaries. The grammars of Tofa by Rassadin (1971 and 1978) and Tuvan by Iskhakov & Palmbach (1961) are in Russian. The examples are translated and transcribed, according to the Scientific Transliteration of Cyrillic. For Soyot, the Soyot lines in the glosses are written in a Cyrillic script. The transcription is based on the Scientific Transliteration of Cyrillic and based on the transcription of other Turkic languages with a Cyrillic script. This was done this way because the grammar of Rassadin (2010) lacked a transcription. This is also the reason why I used the orthographic transcription rather than the IPA transcription.

I already mentioned the 'original' date of the Soyot grammar. This grammar is based on fieldwork notes that are over 40 years old. The grammars of Iskhakov & Palmbach and Poppe are even older. This should be borne in mind because languages develop and change over time.

A very practical problem is the amount of literature and data of these languages. The Turkic languages and Mongolian are not that well-described. For Soyot, only a 51-page grammar sketch is available. Although there are more pages on Tofa and Dukha, the information is still scarce.

Another issue that should be addressed in advance is my policy on the use of symbols. When I use slashes, the letter represents the phonological sound. When I use square brackets, the letter is the phonetic sound. The angular brackets represent the orthographic version of the sound. When square brackets are used in examples, this means that I added words to the translation. Parentheses in the translations are used to make a comment on the translation. The comments and additions are all made by me.

This thesis will discuss the grammar of Tuvan, Tofa, Dukha, and Soyot. While Tuvan is discussed, it is also compared with Turkish and Mongolian. The remaining languages are compared with Tuvan. In the discussion, an overview of the features of the Sayan languages will be given. In the conclusion, the research question will be answered and the results of the comparison with Mongolian and Turkish will be discussed. The comparative lexicon of Tuvan, Tofa, Dukha, Soyot, Turkish and Mongolian can be found in *Appendix B*.

2. Results: Tuvan

In this section, the grammar of Tuvan will be discussed and compared with the grammar of Turkish and Mongolian. Although Turkish and Mongolian will be discussed along with Tuvan, this section contains a concluding paragraph summarizing the findings.

2.1 Phonology

The phonology of Tuvan shows many similarities with Turkish. For example, vowel harmony is found in both Tuvan and Turkish, but also in Mongolian. The vowel and consonant inventories are nicely balanced and do not have any irregularities or complexities. This section will go deeper into the Tuvan phonology.

2.1.1 Vowel inventory and vowel harmony

Tuvan has eight distinctive vowels which can all be lengthened.

Table 1: Tuvan vowel inventory (Anderson & Harrison 1999: 2)

	front			back	
high	i	ü	ɨ		u
mid	e	ö			o
low			a		

The Tuvan vowels correspond with the vowel inventory of Turkish (Theunissen & Türkmen 2005: 28). Mongolian lacks a high central unrounded vowel <ɨ> (Poppe 1954: 9). Vowel lengthening is absent in Turkish, but present in Mongolian (Poppe 1954: 10). Beside vowel length, Tuvan also displays a lexically determined low pitch. The low pitch is realized by a low or creaky voice and, as the example below shows, is found in minimal or near-minimal pairs.

short vowel	low pitch	long vowel
<i>et</i> 'leather'	<i>èet</i> 'meat'	<i>eet</i> 'estuary'
<i>čokta</i> 'go uphill (IMP)'	<i>čòkta</i> 'miss (IMP)'	<i>čookta</i> 'not far'

(Anderson & Harrison 1999: 3)³

Vowel harmony is a typical Turkic feature and Tuvan displays vowel harmony as well (Iskhakov & Palmbach 1961: 28, 29; Anderson & Harrison 1999: 5). Tuvan has a two-way vowel harmony system. The vowel of the suffix will adapt to the vowel of the syllable that directly precedes it. The Tuvan vowel harmony is based on place (back vs. front) and shape (rounded vs. unrounded). As table 2 shows, there are two vowels, [e] and [a], involved in the back harmony. The close vowels are distributed according to place and shape. So [ü] is preceded by [ü] or [ö], [u] is preceded by [u] or [o]. [i] follows [i] or [e] and [ɨ] follows [ɨ] or [a].

³ For all examples from Anderson & Harrison (1999), I adapted the glosses and added the morpheme boundaries.

Table 2: Tuvan vowel harmony

	front	back	vowel harmony
rounded	ü	u	ü for front vowels
	ö	o	u for back vowels
unrounded	i	ɨ	i for front vowels
	e	a	ɨ for back vowels
vowel harmony	e	a	

So, the vowel harmony is realized as follows: the stem vowel is the starting point. The suffix has either [e/a]-basis (hence written with a capital E) or [i/ɨ/ü/u]-basis (hence written with a capital I) and the vowel of the preceding syllable determines which vowel is realized in the following syllable. In the case of the examples below, the [e] after [i] and [a] after [a].

- (1) a. *is-ter-im-den* footprint-PL-1SG.POSS-ABL 'from my footprints'
 b. *at-tar-im-dan* name-PL-1SG.POSS-ABL 'from my names'

(Anderson & Harrison 1999: 5)

Tuvan vowel harmony resembles the vowel harmony system of Turkish⁴. Mongolian has vowel harmony, but only front-back harmony (Poppe 1954: 11).

2.1.2 Consonant inventory

The Tuvan consonant inventory is rather simple:

Table 3: Tuvan consonant inventory (adapted from Anderson & Harrison 1999: 6)

	labial		labio-dental	alveolar		palatal		velar	
plosives	p	b		t	d		k	g	
nasals		m			n			ŋ	
trills					r				
fricatives	(f)			s	z	š	ž	x	
affricates						č			
laterals					l				
approximants			v				y		

[f] only occurs in loans and is not a part of the original consonant inventory (Anderson & Harrison 1999: 6). There are no uvular sounds, although the /k/ may sometimes be realized as [q] and the /g/ as [ɣ] or [ʁ] (Anderson & Harrison 1999: 7). Glottal consonants are absent in Tuvan. Voiceless stops become voiced when in an intervocalic context:

- (2) *at* 'name'
ad-im 'my name'

(Anderson & Harrison 1999: 8)

⁴ See Theunissen & Türkmen (2005: 39) for Turkish vowel harmony.

On the contrary to what Anderson & Harrison claim, the voiced bilabial and alveolar plosives do occur word-initially in the original lexicon, e.g. *dört* ‘four’, *bo* ‘this’ (Anderson & Harrison 2006); therefore, I consider these sounds to be part of the original Tuvan consonant inventory.

The velar nasal is present in Tuvan. This consonant is an areal feature of the languages in Siberia and it is one of the few features shared with unrelated Siberian languages (De Mol-van Valen & Wichmann forthcoming).

Some suffixes also have consonant harmony. The letter changing due to the harmony will be written with a capital letter. The harmony rule is often based on the voiced-voiceless opposition. The examples in (3) contain the dative suffix, which displays consonant harmony. The /k/ is realized as [g] after the voiced [r], but does not change after the voiceless [s].

- (3) *-KE* ‘dative’
- | | |
|---------------|------------------|
| <i>bis-ke</i> | <i>si-ler-ge</i> |
| PRO:1PL-DAT | PRO:2-PL-DAT |
| ‘for us’ | ‘for you (pl.)’ |

(Anderson & Harrison 1999: 25)

The Tuvan consonant inventory is less complex than the Turkish consonant inventory. For example, Turkish has glottal consonants and voiced alveolar affricates (Theunissen & Türkmen 2005: 31). More or less the same goes for Mongolian. Mongolian has more velar consonants, a laryngeal fricative and a voiced alveolar affricate (Poppe 1954: 12).

2.1.3 Syllable structure

The Tuvan syllable structure lacks complexity. Consonant clusters are restricted to two consonants in syllable-final position. The basic structure is (C)V(V)(C)(C). The list below shows all syllable possibilities:

- (4)
- | | | |
|------|-------------|--------------------|
| V | <i>a</i> | ‘but’ |
| VV | <i>öö</i> | ‘hive’ |
| VC | <i>eš</i> | ‘friend’ |
| VVC | <i>aal</i> | ‘yurt’ |
| VCC | <i>art</i> | ‘mountain pass’ |
| CV | <i>bo</i> | ‘this’ |
| CVV | <i>čaa</i> | ‘new’ |
| CVC | <i>dil</i> | ‘language, tongue’ |
| CVVC | <i>sook</i> | ‘cold’ |
| CVCC | <i>dört</i> | ‘four’ |

(Harrison & Anderson 2006: 11)

The syllable structure corresponds with the syllable structures attested in Turkish, except for the lengthened vowels. Consonant clusters in Turkish are restricted to the coda. When a consonant cluster is found in the onset, the word is a loan (Theunissen & Türkmen 2005: 37).

- (5) *stra-te-ji*
 CCCV-CV-CV
 ‘strategy’

(Theunissen & Türkmen 2005: 37)⁵

⁵ For all examples from Theunissen & Türkmen (2005), I added the glosses and morpheme boundaries. The translation of the examples is from Dutch.

Mongolian has the same syllable structure rules as Tuvan and also for Mongolian goes that onset consonant clusters are only found in loans (Poppe 1954: 15).

2.2 Morphology

The morphology section is divided into two parts: the first part will discuss nominal morphology, the second part verbal morphology. Tuvan is a highly agglutinative language and has mainly suffixes. Information is encoded on the head, so cases go on the nouns, TAM affixes on the verb, etc. (Anderson & Harrison 1999). Tuvan lacks morphological gender, so this is not marked anywhere, but when emphasizing semantic gender is needed, it can be expressed lexically.

2.2.1 Nominal morphology

The order of suffixes on the noun is as follows:

STEM-plural-possessive-case

(Anderson & Harrison 1999: 13)

A distinction between animate-inanimate is only made in the words *kirgan* (animate) vs. *èrgi* (inanimate) ‘old’ and *anyak* (animate) vs. *čaa* (inanimate) ‘young/new’.

2.2.1.1 Plural marking

The plural is marked on the noun by the plural suffix *-lEr*. The onset of the suffix changes according to four phonological rules and results into four suffixes (or eight when one also counts the vowel harmony): *-nEr* after nasals, *-tEr* after voiceless consonants, *-dEr* after [l] and *-lEr* after vowels and the consonants [g], [y] and [r] (Iskhakov & Palmbach 1961: 115). Consider examples of all four consonant varieties in (6).

(6)	<i>diiŋ</i>	<i>diiŋ-ner</i>	‘squirrel – squirrels’
	<i>mal</i>	<i>mal-dar</i>	‘livestock – livestock’
	<i>inek</i>	<i>inek-ter</i>	‘cow – cows’
	<i>tag</i>	<i>tag-lar</i>	‘mountain – mountains’

(Iskhakov & Palmbach 1961: 115)⁶

Turkish also has the *-lEr* suffix to mark plural, but only the vowel displays harmony with the preceding syllable. The following examples show a noun ending with a voiceless consonant and a noun ending with a vowel, but both take the unchanged consonant [l] of the plural suffix.

(7)	<i>at</i>	<i>at-lar</i>	‘horse – horses’
	<i>köprü</i>	<i>köprü-ler</i>	‘bridge – bridges’

(Theunissen & Türkmen 1999: 62)

In Mongolian, the suffix *-nEr* is used to mark plurality on the noun (Poppe 1954: 69). The vowel of the suffix is subject to the rules of the back-front vowel harmony. The consonants of the plural suffix do not change.

(8)	<i>baγši</i>	<i>baγši-nar</i>	‘teacher – teachers’
	<i>egeči</i>	<i>egeči-ner</i>	‘older sister – older sisters’

(Poppe 1954: 69)⁷

⁶ For all examples from Iskhakov & Palmbach (1961), I added the glosses and morpheme boundaries. The translation of the examples is from Russian.

⁷ For all examples from Poppe (1954), I added the glosses and morpheme boundaries.

The plural of a few nouns is marked by the suffix *-s* or *-d* (Poppe 1954: 70).

- (9) *baqa* *baqa-s* ‘toad – toads’
morin *mori-d* ‘horse – horses’

(Poppe 1954: 70)

2.2.1.2 Nominal case marking

Tuvan has seven cases: the nominative, genitive, dative, accusative, locative, ablative and allative case (Anderson & Harrison 1999: 13). The case suffixes all have a degree of vowel or consonant harmony, which is reflected by capital letters.

Table 4: Case suffixes in Tuvan (Anderson & Harrison 1999: 14-15; Iskhakov & Palmbach 1961: 129)

		‘wolf’	‘wolves’	‘cow’	‘cows’
NOM	-∅	<i>börü</i>	<i>börü-ler</i>	<i>inek</i>	<i>inek-ter</i>
GEN	-NIŋ	<i>börü-nüŋ</i>	<i>börü-ler-niŋ</i>	<i>inek-tiŋ</i>	<i>inek-ter-niŋ</i>
DAT	-(K)E(E)	<i>börü-ye</i>	<i>börü-ler-ge</i>	<i>inek-ke</i>	<i>inek-ter-ge</i>
ACC	-NI	<i>börü-nü</i>	<i>börü-ler-ni</i>	<i>inek-ti</i>	<i>inek-ter-ni</i>
LOC	-DE	<i>börü-de</i>	<i>börü-ler-de</i>	<i>inek-te</i>	<i>inek-ter-de</i>
ABL	-DEn	<i>börü-den</i>	<i>börü-ler-den</i>	<i>inek-ten</i>	<i>inek-ter-den</i>
ALL	-Je, DIvE	<i>börü-že</i>	<i>börü-ler-že</i>	<i>inek-če</i>	<i>inek-ter-že</i>

In ditransitive sentences, the accusative is used to mark the definite direct object (indefinite direct object is not marked) and the indirect object is marked by the dative. The example shows the dative case on *ät* ‘horse’. The direct object *sigen* ‘hay’ is indefinite and therefore not marked.

- (10) *men* *ät-ka* *sigen ber-di-m*
PRO:1SG horse-DAT hay give-REC-1SG
‘I gave hay to the horse.’

(Anderson & Harrison 1999: 18)

Turkish has six cases, which show many similarities with the Tuvan paradigm. However, Turkish lacks the allative case.

Table 5: Case suffixes in Turkish (Theunissen & Türkmen 2005: 66, 81)

		‘pipe’	‘pipes’	‘cow’	‘cows’
NOM	-∅	<i>boru</i>	<i>boru-lar</i>	<i>inek</i>	<i>inek-ler</i>
GEN	-(n)in ⁸	<i>boru-nun</i>	<i>boru-lar-ın</i>	<i>ineğ-in</i>	<i>inek-ler-in</i>
DAT	-(y)E	<i>boru-ya</i>	<i>boru-lar-a</i>	<i>ineğ-e</i>	<i>inek-ler-e</i>
ACC	-(y)ı	<i>boru-yu</i>	<i>boru-lar-ı</i>	<i>ineğ-i</i>	<i>inek-ler-i</i>
LOC	-DE	<i>boru-da</i>	<i>boru-lar-da</i>	<i>inek-te</i>	<i>inek-ler-de</i>
ABL	-DEn	<i>boru-dan</i>	<i>boru-lar-dan</i>	<i>inek-ten</i>	<i>inek-ler-den</i>

The Mongolian case system, on the other hand, includes the instrumental, comitative, but also lacks an allative. The dative case also functions as a locative (Poppe 1954: 74).

⁸ The capital *i* with a dot, the *İ*, is used in Turkish linguistics to mark the vowel harmony based on front-back and rounded-unrounded. This resembles the capital *i*, the *I*, in Tuvan literature. Both *İ* and *I* have the same function. The notation depends on the language and writing conventions.

Table 6: Case suffixes in Mongolian (Poppe 1954: 76-77)

	stem-C	'people'	stem-V	'dog'
NOM	-∅	<i>ulus</i>	-∅	<i>noqai</i>
GEN	-Ün	<i>ulus-un</i>	-yin	<i>noqai-yin</i>
DAT	-DÜR	<i>ulus-tur</i>	-DÜR	<i>noqai-dur</i>
ACC	-i	<i>ulus-i</i>	-yi	<i>noqai-yi</i>
ABL	-EČE	<i>ulus-ača</i>	-(E)EČE	<i>noqai-ača</i>
INS	-iyEr	<i>ulus-iyar</i>	-bEr	<i>noqai-bar</i>
COM	-IÜGE	<i>ulus-luɣa</i>	-IÜGE	<i>noqai-luɣa</i>

2.2.1.3 Articles

Tuvan lacks definite articles, but has an indefinite article which is the numeral *bir* '1'. When one wants to express definiteness, one could use one of the demonstratives (Anderson & Harrison 1999: 14). Example (11b) shows the use of *bir* as an indefinite article.

- (11) a. *àt* b. *bir àt*
 horse one horse
 'the horse' 'a horse'

(Iskhakov & Palmbach 1961: 207; Anderson & Harrison 1999: 22)

Turkish shows the same scenario with articles. Turkish lacks a definite article but has an indefinite article *bir* that also functions as the numeral '1' (Theunissen & Türkmen 2005: 61-62).

- (12) a. *kadın* b. *bir kadın*
 woman one woman
 'the woman' 'a woman'

(Theunissen & Türkmen 2005: 61)

Mongolian lacks both definite and indefinite articles (Dryer 2013).

2.2.1.4 Possession

Possession is expressed by the genitive case and possessive marking on the possessee. So Tuvan displays double marked possession (Anderson & Harrison 1999: 21), which, as shown in the example below, means that the genitive case is used on the possessor *baški* 'teacher' and the possessive suffix is used on the possessee *bažiŋ* 'house'.

- (13) *baški-niŋ* *bažiŋ-i*
 teacher-GEN house-3.POSS
 'the teacher's house'

(Anderson & Harrison 1999: 20)

Pronominal or attributive possession is marked on the possessee:

- (14) *àt* 'horse'
 àd-im 'my horse'
 àd-iŋ 'your horse'
 àd-i 'his, her horse'
 àd-ivis 'our horse'
 àd-iŋar 'your (PL) horse'
 àd-(lar)-i 'their horse'

(Anderson & Harrison 1999: 22)

Predicative possession can be expressed by the suffix *-nii*:

- (15) *bo nom Maria-nii*
PROX book Maria-PRED
'This book is Mary's.'

(Anderson & Harrison 1999: 23)

However, Tuvan also has a Russian construction. This locational possessive construction is found in the locative case in (16a). The Russian possessive construction exists of the following elements:

locative preposition 'at' possessor-GEN be possessee (16b)

- (16) a. Tuvan:
men-de üš nom bar
PRO:1SG-LOC three book COP
'I have three books.' (lit. 'At me there are three books.')

(Anderson & Harrison 1999: 21)

- b. Russian:
u menya est' tri knig-i
at PRO:1SG.GEN be three book-GEN⁹
'I have three books.' (lit. 'At me there are three books.')

The Russian construction is used to express the 'have'-possessive in Tuvan.

Turkish only has the first discussed possessive construction (Theunissen & Türkmen 2005: 70). The double marking construction is similar to Tuvan.

- (17) *öğretmen-in ev-i*
teacher-GEN house-3SG.POSS
'the teacher's house'

(Theunissen & Türkmen 2005: 69)

Possessive pronouns are, like in Tuvan, marked on the possessee:

- (18) *at* 'horse'
at-ım 'my horse'
at-ın 'your horse'
at-ı 'his, her horse'
at-ımız 'our horse'
at-sınız 'your (PL) horse'
at-(lar)-ı 'their horse'

(Theunissen & Türkmen 2005: 67)

A possessive predicate does not have different marking, but the construction slightly differs: only the genitive case suffix is used.

⁹ *kniga* is marked with a genitive because of the numeral directly preceding the word, not because of the possessive construction.

- (19) *o kitap ben-im*
 DIST book PRO:1SG-GEN
 'That book is mine.'

(Theunissen & Türkmen 2005: 106)

Possession in Mongolian is expressed through the genitive case on the possessor. Mongolian lacks the double marking that is found in Turkish and Tuvan. The example below shows a simple possessive clause:

- (20) *baatar-in mor'*
 Baatar-GEN horse
 'Bataar's horse'

(Gaunt & Bayarmandakh 2004: 13)¹⁰

2.2.1.5 Pronouns

Tuvan has six personal pronouns and there is no distinction between inclusive or exclusive, nor gender (see table 7, page 18). Some pronouns show symmetry with the cases of the nouns, e.g. second and third person plural, others have undergone some phonological changes, e.g. genitive case of the first and second person singular. The dative case in the singular persons shows similarities with Turkish; Tuvan: *meŋ-ee, seŋ-ee, aŋ-aa* vs. Turkish: *ban-a, san-a, on-a* (Anderson & Harrison 1999: 25; Theunissen & Türkmen 2005: 94). The plural forms of the pronouns are formed by the plural suffix *-LEr*. The first and second person plural have the old plural forms (**-iz*) and the plural suffix *-LEr* (Kornfilt 2009: 521).

Table 7: Personal pronouns in Tuvan (Anderson & Harrison 1999: 25)

	1SG	2SG	3SG
NOM	<i>men</i>	<i>sen</i>	<i>ol</i>
GEN	<i>mee-ŋ</i>	<i>see-ŋ</i>	<i>oo-ŋ</i>
DAT	<i>me-(ŋe)e</i>	<i>se-(ŋe)e</i>	<i>a-(ŋa)a</i>
ACC	<i>men-i</i>	<i>sen-i</i>	<i>on-u</i>
LOC	<i>men-de</i>	<i>sen-de</i>	<i>in-da</i>
ABL	<i>men-den</i>	<i>sen-den</i>	<i>oo-n</i>
ALL	<i>men-je</i>	<i>sen-je</i>	<i>ol-je</i>
	1PL	2PL	3PL
NOM	<i>bis(ter)</i>	<i>si-ler</i>	<i>o-lar</i>
GEN	<i>bis-tiŋ</i>	<i>si-ler-niŋ</i>	<i>o-lar-niŋ</i>
DAT	<i>bis-ke</i>	<i>si-ler-ge</i>	<i>o-lar-ga</i>
ACC	<i>bis-ti</i>	<i>si-ler-ni</i>	<i>o-lar-ni</i>
LOC	<i>bis-te</i>	<i>si-ler-de</i>	<i>o-lar-da</i>
ABL	<i>bis-ten</i>	<i>si-ler-den</i>	<i>o-lar-dan</i>
ALL	<i>bis-če</i>	<i>si-ler-je</i>	<i>o-lar-je</i>

Reflexive pronouns in Tuvan are formed by the word *bot* 'self' and the pronominal possessive suffix (*-u* in the case of example 21).

- (21) *bod-u kel-ir uŋun bižik it-pa-di*
 self-3.POSS come-NPST for letter send-NEG-REC
 'Because he intended to come himself, he didn't send a letter.'

(Anderson & Harrison 1999: 27)

¹⁰ For all examples from Gaunt & Bayarmandakh (2004), I added the glosses and morpheme boundaries.

The paradigms of the personal pronouns of Turkish are more regular than the Tuvan personal pronouns. Especially the third person singular portrays the regular case markers.

Table 8: Personal pronouns in Turkish (Theunissen & Türkmen 2005: 94)

	1SG	2SG	3SG
NOM	<i>ben</i>	<i>sen</i>	<i>o</i>
GEN	<i>ben-im</i>	<i>sen-in</i>	<i>on-un</i>
DAT	<i>ban-a</i>	<i>sana</i>	<i>on-a</i>
ACC	<i>ben-i</i>	<i>sen-i</i>	<i>on-u</i>
LOC	<i>ben-de</i>	<i>sen-de</i>	<i>on-da</i>
ABL	<i>ben-den</i>	<i>sen-den</i>	<i>on-dan</i>
	1PL	2PL	3PL
NOM	<i>biz</i>	<i>siz</i>	<i>o-lar</i>
GEN	<i>biz-im</i>	<i>siz-in</i>	<i>o-lar-in</i>
DAT	<i>biz-e</i>	<i>siz-e</i>	<i>o-lar-a</i>
ACC	<i>biz-i</i>	<i>siz-i</i>	<i>o-lar-ı</i>
LOC	<i>biz-de</i>	<i>siz-de</i>	<i>o-lar-da</i>
ABL	<i>biz-den</i>	<i>siz-den</i>	<i>o-lar-dan</i>

The Turkish reflexive pronouns are constructed by the word *kendi* ‘self’ and the pronominal possessive suffixes (Theunissen & Türkmen 2005: 99). Except for the lexical part, the construction is the same as the Tuvan reflexive pronoun.

- (22) a. *kendi-m gel-iyor-um*
 self-1SG.POSS come-PRS-1SG
 ‘I, myself, come.’
- b. *kendi-si-n-i başka-lar=ıyla ölç-üyor*
 self-3.POSS-LK-ACC other-PL=with measure-PRS
 ‘He compares himself with others.’

(Theunissen & Türkmen 2005: 99)

The biggest difference between Mongolian and Tuvan and Turkish is the existence of the first person inclusive and exclusive.

Table 9: Personal pronouns in Mongolian (Poppe 1954: 85)

	1SG	2SG	3SG	
NOM	<i>bi</i>	<i>či</i>		
GEN	<i>min-u</i>	<i>čin-u</i>	<i>in-u</i>	
DAT	<i>na-dur</i>	<i>či-ma-dur</i>	<i>ima-dur</i>	
ACC	<i>nama-yi</i>	<i>či-ma-yi</i>	<i>ima-yi</i>	
ABL	<i>nama-ača</i>	<i>či-ma-ača</i>	<i>ima-ača</i>	
INS	<i>nama-bar</i>	<i>či-ma-bar</i>	<i>ima-bar</i>	
COM	<i>nama-luᠭa</i>	<i>či-ma-luᠭa</i>	<i>ima-luᠭa</i>	
	1PL.INCL	1PL.EXCL	2PL	3PL
NOM	<i>bida</i>	<i>ba</i>	<i>ta</i>	
GEN	<i>bidan-u</i>	<i>man-u</i>	<i>tan-u</i>	<i>an-u</i>
DAT	<i>bidan-dur</i>	<i>man-dur</i>	<i>tan-dur</i>	
ACC	<i>bidan-i</i>	<i>man-i</i>	<i>tan-i</i>	
ABL	<i>bidan-ača</i>	<i>man-ača</i>	<i>tan-ača</i>	
INS	<i>bidan-iyar</i>	<i>man-iyar</i>	<i>tan-iyar</i>	
COM	<i>bidan-luᠭa</i>	<i>man-luᠭa</i>	<i>tan-luᠭa</i>	

The reflexive pronoun is formed by reflexive suffixes on the pronoun.

- (23) *nama-ačayan*
 I-REFL.ABL
 'from myself'

(Poppe 1954: 88)

The basic interrogative pronouns are used for questions and are used in the construction for some indefinite pronouns. The following list shows the interrogative pronouns in Tuvan:

- (24) *kim* 'who'
čüge 'why'
kandig 'how, which'
kayda 'where'
kažan 'when'
čüü 'what'
čüden 'from what'
käš 'how much/many'
kayi, kay(i)zi 'which'
kayaa, kaynaar 'whereto'
kayin, kayirtan 'from where'

(Anderson & Harrison 1999: 28)

In the construction of indefinite pronouns, the interrogative pronoun and the indefinite article are used. When the indefinite pronoun concerns person, place or things, the nouns *kiži* 'person', *čer* 'place', *šagda* 'time' and *čuve* 'thing' follow.

- (25) a. *kandig-bir* b. *kayi-bir* *kiži*
 which-one which-one person
 'any (kind of)' 'anyone'

(Anderson & Harrison 1999: 28)

When one wants to be somewhat more specific, a different construction is used. The indefinite article and the suffix *-LE* are used together with one of the nouns *kiži* 'person', *čer* 'place', *šagda* 'time' and *čuve* 'thing' follow.

- (26) a. *bir-le* *čuve* b. *bir-le* *čer-den*
 one-EQU thing one-EQU place-ABL
 'something' 'from somewhere'

(Anderson & Harrison 1999: 28)

The differences in the interrogative pronouns between Turkish and Tuvan are rather lexical than constructional.

(27)	<i>kim</i>	‘who’
	<i>ne için, niye, ne-den</i>	‘why’
	<i>kadar</i>	‘how much’
	<i>hangi</i>	‘which’
	<i>nere-de</i>	‘where’
	<i>ne zaman</i>	‘when’
	<i>ne</i>	‘what’
	<i>ne-den</i>	‘from what’
	<i>kaç</i>	‘how many’
	<i>hangi-si</i>	‘which one of’
	<i>nere-ye</i>	‘whereto’
	<i>nere-den</i>	‘from where’

(Theunissen & Türkmen 2005: 97; Van Schaik 2003)

In both languages, Turkish and Tuvan, the interrogatives translated with ‘where’ are constructed by the locative, dative and ablative cases. However, the constructional similarities are less clearly visible in the indefinite pronouns. Turkish has lexical indefinite pronouns (*herkes* ‘everybody’), derived (*kim-se* who-IRR ‘somebody’) and constructed indefinite pronouns (*bir-kaç-ı* one-how.many-3.POSS ‘a number of’) (Theunissen & Türkmen 2005: 101). Turkish and Tuvan vary in this respect.

The Mongolian list of interrogative pronouns shows lexical differences with Tuvan:

(28)	<i>ken</i>	‘who’
	<i>yagaad, yayun gež</i>	‘why’
	<i>alin</i>	‘which’
	<i>yaana</i>	‘where’
	<i>yezee, yediyd</i>	‘when’
	<i>yayun</i>	‘what’
	<i>yed(en)</i>	‘how many/much’
	<i>yaaš</i>	‘whereto’
	<i>yaaž</i>	‘how’

(Gaunt & Bayarmandakh 2004)

Indefinite pronouns are formed by the interrogative pronoun and the particle *ču* (*ken ču* ‘somebody’; Poppe 1954: 87).

Tuvan has three demonstratives. *bo* ‘this (PROX)’, *döö* ‘that over there’ (MED) and *ol* ‘that’ (DIST). All three demonstratives are irregularly declined, but the three demonstratives share the same irregularities. *ol* resembles the third person singular (Anderson & Harrison 1999: 26). Demonstratives precede the noun.

Table 10: Demonstratives in Tuvan (Anderson & Harrison 1999: 26)

	‘this’	‘that overthere’	‘that’
NOM	<i>bo</i>	<i>döö</i>	<i>ol</i>
GEN	<i>moo-ŋ</i>	<i>döö-ŋ</i>	<i>oo-ŋ</i>
DAT	<i>ma-ŋaa</i>	<i>dü-gee</i>	<i>a-(ŋa)a</i>
ACC	<i>mon-u</i>	<i>döön-u</i>	<i>on-u</i>
LOC	<i>min-da</i>	<i>düg-de</i>	<i>in-da</i>
ABL	<i>moo-n</i>	<i>döö-n</i>	<i>oo-n</i>
ALL	<i>bo-že</i>	<i>döö-že</i>	<i>ol-je</i>

When the noun is plural, the demonstrative aligns in number and case, but this only happens when the demonstrative is used independently, i.e. without the noun directly following. The plural suffix *-lEr* is attached to the bare stem of the demonstrative. The case follows the demonstrative (e.g. *bo-lar-ga* ‘this-PL-DAT’; Iskhakov & Palmbach 1961: 235). Example (29) shows a demonstrative used in the noun phrase. In this context, the demonstrative behaves like an adjective and does not take any other marking.

- (29) *ol kiži men-den uluγ*
 DIST person PRO:1SG-ABL big
 ‘That person is bigger than me.’

(Anderson & Harrison 1999: 16)

Tuvan, again, displays many similarities with Turkish. Turkish, too, has three demonstratives: *bu* ‘this (close to the speaker, visible)’, *şu* ‘that (far away from the speaker, but visible)’ and *o* ‘that (invisible for the speaker)’ (Theunissen & Türkmen 2005: 95). As in Tuvan, the Turkish demonstrative *o* resembles the personal pronoun *o*.

Table 11: Demonstratives in Turkish (Theunissen & Türkmen 2005: 95)

	‘this’	‘that overthere’	‘that’
NOM	<i>bu</i>	<i>şu</i>	<i>o</i>
GEN	<i>bun-un</i>	<i>şun-un</i>	<i>on-un</i>
DAT	<i>bun-a</i>	<i>şun-a</i>	<i>on-a</i>
ACC	<i>bun-u</i>	<i>şun-u</i>	<i>on-u</i>
LOC	<i>bun-da</i>	<i>şun-da</i>	<i>on-da</i>
ABL	<i>bun-dan</i>	<i>şun-dan</i>	<i>on-dan</i>

To refer to plural nouns, the plural suffix *-lEr* is added: *bun-lar*, *şun-lar*, *on-lar*. The cases are marked after the plural suffix (see also the personal pronoun paradigm, table 8). Mongolian has suppletive forms for plural demonstratives (Poppe 1954: 86). The paradigm follows the case marking of the nouns.

Table 12: Demonstratives in Mongolian (Poppe 1954: 86)

	‘this’	‘that’	‘such as this’	‘such as that’
NOM	<i>ene</i>	<i>tere</i>	<i>eyimü</i>	<i>teyimü</i>
GEN	<i>egün-ü</i>	<i>tegün-ü</i>	<i>eyimü-yin</i>	<i>teyimü-yin</i>
DAT	<i>egün-dür</i>	<i>tegün-dür</i>	<i>eyimü-dür</i>	<i>teyimü-dür</i>
ACC	<i>egün-i</i>	<i>tegün-i</i>	<i>eyimü-yi</i>	<i>teyimü-yi</i>
ABL	<i>egün-eče</i>	<i>tegün-eče</i>	<i>eyimü-eče</i>	<i>teyimü-eče</i>
INS	<i>egün-iyer</i>	<i>tegün-iyer</i>	<i>eyimü-iyer</i>	<i>teyimü-iyer</i>
COM	<i>egün-lüge</i>	<i>tegün-lüge</i>	<i>eyimü-lüge</i>	<i>teyimü-lüge</i>
	‘these’		‘those’	
NOM	<i>ede</i>	<i>edeger</i>	<i>tede</i>	<i>tedeger</i>
GEN	<i>eden-ü</i>	<i>edeger-ün</i>	<i>teden-ü</i>	<i>tedeger-ün</i>
DAT	<i>eden-dür</i>	<i>edeger-tür</i>	<i>teden-dür</i>	<i>tedeger-tür</i>
ACC	<i>eden-i</i>	<i>edeger-i</i>	<i>teden-i</i>	<i>tedeger-i</i>
ABL	<i>eden-eče</i>	<i>edeger-eče</i>	<i>teden-eče</i>	<i>tedeger-eče</i>
INS	<i>eden-iyer</i>	<i>edeger-iyer</i>	<i>teden-iyer</i>	<i>tedeger-iyer</i>
COM	<i>eden-lüge</i>	<i>edeger-lüge</i>	<i>teden-lüge</i>	<i>tedeger-lüge</i>

2.2.1.6 Numerals

The cardinal numerals are as follows:

(30)	<i>bir</i>	'1'	<i>on bir</i>	'11'
	<i>iyi</i>	'2'	<i>čeerbi</i>	'20'
	<i>üş</i>	'3'	<i>üžen</i>	'30'
	<i>dört</i>	'4'	<i>dörten</i>	'40'
	<i>beš</i>	'5'	<i>bežen</i>	'50'
	<i>aldı</i>	'6'	<i>aldan</i>	'60'
	<i>čedi</i>	'7'	<i>čeden</i>	'70'
	<i>ses</i>	'8'	<i>sezen</i>	'80'
	<i>tos</i>	'9'	<i>tozan</i>	'90'
	<i>on</i>	'10'	<i>čüs</i>	'100' (<i>iyi čüs</i> '200', etc.)

(Anderson & Harrison 1999: 31)

Although, in the majority of cases, a numeral does not trigger a plural suffix, in some dialects a plural suffix is used after a numeral (Anderson & Harrison 1999: 31). The numeral precedes the noun.

(31)	a.	<i>beš</i>	<i>àt</i>				
		five	horse				
			'five horses'				
	b.	<i>men-de</i>	<i>üş</i>	<i>nom-nar</i>	<i>çok</i>	<i>tur-gan</i>	
		PRO:1SG-LOC	three	book-PL	COP.NEG	AUX-REM	
			'I didn't have three books.'				

(Anderson & Harrison 1999: 31)

Up to the numeral *on* 'ten', Turkish and Tuvan share derived forms and similarities are clearly visible. From *čeerbi/yirmi* 'twenty' and higher, Tuvan is more regular than Turkish.

(32)	<i>bir</i>	'1'	<i>on bir</i>	'11'
	<i>iki</i>	'2'	<i>yirmi</i>	'20'
	<i>üç</i>	'3'	<i>otuz</i>	'30'
	<i>dört</i>	'4'	<i>kırk</i>	'40'
	<i>beş</i>	'5'	<i>elli</i>	'50'
	<i>altı</i>	'6'	<i>altmış</i>	'60'
	<i>yedi</i>	'7'	<i>yedmiş</i>	'70'
	<i>sekiz</i>	'8'	<i>seksen</i>	'80'
	<i>dokuz</i>	'9'	<i>doksan</i>	'90'
	<i>on</i>	'10'	<i>yüs</i>	'100' (<i>iki yüs</i> '200', etc.)

(Theunissen & Türkmen 2005: 256-257)

As in Tuvan, the plural suffix is left out after numerals.

(33)	<i>beş</i>	<i>masa</i>	
	five	table	
		'five tables'	

(Theunissen & Türkmen 2005: 64)

The numerals in Mongolian differ lexically from Tuvan and Turkish:

(34)	<i>nigen</i>	'1'	<i>arban nigen</i>	'11'
	<i>qoyar</i>	'2'	<i>qorin</i>	'20'
	<i>γurban</i>	'3'	<i>γučin</i>	'30'
	<i>dörben</i>	'4'	<i>döčin</i>	'40'
	<i>tabun</i>	'5'	<i>tabin</i>	'50'
	<i>jirγuyan</i>	'6'	<i>jiran</i>	'60'
	<i>doloyan</i>	'7'	<i>dalan</i>	'70'
	<i>naiman</i>	'8'	<i>nayan</i>	'80'
	<i>yisün</i>	'9'	<i>yeren</i>	'90'
	<i>arban</i>	'10'	<i>jaγun</i>	'100' (<i>qoyar jaγun</i> '200', etc.)

(Poppe 1954: 53, 119)

The Mongolian numerals do not trigger a plural suffix on the noun either (Gaunt & Bayarmandakh 2004: 64).

- (35) *döčin γün*
forty person
'forty people'

(Gaunt & Bayarmandakh 2004: 64)

2.2.1.7 Adjectives

Adjectives precede the noun and do not have any marking (Anderson & Harrison 1999: 32).

- (36) *bičii èrgi bažiŋ*
small old house
'a small, old house'

(Anderson & Harrison 1999: 32)

The first syllable of an adjective together with [p] can be reduplicated to intensify the meaning of the adjective:

- (37) *sap-sariγ*
RED-yellow
'very yellow'

(Anderson & Harrison 1999: 33)

Turkish does the same as Tuvan: the adjective precedes the noun (38a) and reduplication is used to exaggerate the meaning of the adjective (38b; Theunissen & Türkmen 2005: 326, 335-336).

- (38) a. *eski büyük beyaz ev*
old big white house
'the old, big, white house'

b. *kırmızı kıp-kırmızı*
 red RED-red
 'red' 'fire-engine red'

(Theunissen & Türkmen 2005: 327, 336)

Mongolian is not different from Turkish and Tuvan. The adjectives in Mongolian are not marked for case or number (Gaunt & Bayarmandakh 2004: 6).

(39) *ter ногоон хана*
 DIST green wall
 'That is a green wall.'

(Gaunt & Bayarmandakh 2004: 6)

Reduplication is not mentioned in the Mongolian grammars used for this study. Therefore, I assume that reduplication in Mongolian is not as productive as it is in Turkish or Tuvan.

2.2.1.8 Postpositions

Besides the locative case, Tuvan has postpositions to specify the location of the noun. There are two kinds of postpositions. Postpositions without marking that trigger cases on the noun (40a), and postpositions with possessive *and* case markers (40b). The basic construction of the latter type is:

noun postposition-3.POSS-case

(Anderson & Harrison 1999: 35)

(40) a. *xem-ni kežildir kövürüg turgus-kan*
 river-ACC across bridge build-REM
 'They built a bridge across the river.'

(Anderson & Harrison 1999: 36)

b. *ög išt-i-n-de*
 yurt inside-3.POSS-LK-LOC
 'inside the yurt'

(Harrison 2000: 21)

Tuvan portrays a Turkic construction. In Turkish, for example, the specification of the location of the noun can be done by the locative, postpositions with a fixed (41a) case or postpositions with the possessive construction as it was described above (41b), with the exception of the genitive marker on the noun.

(41) a. *masa-yı şu duvar-a doğru çek-in*
 table-ACC MED wall-DAT towards pull-IMP.2PL
 'Push that table towards that wall.'

(Theunissen & Türkmen 2005: 221)

- b. *bir ev-in ön-ü-n-de dur-uyor-du*
 one house-GEN front-3.POSS-LK-LOC stand-PRS-EVIV
 'He stood in front of a house.'

(Theunissen & Türkmen 2005: 227)

Postpositions are also found in Mongolian. Some postpositions take the genitive case (42a), others only add *-n* (short form of the genitive) to the noun the postpositions govern (42b) or the postposition is juxtaposed (42c; Gaunt & Bayarmandakh 2004: 59).

- (42) a. *bi Mongol-in tuhai yapy-a-san*
 PRO:1SG Mongolia-GEN about speak-IPFV
 'I spoke about Mongolia.'

- b. *širee-n deer*
 table-GEN on
 'on the table'
- c. *sandal dor*
 chair under
 'under the chair'

(Gaunt & Bayarmandakh 2004: 59)

2.2.2 Verbal morphology

As already mentioned, Tuvan is a highly agglutinative language. The verbal morphology is no exception and also displays the agglutinative character of this language. The order of suffixes on the verb is:

STEM-voice-negation-mood-aspect-tense-evidential-person-number

The pronominal markers on the verb are divided into two classes. Depending on which TAM marker or participle marker is used, the pronominal markers of one or the other class are used. This will be discussed in section 2.2.2.2 *Tense-Aspect-Mood* and 2.2.2.5 *Participles*.

Table 13: Pronominal markers on verbs in Tuvan (Anderson & Harrison 1999: 39)¹¹

	General markers		Recent past, conditional	
	SG	PL	SG	PL
1	<i>men</i>	<i>bis</i>	<i>-(l)m</i>	<i>-(l)vls</i>
2	<i>sen</i>	<i>siler</i>	<i>-(l)ŋ</i>	<i>-(l)ŋEr</i>
3	\emptyset	<i>-(LEr)</i>	\emptyset	<i>-(LEr)</i>

2.2.2.1 Copula constructions

To express a copula construction, Tuvan has an (existential) copular verb *bar*. Negation of the copular verb will be discussed in section 2.2.2.6 *Negation*. *bar* takes the verb slot, i.e. the last word in the sentence.

¹¹ *Table 14: Pronominal markers on verbs in Turkish (Theunissen & Türkmen 2005: 104, 109)*

	Class I		Class II	
	SG	PL	SG	PL
1	<i>-(y)im</i>	<i>-(y)iz</i>	<i>-m</i>	<i>-k</i>
2	<i>-sın</i>	<i>-sınız</i>	<i>-n</i>	<i>-niz</i>
3	\emptyset	<i>-(LEr)</i>	\emptyset	<i>-(LEr)</i>

Mongolian does not have pronominal markers (Gaunt & Bayarmandakh 2004: 4).

- (43) *bo bažiñ-da on üç kvartira bar*
 PROX house-LOC ten three apartment COP
 'There are 13 apartments in this building.'

(Anderson & Harrison 1999: 69)

Tenses other than the present, are marked on the auxiliary verb *bol* 'be(come)' or *tur* 'stand' (example repeated from 31; Anderson & Harrison 1999: 69).

- (44) a. *ol çil-in kiş xar-lig bol-gan*
 DIST year-? winter snow-ADJ AUX-REM
 'That year the winter was snowy.'

(Iskhakov & Palmbach 1961: 179)

- b. *men-de üç nom-nar çok tur-gan*
 PRO:1SG-LOC three book-PL COP.NEG AUX-REM
 'I didn't have three books.'

(Anderson & Harrison 1999: 69)

However, *bol* and *tur* are not really copular verbs, for they are also used as auxiliary verbs in other constructions. The verb *bar*, on the other hand, is a copular verb, for it is only used in this context and only carries out this function. Sometimes, instead of the copular verb, the evidential suffix *-(y)Dir* (EVIR) is used (see 2.2.2.3. *Evidentiality*).

Turkish has the cognate *var* (45a) that can be used in copular sentences or existential clauses that are often translated in English with 'there is/there are'. The cognate *yok* is used as the negative copular (45b; Theunissen & Türkmen 2005: 132). In predicative sentences, there is a zero-copular verb (45c; Theunissen & Türkmen 2005: 103). Tenses are expressed through the evidential suffixes on the predicate (45a and 45d; Theunissen & Türkmen 2005: 109, 137).

- (45) a. *ev-de ekmek var-dı*
 house-LOC bread COP-VIS
 'There was bread at home.'

(Theunissen & Türkmen 2005: 137)

- b. *toplantı-da yok-muş*
 meeting-LOC COP.NEG-NVIS
 'It seems that he was not in the meeting.'

(Theunissen & Türkmen 2005: 137)

- c. *masa-lar küçük*
 table-PL small
 'The tables are small.'

(Theunissen & Türkmen 2005: 105)

- d. *eskiden çok tembel-di-m*
 before very lazy-VIS-1SG
 'In the past I was lazy.'

(Theunissen & Türkmen 2005: 110)

Mongolian has no pronominal markers, so there is no agreement on the verb or the predicate whatsoever. The copular verbs that are used are *bui* ('be', 46a), *mön* (non-past 'be', 46b), and *yum* (after adjectives and verbs, 46c; Gaunt & Bayarmandakh 2004: 112).

- (46) a. *min-u aqa blama bui*
 PRO:1SG-GEN older.brother lama COP
 'My older brother is a lama.'

(Poppe 1954: 127)

- b. *ter yün Baatar mön üü*
 DIST person Baatar COP Q
 'Is that Baatar?'

(Gaunt & Bayarmandakh 2004: 112)

- c. *ene odoo nada-d maš ih heregtei bayg-aa yum aa*
 PROX now PRO:1SG-DAT very much necessary be-CONT COP EMPH
 'This really is very important to me.'

(Gaunt & Bayarmandakh 2004: 112)

2.2.2.2 Tense-Aspect-Mood

Most TAM suffixes express only one of the TAM, so either tense, aspect or mood. Some suffixes are semantically a combination of TAM, but this is rather rare.

Tense

The non-past *-Vr* is a very broad tense; it literally is non-past. It can express actions in the future or an event coinciding with the speech event (Anderson & Harrison 1999: 41). The following example shows the broad meaning of the non-past.

- (47) *ažilda-ar men*
 work-NPST 1SG
 'I work' or 'I will work'

(Anderson & Harrison 1999: 41)

The past tense is divided into two tenses. The past tense called *PST1 -(K)(E)En* by Anderson & Harrison (1999) refers to an unspecified, vague and indefinite point of time of action. I will refer to this past as the remote past in this thesis. The suffix *-(K)(E)En* takes the general pronominal markers. *PST2 -DI*, the other past tense according to Anderson & Harrison, is the definite, specified past and will be renamed recent past for the sake of clarity. The recent past takes the pronominal suffixes (Anderson & Harrison 1999: 40). The example below is the first person singular for both paradigms.

- (48) a. *men kel-gen men* b. *kel-di-m*
 PRO:1SG come-REM 1SG come-REC-1SG
 'I came' 'I came'

(Anderson & Harrison 1999: 40)

The recent past tends to describe an action closer to the speech event than the remote past (49a), which can refer to actions further in the past, further away from the speech event (49b; Anderson & Harrison 1999: 40-41).

- (49) a. *düün eki udu-du-m*
 yesterday good sleep-REC-1SG
 'Yesterday I slept well.'
- b. *anyak tur-gaş eki ud-aan men*
 young AUX-GER good sleep-REM 1SG
 'When I was young, I used to sleep well.'

(Anderson & Harrison 1999: 41)

Tuvan lacks a morphological present tense. When one wants to express present tense, one should use the following construction:

Stem-(I)p Auxiliary verb General pronominal marker

(Iskhakov & Palmbach 1961: 380)

- (50) *dürgen xal-ip tur men*
 fast drive-GER AUX 1SG
 'I drive fast.'

(Anderson & Harrison 1999: 56)

Turkish has a present *-(y)iyor*, future *-(y)ecek*, non-past *-(y)r* and two past tenses (non-visible past *-miş* and visible past *-di*) (Theunissen & Türkmen 2005: 153). The non-past and the visible past show great resemblance with Tuvan. The present is marked by a suffix on the verbal stem rather than by a gerund construction. This also goes for the future tense. The past tenses in Tuvan are semantically the same as in Turkish. Only the suffixes *-(K)(E)n/-miş* vary.

Mongolian has a present tense as well, expressed by the suffix *-nem* and constructed without gerunds or auxiliary verbs (Poppe 1954: 92). The non-past *-(m)ü* and the visible past *-(l)üge* are also found in Mongolian (Poppe 1954: 107, 109).

Aspect

The perfective aspect can be expressed through the three suffixes *-ivt, -lpt, -lp*. These suffixes can take pronominal markers from both classes (Anderson & Harrison 1999: 43). The perfective aspect expresses a specified amount of time in which an action takes place, often a short time, and can be combined with tense and mood suffixes. The perfective also expresses the 'completeness' of the action. The example below shows the semantic nuance of the imperative and perfective used as an imperative. The imperative emphasizes the action of eating the apple, the perfective expressing an imperative action puts emphasis on completing the action of eating the apple.

- (51) a. *yablaq-ti či*
 apple-ACC eat.IMP
 'Eat the apple!'
- b. *yablaq-ti či-vit*
 apple-ACC eat-PFV
 'Eat the apple up!'

(Anderson & Harrison 1999: 43)

The resultative aspect *-čik* is used to express actions that are completed in the past or to add a rhetorical element to the phrase (52a; Iskhakov & Palmbach 1961: 375-376; Anderson & Harrison

1999: 44). The emphatic aspect *-nV* is used to contrast the resultative (52b). The emphatic aspect takes tense suffixes, the resultative does not because it already has a past tense element in its meaning.

- (52) a. *sen men-i dūün kör-žük sen be*
 PRO:2SG PRO:1SG-ACC yesterday see-RES 2SG Q
 ‘Didn’t you see me yesterday?’
- b. *či-gen-ne men*
 eat-REM-EMPH 1SG
 ‘I *did* eat (them)!’

(Anderson & Harrison 1999: 44)

The imperfective aspect or continuous is constructed by the suffix *-(l)p* on the verbal stem and the auxiliary *ol* (Anderson & Harrison 1999: 65).

- (53) *amīray-im saqt-ip ol-ur men*
 beloved-1SG.POSS long.for-GER AUX-NPST 1SG
 ‘I am longing for my beloved.’

(Anderson & Harrison 1999: 42)

The cessative *-BEstE* expresses the start of the end of an action ‘stop doing X’ (54a). The cessative suffix sometimes occurs together with the inchoative (54b). The inchoative is constructed by the suffix *-y* on the main verbal stem and the auxiliary *ber* or *kir* (Iskhakov & Palmbach 1961: 410). Aspect, tense and pronominal marking is done on the auxiliary.

- (54) a. *nomču-vasta-an-im užur-u-n-dan šildelde-ni bayay dužaa-di-m*
 read-CES-PP-1SG reason-3.POSS-LK-ABL exam-ACC bad meet-REC-1SG
 ‘Because I stopped reading, I did badly on the exam.’

(Anderson & Harrison 1999: 46)

- b. *men ol nom-nu nomču-vasta-y ber-di-m*
 PRO:1SG DIST book-ACC read-CES-INCH AUX-REC-1SG
 ‘I stopped reading that book.’

(Anderson & Harrison 1999: 46)

The iterative *-KII* can be used to express repetitive actions (55a). However, it also has a diminutive meaning, ‘do X a little bit’ (55b; Anderson & Harrison 1999: 42). The iterative can be combined with other TAM suffixes. The pronominal markers depend on the last verbal suffix.

- (55) a. *o-lar bis-tii-n-ge čamdik-ta kel-gile-p tur-gula-ar*
 PRO:3-PL PRO:1PL-PRED-LK-DAT some-LOC come-ITE-GER AUX-ITE-NPST
 ‘They drop by our place from time to time.’
- b. *sen šay-dan kut-kula-vit*
 PRO:2SG tea-ABL make-ITE-PFV
 ‘You make some tea!’

(Anderson & Harrison 1999: 42)

Turkish does not have aspect morphologically marked on the verb. The evidential *-(y)Dİ* (not the visible past marker) can be used to refer to a completed action (Theunissen & Türkmen 2005: 187).

According to Poppe, Mongolian only has a pluperfect aspect (*-JÜGÜi*; Poppe 1954: 93). Gaunt & Bayarmandakh claim that Mongolian also portrays a continuous *-EE*, an imperfective *-sEn*, a habitual *-DEg* and a perfect *-Ev* (Gaunt & Bayarmandakh 2004: 34, 45, 60). Mongolian varies majorly from Tuvan in aspect. Only the perfect aspect is shared semantically; even the suffixes do not coincide.

Mood

The conditional circumfix *-ZI*-pronominal marker-*ZE* expresses conditional clauses (56a) or irrealis¹² (when the action was in the past). The irrealis can be achieved by the auxiliary *bol-* (56b). The first part of the circumfix, *-ZI*, is directly attached to the stem or negation suffix. The second part, *-ZE*, follows the pronominal marker.

- (56) a. *kel-zi-m-ze*
 come-COND-1SG-COND
 'if I come'

(Anderson & Harrison 1999: 47)

- b. *čaaskan bol-zu-m-za aas keži-im kayd-al*
 alone AUX-COND-1SG-COND happiness-1SG where-INT
 'If I am alone, where is my happiness?'

(Anderson & Harrison 1999: 47)

The desiderative is formed by the suffix *-(k)sE* (Iskhakov & Palmbach 1961: 269; Anderson & Harrison 1999: 49-50). As the example below shows, the desiderative suffix can be combined with tense and aspect suffixes (Anderson & Harrison 1999: 49).

- (57) *men čagaa biži-kse-di-m*
 PRO:1SG letter write-DES-REC-1SG
 'I wanted to write a letter.'

(Anderson & Harrison 1999: 50)

The imperative is the bare stem for the second person singular and the bare stem plus a plural suffix for the second person plural (58a-b). When in first or third person, it gets a hortative meaning (59a-c).

- (58) a. *čemnen* eat.IMP 'Eat!'
 b. *čemnen-ijer* eat-IMP.2PL 'Eat!' (plural)

(Anderson & Harrison 1999: 51)

- (59) a. *bil-zin* know-IMP.3SG 'May he know.'
 b. *kel-zin* come-IMP.3SG 'Let him come.'
 c. *kel-be-zin* come-NEG-IMP.3SG 'Don't let him come.'

(Anderson & Harrison 1999: 51-52)

¹² Although it is not usual, some Turkic languages display an irrealis-realism opposition beside a tense system. Tuvan is a good example. The tense system is not as extensively developed as the mood system. A similar situation can be found in Turkish (Theunissen & Türkmen 2005: 298).

The necessitive mood is semantically close to the imperative, but Tuvan differentiates these moods. The necessitive is constructed by the auxiliary verb *appar* and the *-Vr* infinitive suffix on the verbal stem (Anderson & Harrison 1999: 63).

- (60) *boraan-ap egele-en bol-gan-da bis čoru-ur appar-gan bis*
 storm-GER begin-PP AUX-PP-LOC PRO:1PL go-INF NEC-REM 1PL
 ‘Because/once the storm (had) started, we had to leave.’

(Anderson & Harrison 1999: 63)

Turkish has four moods marked by the suffixes *-mElI* (necessitive), *-sE* (conditional), *-(y)E* (subjunctive and hortative), and zero-marking for the imperative (Theunissen & Türkmen 2005: 153). Although three of these Turkish moods can be found in Tuvan (i.e. necessitive, conditional and imperative), the morphological construction is not the same. Turkish does not have verbal circumfixes, nor does it have a gerund construction expressing the necessitive. The hortative is a separate mood in Turkish and is not merged with the imperative. So the moods in Tuvan highly differ from the moods in Turkish.

The moods in Mongolian are even more deviant than the moods in Turkish. Mongolian has zero-marking for the imperative (Poppe 1954: 89), but this is the only similarity. The conditional mood is marked by the suffix *-BEI* (Gaunt & Bayarmandakh 2004: 109). Beside these two moods, Mongolian also has the dubitative *-GüjEi*, optative *-GEsEi* and hortative *-SÜGEi* or *-yE* (Poppe 1954: 90-91).

2.2.2.3 Evidentiality

Evidentiality is one of the most typical features of Turkic languages (De Haan 2013). Tuvan has the suffix *-(y)Dlr* that can be attached to TAM suffixes to express evidentiality (61a; Anderson & Harrison 1999: 50). However, *-(y)Dlr* does not necessarily occur together with other TAM suffixes. It can be used on its own, giving it an evidential meaning in present tense (61b; Iskhakov & Palmbach 1961: 383). The *-(y)Dlr* suffix takes the general pronominal markers.

- (61) a. *söölga üye-de öskele-ni ber-ip-tir sen*
 last time-LOC change-GER AUX-PFV-EVIR 2SG
 ‘It seems you changed recently.’
- b. *ayalga-ni diŋna-ydir men*
 music-ACC hear-EVIR 1SG
 ‘Suddenly, (it seems) I hear music.’

(Anderson & Harrison 1999: 50)

The evidential suffix can also be used for non-verbal predication (Iskhakov & Palmbach 1961: 363-364).

- (62) *bo kuš-tur*
 PROX bird-EVIR
 ‘This is a bird.’

(Iskhakov & Palmbach 1961: 363)

Turkish has the cognate *-Dİr* (Theunissen & Türkmen 2005: 423), which can be used as an evidential in the way it is used in Tuvan, but the meaning is somewhat diffused. The suffix can express both

subjectivity and objectivity (Theunissen & Türkmen 2005: 423, 425-427). Two other evidential suffixes in Turkish *-(y)Dİ* and *-(y)mİŞ* can be used to express either witnessed events and facts or subjectivity and doubt. All evidential suffixes can be attached to verbs and nouns (Theunissen & Türkmen 2005: 110-111, 183, 191).

Mongolian has a more complex evidential system. There are two general categories: established knowledge and non-established knowledge. Established knowledge is marked by *-sEŋ* in past tenses and *-EE* in non-past tenses. The non-established category is divided into indirect evidentiality and direct evidentiality. The suffix *-EE* is used for indirect evidentiality in non-past tenses. The suffix *-jee* is used for indirect evidentiality in past tenses. The direct evidentiality is marked by *-IEE* in past tenses and *-n* in non-past tenses (Brosig 2015: 2). It is safe to assume that Mongolian has a more extensive evidentiality system than Tuvan.

2.2.2.4 Valency

Like almost every part of the verbal morphology, valency is constructed by suffixes that are attached to the verbal stem. These suffixes are placed directly behind the verbal stem. The Tuvan voices are passive, reflexive, reciprocal and causative. The passive and causative are not necessarily reflected in the meaning of the verb because the causative and passive work as (de-)transitivizer in verbal formation, i.e. the passive or causative meaning is lost in the formation of new verbs.

Decreasing valency

The passive voice can be marked by the two suffixes *-(l)l* and *-DIn* (Iskhakov & Palmbach 1961: 290).

- | | | | | | |
|------|---------------|------------|--|----------------|----------------|
| (63) | <i>xosta-</i> | 'liberate' | | <i>xosta-l</i> | 'be liberated' |
| | <i>bil-</i> | 'know' | | <i>bil-din</i> | 'be known' |

(Iskhakov & Palmbach 1961: 290; Anderson & Harrison 1999: 19)

- | | | | | | |
|------|---|--------------|-----------------|---------------------|-----------------|
| (64) | <i>taiga.sin-dan</i> | <i>damdi</i> | <i>čig-lī-p</i> | <i>dalay-lar-že</i> | <i>šu-už-up</i> |
| | taiga.mountain.range-ABL | drop | gather-PASS-GER | sea-PL-ALL | leap-RECP-GER |
| | <i>kir-er</i> | | | | |
| | enter-NPST | | | | |
| | 'From the taiga high up in the mountains drops gather and flow to the sea.' | | | | |

(Iskhakov & Palmbach 1961: 292)

The reciprocal is constructed by the suffix *-(l)š* (Iskhakov & Palmbach 1961: 282). The suffix is attached to the verbal stem. When combined with the passive or causative suffix, the reciprocal precedes the causative and passive.

- | | | | | | |
|------|-------------|--------|--|---------------|-------------------|
| (65) | <i>bil-</i> | 'know' | | <i>bil-iš</i> | 'know each other' |
|------|-------------|--------|--|---------------|-------------------|

- | | | | | | |
|------|--|-----------------------|---------------------|----------------------|------------|
| (66) | <i>amir mendi</i> | <i>aytīr-žī-r-dan</i> | <i>ažīr ara</i> | <i>xöepe-š-pe-en</i> | <i>bis</i> |
| | health | ask-RECP-NPP-ABL | across incompletely | discuss-RECP-NEG-REM | 1PL |
| | '[After] we asked each other about health and did not discuss it any further (with each other).' | | | | |

(Iskhakov & Palmbach 1961: 283)

The reflexive can be expressed by *bot* 'self' or by the suffix *-(DI)n* on the verbal stem.

(67) *boda-* 'think' *boda-n* 'consider' (lit. 'think to oneself')

(Iskhakov & Palmbach 1961: 285)

(68) *kiži iyi katap törüt-tün-er eves*
 person two again be.born-REFL-NPST not
 'A man isn't born twice.' (lit. 'A man cannot be born to himself again.')

(Iskhakov & Palmbach 1961: 289)

Increasing valency

Tuvan has a very active causative construction (Iskhakov & Palmbach 1961: 274). There are four causative suffixes (*-Dir, -D, -Ir, -KIs*) that can be attached to the verbal stem. There is no clear rule for the use of these suffixes.

(69)	<i>kes-</i> 'cut'	<i>kes-tir</i> 'force someone to cut'
	<i>čor(u)-</i> 'go'	<i>čoru-t</i> 'send someone'
	<i>öl-</i> 'die'	<i>öl-ür</i> 'kill'
	<i>kör-</i> 'see, watch'	<i>kör-güs</i> 'show'

(Iskhakov & Palmbach 1961: 276-277)

(70) *baški nom-nu öörenikči-ler-ge nomču-t-kan*
 teacher book-ACC student-PL-DAT read-CAUS-REM
 'The teacher made the students read the book.'

(Anderson & Harrison 1999: 19)

The valency decreasing suffixes in Turkish – *-il, -in, -n, -nil* for passive; *-(i)ş* for the reciprocal; *-(i)n* for the reflexive – resemble the Tuvan suffixes (Theunissen & Türkmen 2005: 271-272, 276). The causative in Turkish is expressed through the suffixes *-Dir, -ir, -it, -t, or -Er* (Theunissen & Türkmen 2005: 283). In Turkish too, the causative and passive do not necessarily express a causative or passive meaning. The causative suffixes are also used as (di-)transitivizers and the passive suffixes can be used as detransitivizers. The paradigm of the verb 'boil' shows clearly how causatives can change the meaning of the verb without giving the verb a causative meaning (71a; boil > cook). The same goes for the passive voice. (71c) shows a verb marked with a passive marker, but not necessarily reflecting the passive meaning.

(71) a. *piş-* 'boil (intr.)'
piş-ir 'cook (trans.)'
piş-ir-t 'make someone cook (caus.)'

(Theunissen & Türkmen 2005: 285)

b. *Ali kalem kır-di*
 Ali pen break-VIS
 'Ali broke the pen.'

'normal' verbal predicates, for there is no pronominal marking on the verbal phrase and the TAM suffixes coincide with the suffixes used in the participle slot.

- (75) *tüün-iyg utas-day-aar n' bi oč-son*
 PRO:3SG-GEN phone-HAB-GER EMPH PRO:1SG go-IPFV
 'I went because he phoned.'

(Gaunt & Bayarmandakh 2004: 99)

The syntax of these Turkish and Mongolian participles and gerunds will also be discussed in 2.3.2.2 *Subordination*.

2.2.2.6 Modals

Modality can be expressed by the irrealis (see section 2.2.2.2 *Tense-Aspect-Mood*). However, this can also be done by the modal form *deg*, meaning 'if'. When *deg* is combined with *-KI* it resembles the English verb 'could' or 'should' (Anderson & Harrison 1999: 53).

- (76) a. *koža kilašta-ži-p čora-an deg bis*
 together walk-RECP-GER go-REM MOD 1PL
 'As if we had been walking together side by side.'
- b. *bo arga-dan irak eves-le šik bar bol-gu deg*
 PROX forest-ABL far not-EMPH meadow COP AUX-GER MOD
 'Not far from this forest there should be a meadow.'

(Anderson & Harrison 1999: 53)

Modals in Turkish are mostly expressed through the evidentials that express doubt, such as *-(y)mış* and *-Dir*. The modal verb 'must' can be expressed through the necessitive or hortative (77a-b). Furthermore a gerund construction (*-mE lazım/gerek(li)*) can be used (77c; Theunissen & Türkmen 2005: 362-363).

- (77) a. *yarın gel-sin*
 tomorrow come-HORT.3SG
 'He must come tomorrow.'

(Theunissen & Türkmen 2005: 363)

- b. *her şeye karış-ma-malı-sın*
 everything step.in-NEG-NEC-2SG
 'You must not step in everything.'

(Theunissen & Türkmen 2005: 362)

- c. *borcu-nuz-u öde-me-niz lazım*
 debt-2PL.POSS-ACC pay-GER-2PL.POSS need
 'You must pay your debt.'

(Theunissen & Türkmen 2005: 363)

In Mongolian, the passive is used to express ‘can’ (Gaunt & Bayarmandakh 2004: 136).

- (78) *nada-d sana-gda-γ-güy bayna*
I-DAT hear-PASS-INF-NEG AUX
‘I can’t remember.’

(Gaunt & Bayarmandakh 2004: 136)

Other modals are expressed through evidentiality (Brosig 2015: 2).

2.2.2.7 Negation

Negation can be done in several ways. The first option is the negation suffix *-BE* which is directly attached to the stem followed by the remote past, recent past, imperfective and imperative (79; Anderson & Harrison 1999: 53).

- (79) *nomču-va-di-m*
read-NEG-REC-1SG
‘I didn’t read.’

(Anderson & Harrison 1999: 53)

The negation suffix *-BEs* is fused with the non-past, and *-BEyn* to gerunds (80; Anderson & Harrison 1999: 54).

- (80) *sen-i ut-pas men*
PRO:2SG-ACC forget-NEG.NPST 1SG
‘I won’t forget you.’

(Anderson & Harrison 1999: 54)

The second option is the negative copula *čok* (81a). This is the replacement for the copula *bar*. The remote past and non-past tense take the auxiliary *tur* and the negation suffixes associated with those tenses (81b-c; Anderson & Harrison 1999: 54).

- (81) a. *ava-m bažiη-da čok*
mother-1SG.POSS house-LOC COP.NEG
‘My mother is not at home.’
- b. *ava-m bažiη-ga tur-ba-an*
mother-1SG.POSS house-DAT AUX-NEG-REM
‘My mother was not at home.’
- c. *ava-m bažiη-ga tur-bas*
mother-1SG.POSS house-DAT AUX-NEG-NPST.3SG
‘My mother will not be home.’

(Anderson & Harrison 1999: 54-55)

Turkish has only one negation suffix, *-mE*, which is the first suffix to be attached to the (extended) verbal stem (Theunissen & Türkmen 2005: 154). The negation suffix *-mEz* is derived from *-mE* and only is used for the non-past (Theunissen & Türkmen 2005: 157). Copula constructions are negated

by the negative copular verb *yok* or *değil* (see 2.2.2.1 *Copula constructions* for examples; Theunissen & Türkmen 2005: 108, 132).

The Mongolian negation has the same structure as Tuvan and Turkish. *biš* is used as a negative copular verb. The suffix *-guy* is attached to all other verbs (Gaunt & Bayarmandakh 2004: 17). When the verbal phrase consists of a main verb and an auxiliary, the negation is marked on the main verb and not on the auxiliary like in Tuvan.

2.3 Syntax

This section will be about the basic Tuvan syntax. Word order, coordination, relativization, complement clauses, adverbial clauses, and questions will be discussed. Tuvan displays a nominative-accusative alignment in all phrases and word classes.

2.3.1 Word order

The basic word order in Tuvan is Subject-Object-Verb. The (direct) object always precedes the verb (82a). In a ditransitive sentence, the indirect object is placed before the direct object (82b).

- (82) a. *bo ulus men-i bil-ir*
 PROX person PRO:1SG-ACC know-NPST.3SG
 S O V
 ‘These people know me.’

(Anderson & Harrison 1999: 17)

- b. *ol kiži bis-ke bo nom-nu ber-gen*
 DIST person PRO:1PL-DAT PROX book-ACC give-REM
 S IndirO DirO V
 ‘He gave us this book.’

(Anderson & Harrison 1999: 71)

The word order of complex clauses is not different from the basic word order. The subordinated clause is inserted directly at the beginning (83a) or behind the subject of the main clause (83b). Coordinated clauses have a double SOV-SOV order (see sections 2.3.2.1 *Coordination* and 2.3.2.2 *Subordination*).

- (83) a. *[[see-ŋ šaandakkı ır-lar-nı ırla-ar-ıŋ-nı] men diŋna-va-an men]*
 PRO:2SG-GEN old.style song-PL-ACC sing-NPP-2SG-ACC PRO:1SG hear-NEG-REM 1SG
 S_{sub} O_{sub} V_{sub} S_{main} V_{main}
 ‘I still haven’t heard you sing old-style songs.’

(Anderson & Harrison 1999: 80)

- b. *[men [o-lar-ga šaptık kat-pas] deeš bažiŋ-če kir-ip kel-di-m]*
 PRO:1SG PRO:3-PL-DAT obstacle add-NEG.NPST PURP house-ALL enter-GER go-REC-1SG
 S_{main} IndirO_{sub} DirO_{sub} V_{sub} V_{main}
 ‘I came inside so as not to disturb them.’

(Anderson & Harrison 1999: 76)

The Tuvan word order is also found in Turkish. The basic word order is SOV (Theunissen & Türkmen 2005: 147). In complex sentences the order is $S_{main}S_{sub}O_{sub}V_{sub}O_{main}V_{main}$, so the subordinated clause is embedded (Theunissen & Türkmen 2005: 444).

The basic word order of Mongolian is also SOV (Gaunt & Bayarmandakh 2004: 6, 152). Complex sentences follow the $S_{sub}O_{sub}V_{sub}S_{main}O_{main}V_{main}$ or $S_{main}S_{sub}O_{sub}V_{sub}O_{main}V_{main}$ order (Gaunt & Bayarmandakh 2004: 61, 97). The order of complex sentences in Mongolian and Turkish are both found in Tuvan.

2.3.2 Conjunction

Conjunction is one of the most diverse parts of the Tuvan syntax. Coordination can be done in three ways. Subordination is achieved by participles and gerunds.

2.3.2.1 Coordination

Coordination can be achieved by three options. The first option is coordinative markers, such as *bolgaš*, *baza*, and *azi*, which all mean ‘and’ (Anderson & Harrison 1999: 71; Anderson & Harrison 2006).

- (84) *[[xat xada-an] baza [čàs čag-gan]]*
 wind blow-REM and rain precipitate-REM
 ‘The wind blew and it rained.’

(Anderson & Harrison 1999: 71)

The second option is the gerund suffix *-KEŠ*. This suffix is attached to the stem of the first verb. TAM suffixes and pronominal markers are attached to the second verb (Anderson & Harrison 1999: 71). This approach, however, does not coordinate two clauses, but subordinate them. Example (85) shows that the verb *bar* ‘go’ is subordinated by the gerund suffix *-KEŠ*.

- (85) *[[bar-gaš] kel-di-m]*
 go-GER come-REC-1SG
 ‘I went and came back.’

(Anderson & Harrison 1999: 71)

The last option, only used for coordinating NPs, is the clitic *=bile* ‘with’. The clitic is attached to the first member of the coordination. Cases can be found on the second member of the coordination (Anderson & Harrison 1999: 71).¹³

- (86) *Kandan=bile Orlan-niŋ xar-i deŋ*
 Kandan=with Orlan-GEN snow-3.POSS equal
 ‘Kandan’s and Orlan’s ages are the same.’

(Anderson & Harrison 1999: 71)

¹³ In the grammar of Anderson & Harrison (1999) *bile* is glossed with an instrumental. However, the only examples with *bile* contain people. In this case, it should have been glossed with a comitative. I chose to gloss *bile* lexically, for the status of *bile* is not clear to me. *bile* can be seen as a nominal case marker, like Anderson & Harrison (1999) see it or it can be seen as a conjunction, in my opinion. For a discussion of the status of the Turkish cognate, I refer to Theunissen & Türkmen (2005: 274-275).

Coordination in Turkish can be achieved through the Arabic loan conjunction *ve* ‘and’. Proper Turkish ‘coordination’ is done by the gerunds *-(i)p* or *-(y)ErEk* (Theunissen & Türkmen 2005: 366).

- (87) *[[kalk-ıp] git-ti-k]*
 get.up-GER leave-VIS-1PL
 ‘We got up and left.’

(Theunissen & Türkmen 2005: 366)

Mongolian seems to lack a conjunction ‘and’. ‘Coordination’ is achieved by the continuous suffix, resulting in a subordinate construction rather than coordination (Gaunt & Bayarmandakh 2004: 11, 22, 87).

- (88) *[[yool-oo ide-ž] pivo uu-can]*
 food-REFL.ACC eat-CONT beer drink-IPFV
 ‘I ate and had some beer.’ (lit. ‘I drank beer [and was] eating my own food.’)

(Gaunt & Bayarmandakh 2004: 87)

2.3.2.2 Subordination

Subordination in Tuvan is achieved through participles and gerunds. The main clause has the regular marking and structure, but the subordinate clause is inserted in front of the main clause. The verb of the subordinate clause is marked by the participle suffixes or the gerund suffixes and bears the conjunction function or relative meaning (Anderson & Harrison 1999: 72).

2.3.2.2.1 Relative clauses

Relative clauses are constructed through participles. As in the following example, the participle is marked by the pronominal suffix of the subject of the relative clause. The participle functions as an adjective and is, therefore, not marked by case or number. Some participles, like in the example below, have the same form as the TAM suffixes.

- (89) *[[šaanda bis-tij čurt-tap tur-gan-ivis čer-de] škola tud-up ka-an]*
 long.ago PRO:1PL-GEN live-GER AUX-PP-1PL place-LOC school build-GER AUX-REM
 ‘A school was built where we used to live.’

(Anderson & Harrison 1999: 72)

Participles in relative clauses can be seen as adjectivized verbs and adjectives have no restrictions on the places in the clause, therefore, participles in a relative clause receive no further marking and every clause can be relativized. When the subject is expressed overtly, it is marked by a genitive or, rarely, by an accusative case (Anderson & Harrison 1999: 72). Example (90) shows a relative clause that only contains a verb. The subject, in this case, is cross-referenced by the possessive marker following the participle.

- (90) *[[bil-ir-im] čer-ler köst-üp kel-gile-en]*
 know-NPP-1SG place-PL show-GER AUX-ITE-REM
 ‘They were shown the places I know.’

(Anderson & Harrison 1999: 72)

This situation is also found in Turkish and, partially, in Mongolian. In Turkish, the participles are used as an adjective and are therefore not marked for case or number. Because relative sentences are ‘adjectivized’, every NP can be relativized. The example below shows an indirect object in a relativized context.

- (91) *[[dans ed-en] kadın-a para ver-di-ler]*
 dance do-NPP woman-DAT money give-VIS-3PL
 ‘They gave money to the woman that danced.’

(Theunissen & Türkmen 2005: 303)

In Mongolian, the TAM suffixes are attached to the verb, instead of a participle construction. However, word order and subordination are the same as in Tuvan. The following example shows the relative clause embedded in the main clause. It also shows that the relative clause takes the position of the adjective.

- (92) *[[činiy möng-iyg av-san] yün ter bayna]*
 DIST money-ACC take-IPFV person DIST COP
 ‘That is the one who took your money.’

(Gaunt & Bayarmandakh 2004: 137)

2.3.2.2.2 Complement clauses

Originally complement clauses were constructed by both participles and gerunds. Two gerunds of the verb *deer* ‘concern’, *de-p* and *de-eš*, developed into a complementizer that is used for simple complement clauses (Anderson & Harrison 1999: 74). However, there are still some verbs, mostly the lexical verbs, that can have complement clauses through participles (93a-b) and even combinations of both strategies can occur in one sentence (93a).

- (93) a. *[[mee-ŋ kel-gen-im-ge] ača-m amıra-ar aažok öörü-ür
 PRO:1SG-GEN come-PP-1SG-DAT father-1SG.POSS be.pleased-NPST very be.happy-NPST
 boor dep] boda-an men]*
 PROB COMP think-REM 1SG
 ‘I thought that my father would be very happy that I came.’
- b. *[[nom-nar-ni ekk-ep ka-ar bol-gan-iŋ-ga] ideg-ep tur men]*
 book-PL-ACC bring-GERAUX-NPST AUX-PP-2-DAT hope-GERAUX 1SG
 ‘I hope you’ll bring the books.’

(Anderson & Harrison 1999: 75)

In Turkish, complement clauses are formed by participles only. The participles take the case that the verb in the main clause triggers (Theunissen & Türkmen 2005: 319). The next example shows a complement clause with the verb ‘believe’. This verb triggers a dative case and, therefore, the participle is marked by a dative case.

- (94) *[[her gün bir saat koş-tuğ-um-a] inan-m-iyor]*
 every day one hour run-PP-1SG-DAT believe-NEG-PRS.3SG
 ‘He does not believe that I run one hour every day.’

(Theunissen & Türkmen 2005: 320)

The syntax of the complement clause in Mongolian seems to resemble the syntax of the Mongolian relative clauses. The following example shows a complement clause. The complement is inserted into the main clause and precedes the main clause.

- (95) *[[ter-iyg udees ömnö gar-san] ge-sen]*
 PRO:3SG-ACC afternoon before leave-IPFV say-IPFV
 'I heard that he left before lunch.'¹⁴

(Gaunt & Bayarmandakh 2004: 145)

2.3.2.2.3 Adverbial clauses

Adverbial clauses resemble partially the construction of complement clauses. However, the complementizer construction is only found in purpose clauses. Purpose clauses are marked by the complementizer *deeš*. This complementizer often (but not always, as can be seen in 93b, repeated from 83b) goes together with the conditional or imperative (96a; Anderson & Harrison 1999: 76).

- (96) a. *[[uyguz-un xandir ud-up al-zin-nar deeš] kadar-ip olur men]*
 sleep-3.POSS deeply sleep-GER SBEN-3.IMP-PL PURP guard-GER AUX 1SG
 'I am guarding them, so that they can get some sleep.'
- b. *[men [o-lar-ga šaptik kat-pas] deeš bažin-če kir-ip kel-di-m]*
 PRO:1SG PRO:3-PL-DAT obstacle add-NEG.NPST PURP house-ALL enter-GER go-REC-1SG
 'I came inside so as not to disturb them.'

(Anderson & Harrison 1999: 76)

Reason clauses can be formed by a participle construction together with the conjunction *užurundan* 'reason' (97a) or by a gerund construction *-KEš* (97b; Anderson & Harrison 1999: 72, 74).

- (97) a. *[[šee-ŋ dülgüür-ler čidir-ip al-gan-iŋ užur-u-n-dan] men bažin-če]*
 PRO:2SG-GEN key-PL lose-GER AUX-PP-2SG reason-3.POSS-LK-ABL PRO:1SG house-ALL
iyi šak išt-i-n-de kir-ip šida-vayn tur men]
 two hour in-3.POSS-LK-LOC enter-GER be.able-NEG.GER AUX 1SG
 'Because you lost the keys, I couldn't get in the house for two hours.'

(Anderson & Harrison 1999: 72)

- b. *[[xem uglat-kaš] parom čor-basta-an]*
 river flood-GER ferry go-CES-REM
 'The ferry stopped running because the river flooded.'

(Anderson & Harrison 1999: 74)

'When' clauses are constructed the same way as simple complement clauses, the participle is marked by the locative case in which the temporal 'when' meaning is expressed.

¹⁴ The translation is provided by Gaunt & Bayarmandakh, but according to the literal translation the sentence literally would have been: 'They said that he left before'. It is not clear whether this example is taken from a text and, therefore, the translation is this free, or that *gesen* is a grammaticalized evidential comparable to *dizque* (< *dicen que* 'they say') in South American Spanish.

- (98) *[[xar er-ve-en-de] bis liža-lig aŋ-ŋap tur-gan bis]*
 snow melt-NEG-PP-LOC PRO:1PL ski-ADJ hunt-GER AUX-REM 1PL
 ‘When the snow hadn’t yet melted, we would go hunting on skis.’

(Anderson & Harrison 1999: 82)

All cases, except for the allative, can be used on the participles, resulting in different meanings and nuances. The genitive case is always triggered by the postposition following the participle and does not carry a meaning of its own. The dative case is triggered when the verb in the main clause needs a dative object. The accusative is often the result of the case that the verb in the main clause triggers. The ablative gives the participle a temporal meaning ‘after’ or ‘since’.

Other cases can also be triggered just as the accusative and dative case: the verb in the main clause can trigger a case other than accusative and this case is thus marked on the participle. This can result in adverbial clauses, such as examples (99a), (99c, repeated from 83a) and (99d). But sometimes the triggered case is a result of the obligatory case of the main verb, which can be seen in example (99b). This example shows a complement clause, but with a dative case because the verb ‘believe’ triggers a dative object.

- (99) a. *[[aŋnaaškŋ dugay-i-n-da čugaalaž-ir-ivis-tiŋ murn-u-n-da] bis*
 hunting about-3.POSS-LK-LOC converse-NPP -1PL-GEN before-3.POSS-LK-LOC we
ür-le šayl-ap olur-du-vus]
 long.time-EMPH drink.tea-GER AUX-REC-1PL
 ‘Before talking about hunting, we drank tea for a long time.’

(Anderson & Harrison 1999: 81)

- b. *[[oo-ŋ dirig iln-er-i-n-ge] büzüre-er men]*
 PRO:3SG-GEN alive remain-NPP -3.POSS-LK-DAT believe-NPST 1SG
 ‘I believe he’s still alive.’
- c. *[[see-ŋ šaandakki ir-lar-ni irla-ar-iŋ-ni] men diŋna-va-an men]*
 PRO:2SG-GEN old.style song-PL-ACC sing-NPP-2SG-ACC PRO:1SG hear-NEG-REM 1SG
 ‘I still haven’t heard you sing old-style songs.’

(Anderson & Harrison 1999: 80)

- d. *[[Ivan-ni šerig-že appar-gan-i-n-dan] kim=daa oo-n čagaa al-ba-an]*
 Ivan-ACC army-ALL bring-PP-3.POSS-LK-ABL who-EMPH he-ABL letter take-NEG-REM
 ‘Since Ivan was taken into the army, no one had received a letter from him.’

(Anderson & Harrison 1999: 79)

Turkish shows a more consistent construction. Adverbial clauses are constructed by gerunds (Theunissen & Türkmen 2005: 365). Because Turkish has such a wide range of gerunds, it is impossible to give examples of all of them. The examples below can, therefore, be seen as a template. (100a) is an example of a ‘when’ clause, where the gerund expresses the temporal meaning. (100b) is an example of a reason clause, where the ‘reason’ again is expressed through the gerund.

- (100) a. *[[ben-i gör-ünce] hemen kaç-ma-ya başla-dı]*
 PRO:1SG-ACC see-GER promptly fly-INF-DAT start-VIS
 ‘When he saw me, he promptly started to walk away.’

(Theunissen & Türkmen 2005: 385)

- b. *[[yarın gele-me-yeceği için] özür dil-iyor]*
 tomorrow come-NEG-GER for excuse say-PRS.3SG
 ‘He apologizes because he can’t come tomorrow.’

(Theunissen & Türkmen 2005: 392)

Like Tuvan and Turkish, Mongolian has a wide range of gerund suffixes that can be used to form adverbial clauses. The examples below represent the Mongolian structure of the adverbial clauses. The ‘until’ clause is formed by the gerund *-tlaa*. The adversative clause is found in the gerund *-vč*.

- (101) a. *[[bi en-iyg γiy-ž duus-tlaa] end bay-na]*
 PRO:1SG this-ACC do-CONT finish-GER here COP-NPST
 ‘I shall be here until I have finished it.’

(Gaunt & Bayarmandakh 2004: 120)

- b. *[[bi yele-vč] či sonos-dog-güy]*
 PRO:1SG tell-GER PRO:2SG listen-HAB-NEG
 ‘I tell you, but you don’t listen.’

(Gaunt & Bayarmandakh 2004: 89)¹⁵

Reason clauses can be formed by *učraas* ‘reason-ABL’ (Gaunt & Bayarmandakh 2004: 100). This construction is also found in Tuvan (see example 97). As example (102) shows, the order and subordination resemble the Tuvan construction.

- (102) *[[čam-ayg ir-sen učr-aas] bi iy bayarla-ž bay-na]*
 PRO:2SG-ACC come-IPFV reason-ABL PRO:1SG much happy-CONT COP-NPST
 ‘Because you’ve come I’m very happy.’

(Gaun & Bayarmandakh 2004: 100)

2.3.3 Questions

Both polar and content questions are marked in Tuvan. Polar questions have a question word *be*. This word is always sentence-final.

- (103) *mee-η=bile baar sen be*
 I-GEN=with go-NPST 2SG Q
 ‘Will you go with me?’

(Anderson & Harrison 1999: 88)

Content questions are marked by the suffix *-ll* (Anderson & Harrison 1999: 88). This suffix appears on the interrogative pronoun (104a) or the element that is the pivot of the question (104b).

¹⁵ Note that the word order of this sentence is main clause-subordinate clause, rather than main clause-final.

- (104) a. *bir şak-ta minut kaç-ıl*
 one hour-LOC minute how.many-INT
 'How many minutes are there in an hour?'

(Anderson & Harrison 1999: 88)

- b. *taraa-ni kažan kez-er-il*
 grain-ACC when cut-NPST-INT
 'When was it that (they) cut the grain?'

(Anderson & Harrison 1999: 88)

In Turkish, only polar questions are morphologically marked. This is done by the question word *mi*. The question word is always word final (105a-b), except for predicates. In predicated the question word follows the questioned clause (105c). Example (105c) shows the nuances when the question word is moved from one phrase to another. In the first example, the quality is questioned. In the second, the location itself is questioned. Although being a separate word, this question word is affected by the vowel harmony rules (Theunissen & Türkmen 2005: 106). Content questions do not have additional marking (105d).

- (105) a. *bahçe-de mi-siniz*
 garden-LOC Q-2PL
 'Are you in the garden?'

(Theunissen & Türkmen 2005: 107)

- b. *İngilizce bil-ir mi-sin*
 English know-NPST Q-2SG
 'Do you speak English?'

(Theunissen & Türkmen 2005: 159)

- c. *Hollanda güzel mi*
 Netherlands beautiful Q
 'Are the Netherlands beautiful (emphasis on the quality)?'

Hollanda mı güzel
 Netherlands Q beautiful
 'Are the Netherlands beautiful (emphasis on the Netherlands)?'

(Theunissen & Türkmen 2005: 107)

- d. *neren ağrı-yor*
 where hurt-PRS
 'Where does it hurt?'

(Theunissen & Türkmen 2005: 97)

Mongolian marks both content and polar questions. Polar questions go with the question word *(y)ÜÜ* (106a) and content questions get the question word *Be* (106b; Gaunt & Bayarmandakh 2004: 16).

(106) a. *ta nom unši-ž baynauu*
 you book read-CONT COP Q
 'Are you reading a book?'

(Gaunt & Bayarmandakh 2004: 16)

b. *ta yuu idey ve*
 you what eat Q
 'What will you eat?'

(Gaunt & Bayarmandakh 2004: 16)

The question word *Be* is also found in Tuvan but is used to mark polar questions.

2.4 Lexicon

In *Appendix B* a 207-words Swadesh list of Tuvan, Turkish and Mongolian can be found. Looking at the Swadesh lists, one can conclude that the majority of the Tuvan words are cognates with the Turkish words.

(107)	Tuvan	Turkish	
	<i>dil</i>	<i>dil</i>	'tongue'
	<i>čok</i>	<i>yok</i>	'not to be'
	<i>daš</i>	<i>taş</i>	'stone'
	<i>at</i>	<i>ad</i>	'name'
	<i>dag</i>	<i>dağ</i>	'mountain'

The cognates display consistent phonological changes between the two languages. In general, it can be concluded that Turkish portrays more lenition in respect to Tuvan.

A few loans from Mongolian are also found in this list. Example (108) represents the various Mongolian loans in Tuvan. The Tuvan avoidance of consonant clusters becomes clear in these loans. Mongolian allows for consonant clusters like *-m't-*, whereas Tuvan inserts a vowel in between. It looks like Tuvan uses the *-l-* for this. The *-l-* behaves according to the vowel harmony rules. This becomes clear in the examples *čimis* 'fruit' and *amitan* 'animal', where the high unrounded vowel is fronted in the case of *čimis* and the back variety in *amitan*.

(108)	Tuvan	Mongolian	Turkish	
	<i>dalay</i>	<i>dalay</i>	<i>deniz</i>	'sea'
	<i>doš</i>	<i>möš</i>	<i>buz</i>	'ice'
	<i>čimis</i>	<i>žims</i>	<i>meyva</i>	'fruit'
	<i>amitan</i>	<i>am'tan</i>	<i>hayvan</i>	'animal'

The words for 'leg' and 'foot' and 'leg' and 'hand' seems to be affected by Russian or Mongolian. In Russian, the semantics of these words is merged to *noga* for 'leg/foot' and *ruka* for 'arm/hand'. This is also the case in Mongolian (*γöl* for 'leg/foot' and *ger* for 'arm/hand'). In Tuvan, these concepts are merged too, whereas Turkish has separate lexical items for these concepts.

(109)	Tuvan	Turkish	
	<i>xol</i>	<i>el</i>	'hand'
	<i>xol</i>	<i>kol</i>	'arm'
	<i>but</i>	<i>bacak</i>	'leg'
	<i>but</i>	<i>ayak</i>	'foot'

Only one loan from Russian was found in the Swadesh list. This is the word for ‘fruit’. Tuvan has a Mongolian loan and a Russian loan.¹⁶

(110) Tuvan	Russian	Mongolian	
<i>čimis, frukt</i>	<i>frukt</i>	<i>žims</i>	‘fruit’

2.5 Discussion

Tuvan phonology shows similarities with both Turkish and Mongolian. Vowel length is found in Mongolian, but the Tuvan vowel inventory is similar to Turkish. Vowel and consonant harmony are shared by all three languages, but the extent of the vowel harmony varies. The harmony rules of Tuvan are closest to Turkish, but the similarities with Mongolian cannot be ignored. Tuvan has Turkic syllable structure that is even projected on loans. Mongolian consonant clusters in loans are separated by the high unrounded vowel /i/, which is subject to the vowel harmony rules.

Tuvan morphology is undeniably Turkic, although, Mongolian influences are clearly visible. The pronominal markers, the case suffixes, numerals, the indefinite article and personal pronouns show the linguistic relation of Tuvan with Turkish. On the other hand, there is the dative-allative opposition, which is found in many Siberian languages, but not in Turkish (Anderson 2006: 25). The Russian possessive construction shows that Russian also has influenced the Tuvan language. The most apparent Mongolian influence is perhaps seen in the auxiliaries. Auxiliaries, as seen in Tuvan, are absent in Turkish. Mongolian, on the other hand, has an even more extensive system of auxiliaries than Tuvan.

Some features are shared by all three languages, such as the postpositions, word order, relativization, copula constructions, evidentials, voice marked on the verbal stem and negation. The syntax is also very identical in all three languages. Word order, subordination structures and the use of gerunds show many similarities. Question words are found in Tuvan, Turkish and Mongolian. However, only Mongolian and Tuvan share the marking of content questions with respectively *Be* and *-II*. Note that the Mongolian *Be* could be a cognate of the Tuvan polar question word *be*.

Sometimes, Tuvan mixes both Turkic and Mongolian features. The subject of the subordinate clause can be marked by a genitive (Turkic) or accusative (Mongolian). The same goes for the plural suffix *-IEr* (Turkic) and *-nEr* (Mongolian). Features like the cessative, iterative and complementizers are only found in Tuvan.

The Tuvan lexicon shows some Mongolian influence, but the major part has a Turkic base. The semantic merging of ‘foot/leg’ and ‘hand/arm’ is found in both Russian and Mongolian; therefore, I cannot draw a hard conclusion on the origin of this merging. The phonological differences between Turkish and Tuvan seem to be consequent.

¹⁶ Interesting to see is the fact that the Turkish word for ‘fruit’ is also a loan. *Meyva* is originally found in the Persian languages. Looking at other Turkic languages, they all seem to have the Mongolian, Persian or Russian loan.

3. Results: Tofa

In this chapter, the Tofa grammar is discussed and compared with Tuvan. Tofa is spoken in the Tofalaria region in the Irkutsk Oblast’.

3.1 Phonology

Tofa vowel and consonant inventories overlap for the major part with the Tuvan sound inventory. However, Tofa has uvular and pharyngeal consonants and the <ä> vowel, which are absent in Tuvan.

3.1.1 Vowel inventory and vowel harmony

The Tofa vowel inventory is displayed in the table below. Although Rassadin put in more vowels in the table, I have chosen to not include them, for they appear to be non-phonemic.

Table 15: Tofa vowel inventory (adapted from Rassadin 1971: 24)

	front		back
high	i ü	ɨ	u
mid	e ö		o
low	ä	a	

These vowels can be lengthened or pharyngealized (Rassadin 1971: 24), which are phonemic features.

short vowel	pharyngealized vowel	long vowel
eš ‘friend’	eʃ- ‘dig away, row’	eeš ‘female bear’
at ‘name’	aʃt ‘horse’	aat ‘rock a baby’

(Rassadin 1971: 157, 158, 183, 184)

Vowel harmony is also found in Tofa. The first variety of vowel harmony is based on the front-back opposition (Rassadin 1971: 53). The minimal pair below shows only one difference: the back vowel in the first example and the front vowel in the second vowel. The plural suffix is changed due to the influence of the (last) vowel in the stem.

- (111) a. *ham-nar* b. *hem-ner*
 shaman-PL river-PL
 ‘shamans’ ‘rivers’

(Rassadin 1971: 65)¹⁷

The vowel harmony based on the front-back opposition and the rounded-unrounded opposition is not discussed as such, but the following two examples show that Tofa has vowel harmony based on both these oppositions. In (112a), the suffix *-DI* has an unrounded back vowel; in (112b) the vowel of the suffix is a rounded back vowel.

¹⁷ For all examples from Rassadin (1971), I adapted the glosses and added the morpheme boundaries. The examples are translated from Russian.

- (112) a. *odž al-di* b. *men dur-du-m*
 revenge take-REC 1SG stand-REC-1SG
 'He took revenge.' 'I stood.'

(Rassadin 1971: 62)

3.1.2 Consonant inventory

Because Rassadin had his own system of transcribing, I adapted his notation system, in order to keep all the transcriptions consistent. The (adapted) Tofa consonant inventory is found in the following table:

Table 16: Tofa consonant inventory (adapted from Rassadin 1971: 44)

	labial		labio-dental		alveolar		palatal		velar		uvular		pharyngeal	
plosives	p	b			t	d			k	g	q			
nasals		m				n	ny			ŋ				
trills						r								
fricatives					s	z	š	ž		ɣ	ʁ	ħ		
affricates							č	dž						
laterals						l								
approximants					v			y						

The word-initial [l], [p] and [r] only appear in loans:

- (113) *lampa* < *lampa* (Russian) 'lamp'
pool < *pol* (Russian) 'gender', 'floor'
rama < *rama* (Russian) 'frame'

(Rassadin 1971: 205, 216, 224)

In intervocalic contexts, some consonants change from devoiced to voiced. The next example shows the word *at* in intervocalic context. When *at* is not directly followed by the vowel, the final consonant is [t]. When *at* is followed by a vowel, the /t/ becomes [d].

- (114) a. *at* b. *ad-i*
 name name-3.POSS
 'name' 'his name'

(Rassadin 1971: 47)

Most suffixes in Tofa have a consonant in the onset, which is subject to consonant harmony. Examples can be found throughout this chapter.

In Tuvan the uvular and pharyngeal consonants are absent.

3.1.3 Syllable structure

Like in Tuvan, the syllable structure is rather simple in Tofa. Consonant clusters are avoided unless they appear in the coda of the syllable, but no more than two consonants are allowed in the cluster. So the basic syllable structure is (C)V(V)(C)(C). The following list shows all possibilities.

(115)	VV	<i>ee</i>	‘master’
	VC	<i>aŋ</i>	‘wild’
	CV	<i>de</i>	‘say (IMP)’
	VVC	<i>ool</i>	‘son’
	CVV	<i>čaa</i>	‘war’
	CVC	<i>day</i>	‘mountain’
	CVVC	<i>daaš</i>	‘sound’
	CVCC	<i>dört</i>	‘four’

(Rassadin 1971: 154, 168, 170, 175, 183, 195, 213)

3.2 Morphology

Tofa morphology has a highly agglutinative character. Tofa has only suffixes, which are attached to the nominal and verbal stems. All in all, the morphology shows many similarities with Tuvan.

3.2.1 Nominal morphology

Tofa nominal morphology is discussed in this section. Tofa does not have morphologically marked gender, nor does it distinguish animacy morphologically. The order of the suffixes on the noun is:

STEM-plural-possessive-case.

3.2.1.1 Plural marking

The suffix *-LEr* is used to mark plurality in Tofa (Rassadin 1978: 19). The capital [l] changes into [n] after nasals, [l] after the remaining voiced consonants and vowels and [t] after voiceless consonants.

(116)	<i>hem</i>	<i>hem-ner</i>	‘river – rivers’
	<i>ög</i>	<i>ög-ler</i>	‘house – houses’
	<i>taš</i>	<i>taš-tar</i>	‘stone – stones’

(Rassadin 1978: 20)

3.2.1.2 Nominal case marking

Unlike Tuvan, which has seven cases, Tofa has only six cases: the nominative, genitive, dative, accusative, locative and ablative case. The allative case is merged with the dative case and the locative case can also trigger a partitive meaning (Rassadin 1978: 29).

Table 17: Case suffixes in Tofa (adapted from Rassadin 1978: 30-32)

		‘horse’	‘horses’	‘lake’	‘lakes’
NOM	-∅	<i>aʰt</i>	<i>aʰt-tar</i>	<i>höl</i>	<i>höl-ler</i>
GEN	-NIŋ	<i>aʰt-tiŋ</i>	<i>aʰt-tar-niŋ</i>	<i>höl-niŋ, höl-nüŋ</i>	<i>höl-ler-niŋ</i>
DAT	-(K)E	<i>aʰt-ka</i>	<i>aʰt-tar-ga</i>	<i>höl-ge</i>	<i>höl-ler-ge</i>
ACC	-NI	<i>aʰt-ti</i>	<i>aʰt-tar-ni</i>	<i>höl-nü</i>	<i>höl-ler-ni</i>
LOC	-DE	<i>aʰt-ta</i>	<i>aʰt-tar-da</i>	<i>höl-de</i>	<i>höl-ler-de</i>
ABL	-DEn	<i>aʰt-tan</i>	<i>aʰt-tar-dan</i>	<i>höl-den</i>	<i>höl-ler-den</i>

The indirect object is marked by the dative case (117a; Rassadin 1978: 30). The indefinite direct object does not trigger any marking (117b). The definite direct object, on the other hand, is marked by the accusative case (117a).

- (117) a. *oŋ ħineek-ti ool-ga ber-di*
 PRO:3SG book-ACC son-DAT give-REC
 'He gave the boy the book.'

(Rassadin 1978: 38)

- b. *eʔt če-en-im [...]*
 meat eat-PP-1SG
 '[...] I ate meat.'

(Rassadin 1978: 212)

3.2.1.3 Articles

According to Rassadin (1971), Tofa has an indefinite article *bir*, which can be translated with '1' or 'a' (Rassadin 1971: 162, 1978: 51). Tofa lacks a definite article. The Tofa article is a cognate with the Tuvan indefinite article. The following example shows how the numeral '1' can function as an indefinite article.

- (118) *bir kiši kel-gen*
 one person come-REM
 'A man came.'

(Rassadin 1978: 51)

3.2.1.4 Possession

Pronominal attributive possession is marked by suffixes on the possessee.

- (119) *öök* 'button'
öög-üm 'my button'
öög-üŋ 'your button'
öög-ü 'his, her button'
öög-übüs 'our button'
öög-üŋer 'your (PL) button'
öög-ü 'their button'

(Rassadin 1971: 215; Rassadin 1978: 24)

Predicative possession is formed by the pronominal suffix on the possessee (*-im* in the example below) and the copular verb *bar* or *yok* (in case of negation).

- (120) *aʔt-im bar*
 horse-1SG.POSS COP
 'I have a horse.'

(Rassadin 1978: 26)

3.2.1.5 Pronouns

Tofa personal pronouns do not show any striking irregularities. However, this can only be said of the paradigms that were provided by Rassadin. The forms with an asterisk are reconstructed by myself. The dative and genitive forms of the first and second person singular were not found. Because these forms are very irregular in the other Sayan languages, I cannot reconstruct these without many doubts.

Table 18: Personal pronouns in Tofa (adapted from Rassadin 1978: 256)

	1SG	2SG	3SG
NOM	<i>men</i>	<i>sen</i>	<i>oŋ</i>
GEN			<i>oŋ-nuŋ</i>
DAT			<i>oŋ-ga</i>
ACC	* <i>men-i</i>	* <i>sen-i</i>	<i>oŋ-nu, oŋ-un</i>
LOC	* <i>men-de</i>	<i>sen-de</i>	<i>oŋ-da</i>
ABL	<i>men-den</i>	* <i>sen-den</i>	<i>oŋ-dan</i>
	1PL	2PL	3PL
NOM	<i>biˀs</i>	<i>si-ler</i>	<i>o-lar-iŋ</i>
GEN	<i>bis-tiŋ</i>	* <i>si-ler-niŋ</i>	<i>o-lar-iŋ-niŋ</i>
DAT	<i>bis-ke</i>	* <i>si-ler-ge</i>	<i>o-lar-iŋ-ga</i>
ACC	* <i>bis-ti</i>	* <i>si-ler-ni</i>	<i>o-lar-iŋ-ni, o-lar-iŋ-in</i>
LOC	* <i>bis-te</i>	* <i>si-ler-de</i>	<i>o-lar-iŋ-da</i>
ABL	* <i>bis-ten</i>	* <i>si-ler-den</i>	<i>o-lar-iŋ-dan</i>

Overall, the paradigms of the personal pronouns show regular use of the case markers.

The reflexive pronoun is formed by the word *bot*, which means ‘body’ and is extended in the nominative by the postposition *bile* ‘with’ (121a). In the remaining cases, *bile* is dropped and case markers are added (121b). The combination with *bile* is not found in Tuvan.

- (121) a. *bod-um* *bile* b. *bod-um-ga*
 body-1SG.POSS with body-1SG.POSS-DAT
 ‘I, myself’ ‘for myself’

(Rassadin 1978: 257)

Like in Tuvan, interrogative pronouns in Tofa are used to form indefinite pronouns. The list below shows the basic interrogative pronouns:

- (122) *kum* ‘who’
 kandiŋ ‘which’
 kanˀčžangaš ‘why’
 kanˀčža ‘how’
 kayda ‘where’
 kaˀħin ‘when’
 čü ‘what’
 kaˀš, čeˀhe ‘how much/many’
 kayci, kae ‘which’
 kaynaari ‘whereto’
 kaidan ‘from where’

(Rassadin 1978: 173, 255)

The indefinite pronouns are formed by the interrogative pronouns and the particle *tE* (Rassadin 1978: 255).

- (123) a. *kum ta* b. *čü te*
 who PTCL what PTCL
 ‘someone’ ‘something’

(Rassadin 1978: 254)

Tofa has three demonstratives *bo* ‘this (PROX)’, *ol* ‘that (MED)’ and *tee* ‘that (distant; DIST)’. Unlike Tuvan, the third person singular does not coincide with one of the demonstratives in Tofa. Furthermore, the Tofa paradigms show fewer irregularities than Tuvan.

Table 19: Demonstratives in Tofa (Rassadin 1978: 256)

	‘this’	‘that’	‘that (distant)’
NOM	<i>bo</i>	<i>ol</i>	<i>tee</i>
GEN	<i>moo-nuŋ</i>	<i>on-uŋ</i>	<i>tee-niŋ</i>
DAT	<i>ma-(ŋ)a</i>	<i>a-(ŋ)a</i>	<i>tee-ge</i>
ACC	<i>mon-u</i>	<i>on-u</i>	<i>tee-ni</i>
LOC	<i>min-da</i>	<i>in-di</i>	<i>tee-de</i>
ABL	<i>min-dan, mun-un</i>	<i>in-dan, un-un</i>	<i>tee-den</i>

Example (124) shows the demonstrative *ol* in context.

- (124) *ol kiši minda bol-baay*
 MED person here be-NEG.OPT
 ‘May he not be here!’

(Rassadin 1978: 225)

3.2.1.6 Numerals

The Tofa numerals precede the noun and show many similarities with Tuvan. However, the irregular form for ‘20’ is lost and replaced by the regular form *digit-decimal suffix -En*.

- (125) *bir* ‘1’ *on birəə* ‘11’
 iʰhi ‘2’ *iʰhon* ‘20’
 üş ‘3’ *üčžon* ‘30’
 dört ‘4’ *dörten* ‘40’
 beš ‘5’ *bečžen* ‘50’
 aʰlti ‘6’ *aʰlton* ‘60’
 čedi ‘7’ *čeden* ‘70’
 seʰhes ‘8’ *seʰhezon* ‘80’
 toʰhos ‘9’ *toʰhozon* ‘90’
 on ‘10’ *čüs* ‘100’ (*iʰhi čüs* ‘200’, etc.)

(Rassadin 1978: 111-113)

Like in Tuvan, the numerals do not trigger a plural suffix:

- (126) *bečžen kiši*
 fifty person
 ‘fifty people’

(Rassadin 1978: 115)

3.2.1.7 Adjectives

Adjectives precede the noun and do not trigger any marking. Unlike Tuvan, Tofa also allows full reduplication (127a), next to partial reduplication (127b), to emphasize the meaning of the adjective.

- (127) a. *öske-öske #t*
 RED-other voice
 ‘many different voices’
- b. *sap-sarıg*
 RED-yellow
 ‘very yellow’

(Rassadin 1978: 95)

3.2.1.8 Postpositions

Postpositional phrases are constructed as follows:

noun postposition-possessive suffix-case

The example below shows the necessity of the possessive suffix. The person and number expressed by the possessive suffix refer to the person and number that are affected by the postposition. Example (128b) shows a first person singular possessive suffix, meaning the postposition governs the first person singular.

- (128) a. *nostool a⁹lt-i-n-da*
 chair low-3.POSS-LK-LOC
 ‘under the chair’
- b. *a⁹lt-im-da*
 low-1SG.POSS-LOC
 ‘under me’

(Rassadin 1978: 262)

I have no examples of postpositions without possessive suffixes or triggering case marking on the governing noun. So Tofa seems to have only the construction with the possessive markers, whereas Tuvan also has postpositions without possessive markers.

3.2.2 Verbal morphology

The verbal morphology shows again the agglutinative character of Tofa. The basic order of the verbal suffixes is:

STEM-voice-negation-mood-aspect-tense-person-number

Like Tuvan, the pronominal endings are divided into two classes. The first class is the paradigm of the general pronominal markers, which are used on most TAMs and follow the verb. The second class contains suffixes, used for the remote past, recent past and conditional mood.

Table 20: Pronominal markers on verbs in Tofa (Rassadin 1978: 171)

	General markers		Past tenses, conditional	
	SG	PL	SG	PL
1	<i>men</i>	<i>bis</i>	<i>-(l)m</i>	<i>-(l)bls</i>
2	<i>sen</i>	<i>siler</i>	<i>-(l)ŋ</i>	<i>-(l)ŋEr</i>
3	∅	<i>(-lEr)</i>	<i>-(Z)l</i>	<i>-(Z)l</i>

3.2.2.1 Copula constructions

Copular clauses are simply juxtaposed. However, the morphology, i.e. pronominal marking on the zero-verb, is found in phrase-final position. Example (129a) shows *men* twice. The first *men* is the personal pronoun first person singular, the second *men* is the pronominal marker ‘following’ the zero-verb. This construction is very similar to the Turkish way of expressing copula constructions.

Negation is achieved through a negative copular verb, which precedes the pronominal markers and takes the place of the zero-verb in declarative sentences (129b).

- (129) a. *men aňši men*
 PRO:1SG hunter 1SG
 'I am a hunter'
- b. *men aňši emes men*
 PRO:1SG hunter COP.NEG 1SG
 'I am not a hunter'

(Rassadin 1978: 27, 28)

3.2.2.2 Tense-Aspect-Mood

TAMs are expressed through suffixes on the verbal stem. Auxiliaries are less common than in Tuvan, but nonetheless, they are found in Tofa.

Tense

According to Rassadin, the present tense is formed by the suffix *-Dir* (Rassadin 1978: 201). However, I think this highly unlikely, for *-Dir* usually is used to express evidentiality. Rassadin discusses another 'concrete present tense', which is constructed by the gerund *-(l)p* and an auxiliary verb (Rassadin 1978: 204). Example (130) shows this present tense in context.

- (130) *hem su-u-n-da balik-tar čor-up turu*
 river water-3.POSS-LK-LOC fish-PL go-GER AUX
 'Fishes swim in the river water.'

(Rassadin 1978: 205)

The non-past tense is formed by *-Ir/Er* and is mostly used for general observations, like the following example.

- (131) *inaari kum ta čoru-vas*
 there who PTCL go-NEG.NPST
 'Nobody goes there.'

(Rassadin 1978: 217)

The future tense *-(K)Ey* expresses actions that certainly will take place in the future or that one really wants to happen in the future.

- (132) *sen inaari bo ħündüs bar-ba-ay sen*
 PRO:2SG there PROX today go-NEG-FUT 2SG
 'You will not go there today.'

(Rassadin 1978: 218)

The recent past tense *-DI* requires that the speaker was a witness of the action expressed. Because the speaker was a witness, these actions often took place quite recently (133a). The recent past triggers the person suffixes. The following examples show a recent past in context (133a) and an example of the recent past with a pronominal suffix (133b).

(133) a. *urug sun-du*
 child run-REC
 'The child run (I saw it with my own eyes).'

b. *bil-di-m*
 know-REC-1SG
 'I knew'

(Rassadin 1978: 210)

The remote past tense *-KE* expresses actions that happened and finished in the past. Unlike the recent past, the remote past takes the unbound pronominal endings.

(134) *oŋ bar-gan*
 PRO:3SG leave-REM
 'He left (I did not see it, but he is not here anymore, so he must have left).'

(Rassadin 1978: 211)

Aspect

The perfective aspect can be expressed through the remote past tense, but also by the suffix *-(l)vt*.

(135) *bulut ay-ni dug-la-vit-gan*
 cloud moon-ACC cover¹⁸-VBLZ-PFV-REM
 'The cloud covered the moon.'

(Rassadin 1978: 149)

The imperfective aspect is formed by the gerund *-(l)p* and an auxiliary verb (Rassadin 1978: 151). I could not find an example with an imperfective combined with a past tense, so it is not clear whether this aspect is an alternative for the present tense (as found in Tuvan and in example 136) or if this aspect can be combined with other tenses, leaving it a proper imperfective aspect.

(136) *nyeš ün-üp turu*
 tree exit-GER AUX
 'The tree grows (into a big tree).'

(Rassadin 1978: 151)

The continuous aspect is only found with the present tense and is expressed through the suffix *-Bišaanga* (Rassadin 1978: 208).

(137) *kiši inda čoru-bušaanga*
 person there go-CONT
 'The man keeps going there.'

(Rassadin 1978: 208)

¹⁸ The translation of *dug* was not found, but the translation and the verbalizer suggest that *dug* is originally a noun with the meaning 'cover'.

Mood

Unlike Tuvan, the conditional mood in Tofa is expressed through a suffix *-ZE* (Rassadin 1978: 227). However, this suffix is only found on the main verbal stem in the third person (138a). For the other persons, the suffix is attached on the auxiliary *er-* and the suffix *-DI* plus pronominal endings is put on the main verbal stem (138b).

- (138) a. *eʹsiri-be-se* *ekki bol-ir*
become.drunk-NEG-COND good be-NPST
'If he does not get drunk, it will be alright.'
- b. *inda bol-di-m* *er-se* *sood-ar men*
there be-REC-1SG AUX-COND tell-NPST 1SG
'If I am there, I will tell.'

(Rassadin 1978: 228)

The non-past suffix *-Ir/Er* together with the particle *iik* forms the subjunctive mood (Rassadin 1978: 231). Although this mood often occurs together with the conditional mood, this is not necessary, given the example below.

- (139) *men-den* *öske kum ta* *ber-bes* *iik*
PRO:1SG-ABL other who PTCL give-NEG.NPST PTCL
'Except for me, no one else would give [it].'

(Rassadin 1978: 231)

The desiderative mood *-(I)ksE* is introduced without examples in context. Rassadin only provides examples of the changed verbal stem.

- (140) *udu-* 'sleep' *udu-ksa* 'want to sleep'

(Rassadin 1978: 164)

The optative mood coincides with the future suffix *-KEy*. The following example shows the suffix *-KEy* with an optative reading.

- (141) *sen* *inaari bar-gay la* *sen*
PRO:2SG there go-OPT PTCL 2SG
'May you go there.'

(Rassadin 1978: 225)

The second person singular imperative mood is expressed through the verbal stem (142a). The second person plural imperative is formed by the suffix *-EEllŋEr* (Rassadin 1978: 222). The other imperative forms have a hortative meaning (142b).

- (142) a. *sen* *bar-ba* b. *bar-šaan čor-uuluŋ*
PRO:2SG go-NEG go-GER go-IMP.1PL
'You, don't go!' 'Let's go!'

(Rassadin 1978: 223)

3.2.2.3 Evidentiality

Evidentiality is not discussed by Rassadin. When Rassadin discusses *-Dir*, he analyzed it as a form of a present tense, however, his explanation is not convincing because he does not address the fact that the Tuvan cognate is not analyzed as a tense. It gets even more troublesome if one bears in mind that this *-Dir* is extended by *-E*, which is a present participle suffix. This suggests that *-Dir* itself does not have a present meaning, but more of an evidential reading. However, I cannot prove this with examples.

The past tenses already give a hint of evidentiality by the division in witnessed versus unwitnessed or inferred actions. Looking at the other languages discussed in this thesis, it is without a doubt that Tofa has a grammatical category concerning evidentiality, but it has not been studied (yet).

3.2.2.4 Valency

The voice suffixes are attached to the verbal stem before TAMs and pronominal endings. Despite some phonological differences, these voice suffixes are cognates with the Tuvan voice suffixes. Rassadin only provides examples of changed verbal stems, so there are no examples of voices in context

Decreasing valency

The suffix *-(l)l* expresses the passive voice.

(143) *üs-* ‘break’ *üz-ül* ‘be broken’

(Rassadin 1978: 135)

The reciprocal, or cooperative as Rassadin calls this voice, is constructed by the suffix *-(l)š* (Rassadin 1978: 135).

(144) *sooda-* ‘talk’ *sooda-š* ‘talk to each other’

(Rassadin 1978: 136)

The reflexive voice is formed by the suffixes *-(V)n* or *-DIn* (Rassadin 1978: 133-134).

(145) *čülü-* ‘shave’ *čülü-n* ‘shave oneself’

(Rassadin 1978: 134)

Increasing valency

Like in Tuvan, increasing valency is expressed through the causative voice, which can be expressed through the four suffixes *-t*, *-Dir*, *-(k)Ir*, *-(k)Is* (Rassadin 1978: 137). The following examples show that the causative suffix is also used for transitive verbal formation.

(146) <i>kel-</i>	‘come’	<i>kel-dir</i>	‘make one go’
<i>sargar-</i>	‘become yellow’	<i>sargar-t</i>	‘make one yellow’
<i>čičt-</i>	‘lie (down)’	<i>čičt-kir</i>	‘lay’
<i>tur-</i>	‘stand’	<i>tur-kus</i>	‘stay, stop’

(Rassadin 1978: 137)

3.2.2.5 Participles and gerunds

Gerunds and participles are used to subordinate or coordinate clauses. So here, I will discuss the morphology of these gerunds and participles. The syntax and consequences of the use of participles and gerunds will be discussed in section 3.3 *Syntax*. Tofa has a wide range of gerund and participle suffixes. The two examples below show how participles (147a) and gerunds (147b) are formed by the suffix on the verbal stem. Other gerund and participle suffixes act the same and only differ in phonology and meaning, which will be discussed in 3.3 *Syntax*.

- (147) a. *minda tur-u kiši tamñila-vas*
here stand-NPP person smoke-NEG.NPST
'The man who stands here, does not smoke.'

(Rassadin 1978: 187)

- b. *kiš bol-giša koorit-ta čerle-en bis*
winter be-GER city-LOC live-REM 1PL
'We lived in the city until the winter fell.'

(Rassadin 1978: 179)

3.2.2.6 Modals

Rassadin describes four modals: *-kl deg* 'need' (148a), which is also found in Tuvan, *-n bol-* 'can' (148b), *-n čada-* 'cannot' (148c) and *-(l)p ši-da-* 'can' (148d; Rassadin 1978: 165-167). All modals are composed by gerunds and auxiliaries or modal verbs.

- (148) a. *bo čüme sa^t-ip al-gi deg*
PROX thing sell-GER take-GER PTCL
'This thing needs to be sold.'

(Rassadin 1978: 165)

- b. *oŋ u^ču-n bol-ir*
PRO:3SG fly-GER be-NPST
'He can fly.'

- c. *u^ču-n čada-an men*
fly-GER unable-REM 1SG
'I could not fly.'

(Rassadin 1978: 166)

- d. *sana-p ši-da-r men*
read-GER can-NPST 1SG
'I can read.'

(Rassadin 1978: 167)

3.2.2.7 Negation

Like Tuvan, Tofa displays a wide range of negation suffixes, which depend on the TAM for their form. *-BEyn* is used for the negation of gerunds and the present tense (Rassadin 1978: 181, 202). *-BE* is the most diverse suffix and is found together with the past tenses and the conditional mood (149a;

Rassadin 1978: 210, 211, 228). The suffix *-BEs* is triggered by the non-past tense and subjunctive mood (149b; Rassadin 1978: 216, 231). The negation suffix *-BEs* is fused with the TAM meaning. The last negation suffix is *-BEEy*, which goes together with the future tense or optative mood (Rassadin 1978: 218, 225).

- (149) a. *bo kiši gel-be-en*
 PROX person come-NEG-REM
 ‘That man did not come yet.’

(Rassadin 1978: 211)

- b. *oŋ gel-se te čü-nü te sooda-vas*
 PRO:3SG come-COND PTCL what-ACC PTCL say-NEG.SJV
 ‘Although he came, he wouldn’t say anything.’

(Rassadin 1978: 231)

3.3 Syntax

Tofa syntax is not discussed in any of Rassadin’s publications; therefore, this section is based on my own observations.

Tofa shows nominative-accusative alignment, the word order is classical Turkic SOV and subordinate clauses are incorporated into the main clause, like in Tuvan.

3.3.1 Word order

The word order in a simple clause is SOV (150a); the word order of a ditransitive clause is SOXV, where X stands for indirect object. The indirect object follows the direct object (150b repeated from 117a). This is not found in Tuvan, in which the indirect object precedes the direct object.

- (150) a. *oŋ ihi kiši-ni kör-übit-ken*
 PRO:3SG two people-ACC see-PFV-REM
 S O V
 ‘He saw two people.’

(Rassadin 1978: 37)

- b. *oŋ ħineek-ti ool-ga ber-di*
 PRO:3SG book-ACC son-DAT give-REC
 S DirO IndirO V
 ‘He gave the boy the book.’

(Rassadin 1978: 38)

The subordinate clause precedes the main verb and is incorporated into the main clause. I only found intransitive complex sentences, so my analysis is based on the combination of the following two examples. The subject of the main clause precedes the subordinate clause, which is embedded in front of the main verb.

- (151) a. *[[ol kiši-niŋ čor-u-s-un] kör-dür men]*
 MED person-GEN go-NPP-3.POSS-ACC see-EVI 1SG
 S_{sub} V_{sub} V_{main}
 ‘I see that that man goes.’

(Rassadin 1978: 187)

- b. [men [tu^ʕt-kaš]kel-gen men]
 PRO:1SG grab-GER come-REM 1SG
 S_{main} V_{sub} V_{main}
 'I grabbed [it] and then came.'

(Rassadin 1978: 178)

3.3.2 Conjunction

Conjunction is mostly done by gerunds and participles. Tofa displays Turkic conjunction in its syntax and morphology. It even appears that Tofa is more Turkic-like than Tuvan.

3.3.2.1 Coordination

Coordination is achieved through particles or the gerund *-(l)p*. The particles *bile* and *tE* are used to coordinate two nominal elements (152a-b), the gerund is used for verbal clauses (152c).

- (152) a. a^ʕt bile inek b. a^ʕt ta inek
 horse with cow horse PTCL cow
 'horse and cow' 'horse and cow'

(Rassadin 1978: 265)

- c. [[a^ʕt ezerin al-ip] čer-ge kaa-bit-ti]
 horse saddle take-GER earth-DAT throw-PFV-REC
 'He took the horse saddle and threw it on the ground.'

(Rassadin 1978: 174)

Disjunctive clauses are combined by *azi ... Baan* (Rassadin 1978: 265). I did not find examples with a single 'or' in the translations. This may be caused by the translation of Rassadin, who consistently translates the double particles with double 'or ... or'. So it is possible that the double particles are also used to express what would be translated in English with a single 'or'.

- (153) [[azi al-ir men baan] [azi al-bas men baan]]
 or take-NPST 1SG PTCL or take-NEG.NPST 1SG PTCL
 'Do I take or shall I not take [it].' (lit. 'Or do I take or do I not take [it]?')

(Rassadin 1978: 265)

3.3.2.2 Subordination

Subordination is done through participles and gerunds. The morphology of this category is discussed in 3.2.2.5 *Participles and gerunds*. In this section, the syntax is discussed.

3.3.2.2.1 Relative clauses

Relative clauses are formed by participles (Rassadin 1978: 185). Like in Tuvan, the participles takes the position of adjectives and therefore, takes no further morphology. Example (154) shows the (negated) participle *aŋna-vas* that is in the position of the adjective, while the main verb *kel* 'come' is marked for TAM.

- (154) [[minda aŋna-vas] kiši kel-di]
 here hunt-NEG.NPP person come-REC
 'The man that does not hunt here, comes.'

(Rassadin 1978: 188)

3.3.2.2.2 Complement and adverbial clauses

Complement clauses are formed by participles. Although Rassadin does not discuss this, it seems that Tofa uses the same morphology on participles as Turkish does. If I analyzed the examples correctly, the participles are marked by the pronominal possessive markers for the subject of the subordinate clause and case markers for the case that is triggered by the main verb. Sometimes, the expressed subject of the subordinate clause can be marked by the genitive case. So, for the following examples, the subject is not marked by case in (155a) but marked by a genitive in (155b, repeated from 151a). The participles are both marked by the third person possessive marker *-s* (*l* is dropped) and a metathesized accusative marker *-ln* (instead of *-nl*).

(155) a. *[[ol kiři olur-u-s-un] kör-dür men]*
MED person sit-NPP-3.POSS-ACC see-EVI 1SG
'I see that that man sits.'

(Rassadin 1978: 186)

b. *[[ol kiři-niņ čor-u-s-un] kör-dür men]*
MED person-GEN go-NPP-3.POSS-ACC see-EVI 1SG
'I see that that man goes.'

(Rassadin 1978: 187)

Adverbial clauses are formed by gerunds, which trigger no further morphology. The following examples show two gerunds, *-GEŠ* (156a, repeated from 151b) and *-(l)p* (156b). They both precede the main clause and have no further person marking or whatsoever.

(156) a. *[[men tu^ˈt-kaš] kel-gen men]*
PRO:1SG grab-GER come-REM 1SG
'I grabbed [it] and then came.'

(Rassadin 1978: 178)

b. *[[edžik a^ˈñ-ip] ög-e kir-di]*
door open-GER home-DAT enter-REC
'While he opened the door, he entered the house.'

(Rassadin 1978: 174)

3.3.3 Questions

Polar questions are marked with the question word *Be* (Rassadin 1978: 269). Example (157) shows the question word which follows the verb.

(157) *sen kel-di-n be*
PRO:2SG come-REC-2SG Q
'Did you come?'

(Rassadin 1978: 269)

Although interrogative pronouns are discussed in Rassadin's grammar, content questions are not, so it is not clear whether Tofa has question marking on content questions.

3.4 Lexicon

Overall, the basic Tofa lexicon has many cognates with Tuvan. Here, the differences will be discussed.

Phonologically, most differences are found in the pharyngealization of the vowels and fortition of some consonants, of which the last process occurs in both languages.

Pharyngealization is found in with back and front vowels and, as it is shown below, it does not coincide with the low pitch in Tuvan.

(158)	Tuvan	Tofa	
	<i>bis</i>	<i>bi^ʕs</i>	‘we’
	<i>it</i>	<i>i^ʕt</i>	‘dog’
	<i>kuš</i>	<i>qu^ʕš</i>	‘bird’

Fortition is found in both languages. The first three examples show fortition in Tofa, the last three show fortition in Tuvan.

(159)	Tuvan	Tofa	
	<i>kayda</i>	<i>qayda</i>	‘where’
	<i>eveeš</i>	<i>ebeš</i>	‘few’
	<i>iyi</i>	<i>iñi</i>	‘two’
	<i>tar</i>	<i>dar</i>	‘narrow’
	<i>urug</i>	<i>uruγ</i>	‘child’
	<i>miyis</i>	<i>miis</i>	‘horn’

Tofa has less Mongolian loans than Tuvan and overall Tofa seems to have more (old) Turkic roots in its lexicon.

(160)	Tuvan	Tofa	Turkish	Mongolian	
	<i>elezin</i>	<i>ħum</i>	<i>kum</i>	<i>els</i>	‘sand’
	<i>čalgın</i>	<i>ħanat</i>	<i>kanat</i>	<i>dalavč</i>	‘wing’
	<i>möön</i>	<i>baarsıq</i>	<i>bağırsak</i>	<i>cuvday</i>	‘guts’
	<i>doozun</i>	<i>to^ʕpraq</i>	<i>toz</i>	<i>toos</i>	‘dust’ (compare: <i>toprak</i> ‘ground, bottom’ in Turkish)
	<i>soyar</i>	<i>tere</i>	<i>deri</i>	<i>ar^ʕs</i>	‘skin’

Tofa has two different words for ‘leg’ (*but* or *daman*) and ‘foot’ (*but* or *daman*). However, the Russian dictionary does not make it clear which word belongs to which of the two concepts. On the other hand, the concepts ‘feather’ and ‘hair’ are merged into one word *dük*, which means ‘hair’ in the other Sayan languages.

One word *eldik* ‘mitten’ (Rassadin 1971: 180), which does not belong to the Swadesh list, drew my attention. The word in Tofa can be parsed *el-dik*. The first syllable resembles the word *el* (‘hand’ in Turkish). The word for ‘mitten’ in Tuvan *xol xavi* is composed by *xol* ‘hand’ and *xav-i* ‘sack (probably)’ (Harrison & Anderson 2006). The Tofa word for ‘hand’ and ‘arm’ is merged into one word *qol*. So the Tofa word for ‘mitten’ shows an old Turkic root that is not found anymore in the Sayan languages.

3.5 Discussion

In phonology, the biggest differences are found in the inventories. Tofa has an <ä>, which is absent in Tuvan. Furthermore, it has a phonemic distinction between vowels and pharyngealized vowels and uvular and pharyngeal consonants. Similarities are found in vowel length, the vowel and consonant harmony rules and syllable structures.

Nominal morphology shows many similarities with Tuvan. For example, possession is expressed the same way it is formed in Tuvan. On the other hand, Tofa lacks an allative case and the *-dEr* option of the plural suffix is absent. Furthermore, the Tofa third person singular shows fewer irregularities

than the Tuvan third person singular and the Tofa third person singular does not coincide with one of the demonstratives. Verbal morphology is less influenced by Mongolian. Tofa has fewer auxiliary verbs. Most Tofa TAM suffixes have Tuvan cognates. Negation is achieved by one of the four negation suffixes, which all are cognates with the Tuvan negation suffixes.

Tofa syntax does not deviate much from Tuvan. The subordinate clause is incorporated into the main clause. Participles are used for complement clauses and gerunds for adverbial clauses. In this case, Tofa also seems to be more Turkic and less influenced by Mongolian than Tuvan. The only part that could not be compared is the marking of content questions.

Tofa lexicon appears to be more conservative than Tuvan. It has fewer loans from Mongolian in its basic lexicon and some Turkic roots were found that were absent in the other Sayan languages, such as *to'praq* 'dust', *tere* 'skin' and *eldik* 'mitten'. Furthermore, Tofa has two words for the concept 'leg' and 'foot', instead of one. On the other hand, 'feather' and 'hair' are merged in Tofa and both expressed through the word *dük*.

4. Results: Dukha

In this chapter, the grammar of Dukha is discussed and compared to the Tuvan grammar. Dukha is spoken in Mongolia and, therefore, also shows influences from Mongolic languages.

4.1 Phonology

Dukha phonology shows many similarities with Tuvan phonology. The biggest difference with Tuvan can be found in the consonant inventory, which, in Dukha, also contains uvular and glottal sounds.

4.1.1 Vowel inventory and vowel harmony

The vowel inventory of Dukha resembles the vowel inventory of Tuvan, except for the [ɨ] which is released further back in the mouth.

Table 21: Dukha vowel inventory (Ragagnin 2011: 34)

	front	back
high	i ü	ɨ u
mid	e ö	o
low	a	

The vowels in the table above can all be lengthened, forming long vowels (Ragagnin 2011: 40). Besides lengthening, vowels can be aspirated. Given the (near) minimal pairs below, the aspiration seems to be phonemic.

short vowel	aspirated vowel	long vowel
<i>at</i> 'name'	<i>a^ht</i> 'horse'	<i>aar</i> 'heavy'
<i>ol</i> 'he'	<i>o^ht</i> 'fire'	<i>ool</i> 'son'

(Ragagnin 2011: 34, 36, 70, 128)

Although vowel harmony is not discussed in the grammar of Ragagnin, parting from the data and examples she provides, it is safe to presume that Dukha has vowel harmony based on the front-back opposition. The plural suffix in the (161a-b) displays an [e] in the syllable following a front vowel and an [a] in the syllable following a back vowel. Rounded-unrounded harmony rules are all expressed through [ə]. (161c-d) show the rounded [ü] and the unrounded [a], but both vowels are followed by a schwa.

(161) a. <i>hem</i>	<i>hem-ner</i>	b. <i>ool</i>	<i>ool-lar</i>	c. <i>mün-ə</i>	d. <i>hab-ə</i>
river	river-PL	son	son-PL	soup-3.POSS	sack-3.POSS
'river'	'rivers'	'son'	'sons'	'his soup'	'his sack'

(Ragagnin 2011: 121, 122)¹⁹

Furthermore, Dukha has a non-phonemic [ə]. This schwa is found in some non-stressed syllables and in the suffixes with rounded-unrounded harmony.

¹⁹ Although Ragagnin glossed all of her examples, I changed some of the glosses for the sake of consistency with the other languages discussed in this thesis.

4.1.2 Consonant inventory

The consonant inventory of Dukha has uvular and pharyngeal consonants, which are absent in Tuvan. An overview of the consonant inventory can be found in the table below.

Table 22: *Dukha consonant inventory (adapted from Ragagnin 2011: 44-49)*

	labial		labio-dental	alveolar		palatal		velar		uvular	pharyngeal	glottal
plosives	p	b		t	d			k	g	q		
nasals		m			n				ŋ			
trills					r							
fricatives			(f)	s	z	š	ž	x		ɣ	ħ	h
affricates				c		č	dž					
laterals					l							
approximants				v			y					

The /r/ can only be found word-initially in loans and even these loans are often preceded by a vowel. The following example is a loan from Russian and shows that the noun is preceded by the schwa.

(162) ə-rayoon
 'rayon'

(Ragagnin 2011: 45)

In intervocalic contexts, some consonants tend to become voiced, but this is not found with all voiceless consonants. Compare the examples below, whereas example (163a) has a devoiced consonant changed into its voiced counterpart and (163b) where the voiceless consonant does not change.

(163) a. *hap* *hab-əm* b. *a^ht* *a^ht-əm*
 sack sack-1SG.POSS horse horse-1SG.POSS
 'sack' 'my sack' 'horse' 'my horse'

(Ragagnin 2011: 122)

Besides vowel harmony, Dukha has consonant harmony, which is found in the onset of the suffixes. As (164) shows, this Dukha consonant harmony resembles the Tuvan consonant harmony.

(164) a. *is* *is-ter* b. *tu^hha* *tu^hha-lar*
 trace trace-PL Dukha Dukha-PL
 'trace' 'traces' 'Dukha' 'Dukha (PL)'

(Ragagnin 2011: 121)

4.1.3 Syllable structure

Dukha syllable structure avoids consonant clusters in the onset of the syllable; these clusters are only found in the coda. Basic Dukha syllable structure can be represented as (C)V(V)(C)(C) and examples can be found below:

(165)	VV	<i>ee</i>	‘owner’
	VC	<i>at</i>	‘name’
	CV	<i>po</i>	‘this’
	VVC	<i>ool</i>	‘son’
	CVV	<i>yaa</i>	‘new’
	CVC	<i>gar</i>	‘snow’
	VCC	<i>ört</i>	‘fire’
	CVVC	<i>söök</i>	‘bone’
	CVCC	<i>tört</i>	‘four’

(Ragagnin 2011: 30, 35, 36, 37, 55, 85, 129)

Dukha syllable structure does not differ from the syllable possibilities in Tuvan.

4.2 Morphology

Dukha morphology is ‘typical’ Turkic and has an agglutinative character. Suffixes are attached to the stems of nouns and verbs. Like Tuvan, Dukha has no morphological gender or morphologically distinguished animacy.

4.2.1 Nominal morphology

In this section, the morphology of the nouns will be discussed. As already mentioned, Dukha has mainly suffixes. The order of suffixes on the noun in Dukha is:

STEM-plural-possessive-case.

4.2.1.1 Plural marking

Plurality is marked by the suffix *-lEr* (Ragagnin 2011: 121). The vowel of the suffix changes according to the front-back opposition. The consonant remains [l] when the nominal stem ends with a vowel or a voiced consonant. The suffix changes into *-tEr* after voiceless consonants and *-nEr* after nasals.

(166)	<i>aŋ</i>	<i>aŋ-nar</i>	‘wild animal – wild animals’
	<i>aššak</i>	<i>aššak-ter</i>	‘old man – old men’
	<i>žara</i>	<i>žara-lar</i>	‘reindeer – reindeers’
	<i>ir</i>	<i>ir-lar</i>	‘song – songs’

(Ragagnin 2011: 65, 121, 126, 130)

Except for the *-dEr* option, which Dukha lacks, Dukha shows similar plural marking as Tuvan.

4.2.1.2 Nominal case marking

Dukha has seven nominal cases: the nominative, genitive, dative, accusative, locative, ablative and allative²⁰. As all suffixes in Dukha, the case suffixes also have a certain degree of vowel or consonant harmony.

²⁰ Ragagnin calls this case directional. I chose to rename it and call it allative, for the sake of consistency.

Table 23: Case suffixes in Dukha (Ragagnin 2011: 122)

		'lake'	'lakes'	'girl'	'girls'
NOM	-∅	<i>höl</i>	<i>höl-ler</i>	<i>gis</i>	<i>gis-tar</i>
GEN	-NIŋ	<i>höl-nəŋ</i>	<i>höl-ler-nəŋ</i>	<i>gis-təŋ</i>	<i>gis-tar-nəŋ</i>
DAT	-(K)E	<i>höl-ge</i>	<i>höl-ler-ge</i>	<i>gis-ka</i>	<i>gis-tar-ga</i>
ACC	-NI	<i>höl-nə</i>	<i>höl-ler-nə</i>	<i>gis-tə</i>	<i>gis-tar-nə</i>
LOC	-DE	<i>höl-de</i>	<i>höl-ler-de</i>	<i>gis-ta</i>	<i>gis-tar-da</i>
ABL	-DEn	<i>höl-den</i>	<i>höl-ler-den</i>	<i>gis-tan</i>	<i>gis-tar-dan</i>
ALL	-KIdI	<i>höl-gədə</i>	<i>höl-ler-gədə</i>	<i>gis-kədə</i>	<i>gis-tar-gədə</i>

The definite direct object is marked by the accusative, indefinite direct objects do not receive any marking (Ragagnin 2011: 123). Indirect objects, such as the ones from the example below, trigger dative marking.

- (167) *sii-ge mün per-gen iyək-əl*
 you-DAT soup give-NPP PTCL-PTCL
 'But the soup was already given to you!'

(Ragagnin 2011: 124)

4.2.1.3 Articles

Articles are not discussed in the Dukha literature. But it seems that Dukha has an indefinite article expressed through the numeral *pir* '1', which resembles the Tuvan approach. The following example shows the numeral '1' in an article position.

- (168) *ah pir gaas žaraš gis usən na hežige-ləŋ*
 INTJ one elegant nice girl long PTCL braid-ADJZ
 'Ah, a nice elegant girl with really long braids.'

(Ragagnin 2011: 191)

4.2.1.4 Possession

Pronominal possession is, like in Tuvan, marked on the noun. The full paradigm is found below:

- (169) *a^ht* 'horse'
a^ht-əm 'my horse'
a^ht-əŋ 'your horse'
a^ht-ə 'his, her horse'
a^ht-əvəs 'our horse'
a^ht-əŋar 'your (PL) horse'
a^ht-(lar)-ə 'their horse'

(Ragagnin 2011: 122)

When the possessor is expressed by a full noun instead of a pronoun, the double genitive construction is used (Ragagnin 2011: 123). The possessor is marked by the genitive (in the example below *uləs* 'people' and *ündesən* 'origin') and the possessee (*ündesən* 'origin' and *hileeb* 'bread') is marked by the pronominal possessive markers (170).

- (170) *tayga ulas-a-nəŋ ündesən-nəŋ hileeb-a höngen te-p žime-nə*
 taiga people-3.POSS-GEN origin-GEN bread-3.POSS höngen say-GER thing-ACC
- gan-ža gil-ər-nəŋ t^hu^hxay-a soodan-əyn*
 which-ADJZ make-NPP-GEN situation-3.POSS speak-IMP.1SG
- ‘Let me speak about how one makes the thing called *höngen*, the traditional bread of the people of the taiga.’

(Ragagnin 2011: 123)

Predicative possession can be formed by the ‘Russian’ way, which is discussed in section 2.2.1.4 *Possession* or by the copular verb *par* with the double possessive marking.

- (171) a. *men-de üš tuŋma par*
 PRO:1SG-LOC three younger.sibling COP
 ‘I have three younger siblings.’
- b. *mee-ŋ üš tuŋma-m par*
 PRO:1SG-GEN three younger.siblings-1SG.POSS COP
 ‘I have three younger siblings.’

(Ragagnin 2011: 193)

4.2.1.5 Pronouns

Dukha personal pronouns do not distinguish gender, nor does Dukha make a distinction between inclusive or exclusive.

Table 24: Personal pronouns in Dukha (Ragagnin 2011: 128)

	1SG	2SG	3SG
NOM	<i>men</i>	<i>sen</i>	<i>ol</i>
GEN	<i>mee-ŋ</i>	<i>see-ŋ</i>	<i>oo-ŋ, on-əŋ</i>
DAT	<i>me-ŋe, mii-ge</i>	<i>se-ŋe, sii-ge</i>	<i>a-(ŋ)a, aa-ga</i>
ACC	<i>men-a</i>	<i>sen-a</i>	<i>on-a</i>
LOC	<i>men-de</i>	<i>sen-de</i>	<i>in-da</i>
ABL	<i>men-den</i>	<i>sen-den</i>	<i>oo-n</i>
ALL	<i>men-gadə</i>	<i>sen-gadə</i>	<i>ol-γadə</i>
	1PL	2PL	3PL
NOM	<i>pis(ter)</i>	<i>si-ler</i>	<i>o-lar</i>
GEN	<i>pis-təŋ</i>	<i>si-ler-nəŋ</i>	<i>o-lar-nəŋ</i>
DAT	<i>pis-ke</i>	<i>si-ler-γe</i>	<i>o-lar-γa</i>
ACC	<i>pis-tə</i>	<i>si-ler-nə</i>	<i>o-lar-nə</i>
LOC	<i>pis-te</i>	<i>si-ler-de</i>	<i>o-lar-da</i>
ABL	<i>pis-ten</i>	<i>si-ler-den</i>	<i>o-lar-dan</i>
ALL	<i>pis-kadə</i>	<i>si-ler-gadə</i>	<i>o-lar-gadə</i>

The case markers on the pronouns are similar to the case markers on the noun. The stems of the pronouns, on the other hand, show some irregularities in the singular forms.

The reflexive pronoun is formed by *pot* plus the pronominal possessive markers. Ragagnin does not provide a translation of the word *pot*, so it is not clear if this word has a lexical meaning besides its reflexive meaning, such as e.g. ‘body’, which is found in Tofa and Soyot.

- (172) *ol ibə-nə am ašəyla-p pot-ə-nə amədəral-ə-n-ga tikka ašəyla-p*
 MED reindeer-ACC now exploit-GER **self-3.POSS-GEN** life-3.POSS-LK-DAT very exploit-GER
ašəyla-ar pol-ə per-yəndəroo
 exploit-NPP become-GER give-RES.EMPH
 ‘They became people who make wide use of the reindeer in their own life. Sooo it was.’

(Ragagnin 2011: 132)

The basic interrogative pronouns are as follows:

- (173) *gim* ‘who’
žüüden, žüüge ‘why’
ganžap ‘how, which’
gaeda ‘where’
ga^hʃan ‘when’
žüü ‘what’
žüüden ‘from what’
ga^hš ‘how much/many’
gae ‘which’
žüüže, gayaa ‘whereto’

(Ragagnin 2011: 75, 131, 163, 164, 225)

Indefinite pronouns are not discussed in the grammar by Ragagnin and examples with an indefinite pronoun in the translation do not contain indefinite pronouns in the Dukha line, but participles or gerunds.

Demonstratives have a three-way distinction. *po* ‘this (PROX)’, *ol* ‘that (MED)’ and *tee* ‘that (distant; DIST)’ (Ragagnin 2011: 129). As in Tuvan, demonstratives precede the noun and the third person singular is the same as the medial demonstrative.

Table 25: Demonstratives in Dukha (Ragagnin 2011: 129)

	‘this’	‘that’	‘that (distant)’
NOM	<i>po</i>	<i>ol</i>	<i>tee</i>
GEN	<i>moo-ŋ, moo-nəŋ</i>	<i>oo-ŋ, on-əŋ</i>	<i>tee-ŋ</i>
DAT	<i>ma-(ŋ)a, maa-ga</i>	<i>a-(ŋ)a, aa-ga</i>	<i>tee-ge</i>
ACC	<i>mon-ə</i>	<i>on-ə</i>	<i>tee-nə</i>
LOC	<i>min-da</i>	<i>in-da</i>	<i>tee-de</i>
ABL	<i>moo-n, mon-uun</i>	<i>oo-n, on-uun</i>	<i>tee-nən</i>
ALL	<i>bo-gədə</i>	<i>ol-gədə</i>	<i>tee-gədə</i>

4.2.1.6 Numerals

Dukha cardinal numbers show rather phonological than lexical differences with those in Tuvan.

(174)	<i>pir</i>	'1'	<i>on pir</i>	'11'
	<i>i^hxə</i>	'2'	<i>žeerbi</i>	'20'
	<i>üş</i>	'3'	<i>üşon</i>	'30'
	<i>tört</i>	'4'	<i>törtön</i>	'40'
	<i>peš</i>	'5'	<i>pežon</i>	'50'
	<i>al^htə</i>	'6'	<i>al^hton</i>	'60'
	<i>žedə</i>	'7'	<i>žedon</i>	'70'
	<i>ses</i>	'8'	<i>seson</i>	'80'
	<i>t^hos</i>	'9'	<i>t^hoson</i>	'90'
	<i>on</i>	'10'	<i>žüs</i>	'100' (<i>i^hxə žüs</i> '200', etc.)

(Ragagnin 2011: 98)

A noun following a numeral does not take the plural suffix (Ragagnin 2011: 121).

(175)	<i>peš</i>	<i>eser</i>
	five	saddle
	'five saddles'	

(Ragagnin 2011: 121)

4.2.1.7 Adjectives

As in Tuvan, example (176) shows that adjectives in Dukha precede the noun and do not trigger any marking.

(176)	[...]	<i>pir</i>	<i>uləy</i>	<i>hem</i>	[...]
		one	big	river	
		'a big river'			

(Ragagnin 2011: 154)

Sometimes, reduplication is used to express intensity (Ragagnin 2011: 97). The first syllable of the adjective is reduplicated. The consonant of the coda of the reduplicated syllable is bilabial ([b] in case of example 177).

(177)	<i>ak</i>	<i>ab-ak</i>
	white	RED-white
	'white'	'very white'

(Ragagnin 2011: 97)

4.2.1.8 Postpositions

Postpositions are also found in Dukha. They are to be seen as an extension of the locative case. Some trigger certain cases on the noun they follow (as for example 178a), others are found in the genitive-possessive construction (as for example 178b).

- (178) a. *sen-den paška gim t^haa pil-bes*
 PRO:2SG-ABL besides who PTCL know-NEG.NPST
 ‘Nobody except you knows (it).’

(Ragagnin 2011: 168)

- b. *on-aŋ i^hšt-a-n-den ibə ibə te-p pir pasa pir in-dəy*
 MED-GEN inside-3.POSS-LK-ABL reindeer reindeer say-GER one and one MED-ADJZ
aŋ par pol-gandəroo
 game COP become-RES.EMPH
 ‘Within those, there was such an animal called reindeer. Sooo it was.’

(Ragagnin 2011: 171)

4.2.2 Verbal morphology

The agglutinative character of Dukha is also reflected in the verbal morphology. The order of the suffixes on the verb is:

STEM-voice-negation-mood-aspect-tense-evidential-person-number

The pronominal endings are divided into two classes. The first class contains the pronominal endings that are mostly used. These markers are placed behind the verb. The second class includes markers in the form of suffixes attached to the recent past, conditional and limitative mood (Ragagnin 2011: 133).

Table 26: Pronominal markers on verbs in Dukha (Ragagnin 2011: 121, 133)

	General markers		Recent past, conditional, limitative	
	SG	PL	SG	PL
1	<i>men</i>	<i>pis</i>	<i>-(l)m</i>	<i>-(l)bls</i>
2	<i>sen</i>	<i>siler</i>	<i>-(l)ŋ</i>	<i>-(l)ŋEr</i>
3	\emptyset	<i>(olar)</i>	<i>-(Z)l</i>	<i>-(Z)l</i>

4.2.2.1 Copula constructions

The particle *turə* derived from the verb *tur* ‘stand’ can function as a copular verb in Dukha (179a; Ragagnin 2011: 174). TAM is marked on the copular verb (179b).

- (179) a. *tayga-da amədara-ar tikka žaraš turə*
 taiga-LOC live-NPP very nice COP
 ‘It is very nice to live in the taiga.’

(Ragagnin 2011: 174)

- b. *mīn-da aŋ go^hh-ey tur-yan*
 PROX-LOC game abundant-ADJZ COP-REM
 ‘At that time the game here was plentiful.’

(Ragagnin 2011: 178)

Besides *turə*, Dukha has the particles *par* and *žok*, which respectively mean ‘existent’ and ‘non-existent’, which can be seen in example (180a). Besides the existential meaning, both particles are also used to express predicative possession (Ragagnin 2011: 192). As can be seen in example (180b,

repeated from 171), the possessor in this sentence is marked by the genitive case and the possessee is marked by the pronominal possessive markers.

- (180) a. *irak-ta aŋ par po žook-ta aŋ žok*
 far-LOC game COP PROX near-LOC game COP.NEG
 ‘There is game far away (from here), (but) no game in this neighborhood.’

(Ragagnin 2011: 192)

- b. *mee-ŋ üš tuŋma-m par*
 PRO:1SG-GEN three younger.sibling-1SG.POSS COP
 ‘I have three younger siblings.’

(Ragagnin 2011: 193)

4.2.2.2 Tense-Aspect-Mood

Ragagnin treats *Tense* and *Aspect* concurrently. However, for the sake of consistency and clarity, I will discuss these two grammatical categories separately.

Tense

Dukha has no present tense, but only a non-past tense, which is marked by the suffix *-Ir/-Er* (Ragagnin 2011: 146). Because there is no present tense in Dukha, this tense has a very broad meaning stretching from the general and habitual present (181a) to future meanings (181b).

- (181) a. *pis tayga žaahay amadara-ar*
 PRO:1PL taiga nice live-NPST
 ‘We live well in the taiga.’

- b. *taarta žoro-or*
 tomorrow move-NPST
 ‘We (will) move tomorrow.’

(Ragagnin 2011: 147)

The future tense is expressed by *-(K)Ey*. This tense expresses actions that will occur in the future further away from the point of speech than the future actions that are expressed through the non-past. Besides, the future tense is less general than the non-past.

- (182) *so-o-n-da oyna-ay la pis*
 end-3.POSS-LK-LOC play-FUT PTCL 1PL
 ‘We will play later.’

(Ragagnin 2011: 160)

Opposed to the non-past and the future tense, Dukha has two past tenses. Although Ragagnin focuses on aspect, judging the examples it appears that remoteness and recentness are linked to the two past tenses.

The first past tense is *-KEŋ*, which is glossed by REM in this thesis, for it also expresses actions with a perfect-like meaning or a remoteness in time to the speaker.

- (183) *ol ulas-tar žo-y par-yan*
 MED people-PL move-GER go-REM
 ‘Those people have moved away.’ (lit. ‘Those people went and moved.’)

(Ragagnin 2011: 151).

The recent past is expressed through the suffix *-DI*. As in Tuvan, the recent past triggers the suffixes of the pronominal endings (Ragagnin 2011: 154). Although actions with the *-DI* suffix are more recent than the actions marked by *-KEN*, *-DI* can still express actions that are completed in the past (184a), but this is not obligatory, which can be seen in example (184b).

- (184) a. *pis-ter a^ht suy-ar-ar te-eš gel-də-bəs*
 PRO:1PL-PL horse water-VBLZ-NPP say-GER come-REM-1PL
 ‘We came to water the horses.’

- b. *on-ə tü^hs-tər-də-ŋ*
 med-ACC fall-CAUS-REC-2SG
 ‘Be carefull you don’t make her fall.’

(Ragagnin 2011: 155)

Aspect

Perfective and imperfective are not discussed as separately expressed aspects. The perfective aspect can be found in the remote past tense, which in itself bears a perfective meaning. One aspect and a mood²¹, resultative aspect and emphatic mood, are composed by the suffix *-KEN* and *-DIR*²². The resultative already has a perfective meaning, which is probably the reason why the remote past suffix *-KEN* and the assertative suffix *-DIR* are used to compose it. Example (185a) is a phrase with the resultative *-KEndIr(I)*. The resultative in this example expresses the ‘finishness’ of the action ‘die’, ‘exit’ and ‘return’, etc. The emphatic mood *-KEndIroo* is shown in example (185b, repeated from 178b). The emphatic mood emphasizes the situation in the past. The example shows this by the emphatic construction in Dukha and the ‘Sooo it was’ phrase in the translation.

- (185) a. *öl-ər or^hta ol tay-nəŋ gir-ə-n-gədə žü^hk-te-p ün-dər-yeš*
 die-NPP middle MED mountain-GEN limit-3.POSS-LK-ALL load-VBLZ-GER exit-CAUS-GER

pa^hhⁱ-ən purən-gaarəgös-keš sal-əp ga-abət-kaš am yan-a
 head-3.POSS south-ADJZ show-GER put-GER throw-CMPL-GER now return-GER

per-yendərə²³
 give-RES

‘As soon as he died, (the boy) carried him out on his shoulders toward that mountain ridge, he placed him so that his head looks towards the south, and then he returned home.’

(Ragagnin 2011: 153)

²¹ Although mood is discussed in the next section, I chose to discuss the emphatic together with the resultative, for its constructions are so similar.

²² For the discussion of *-DIR*, see section 4.2.2.3 *Evidentiality*.

²³ Maybe, following the explanation above, the suffix *-KEndIr(I)* should be glossed *-yen-dər-ə -REM-EVI-?*. The same goes for the suffix *-KEndIroo*.

- b. *on-əŋ ʃt-ə-n-ge ibe ibe te-p pir pasa in-dəy aŋ*
 MED-GEN inside-3.POSS-LK-DAT reindeer reindeer say-GER one and PROX-AJZ game
par pol-gandaroo
 COP become-RES.EMPH
 ‘Whitin these, there was such an animal called reindeer. Sooo it was.’

(Ragagnin 2011: 154)

The continuous can be formed by the suffix *-Bašaan* (186a) or the gerund *-(l)p* and an auxiliary verb (186b; Ragagnin 2011: 149). The difference between these two constructions is the ‘still’ meaning that is added to the continuous formed by the suffix *-Bašaan*.

- (186) a. *mün gil-bašaan men*
 soup make-CONT 1SG
 ‘I am still preparing the soup.’

(Ragagnin 2011: 149)

- b. *šay hayn-əp turə*
 tea boil-GER AUX
 ‘The tea is boiling.’

(Ragagnin 2011: 150)

The iterative is constructed by *-KIIA* or *-DE* (Ragagnin 2011: 102). Ragagnin does not provide an example in context, so example (187) shows the verbal stem of the verb ‘beat’ in combination with the iterative.

- (187) *ga^hk-* ‘beat’ *ga^hk-ta* ‘beat repeatedly’

(Ragagnin 2011: 102)

The last aspect is the inchoative, marked by the gerund *-(l)p* in combination with *e^hxele* (Ragagnin 2011: 117), which is derived from the verb *e^hxē* ‘begin’.

- (188) *ak ay so-o-n-da ün-əp e^hxē-le-er*
 white moon end-3.POSS-LK-LOC exit-GER begin-VBLZ-NPST
 ‘They start growing after White Month (February).’

(Ragagnin 2011: 117)

Mood

Unlike Tuvan, the conditional mood is marked by the suffix *-ZE* (Ragagnin 2011: 142). The limitive *-KİŞE* and the desiderative *-(l)KsE* are formed with the suffix *-ZE* (Ragagnin 2011: 102, 142). All three moods express a certain irrealis meaning for which conditions are set and all three moods trigger the pronominal suffixes. (189a) is an example of the conditional; (189b) shows a limitive, which in itself also has a conditional meaning: until X, we will do Y. (189c) is an example of the desiderative. The desiderative mood also has an irrealis meaning, for the verbal action on which the desiderative is marked is not yet achieved.

(189) a. *mee-ŋ gara-am-nə in-ža žu^hkšə-sa-ŋ ekkə-r-er be*
 PRO:1SG-GEN eye-1SG.POSS-ACC PROX-ADJZ pluck.out-COND-2SG good-VBLZ-NPST Q
tilgə-žek ool te-er žime
 fox-NMLZ son say-NPST thing
 '[He] says, "If you pluck out my eye that way, will it get better, little fox?"'

(Ragagnin 2011: 143)

b. *žer toŋ-gəša ay-la-ar pis-ter*
 ground freeze-LIM wild.onion-VBLZ-NPST 1PL-PL
 'We collect wild onions until the ground freezes.'

(Ragagnin 2011: 142)

c. *ol üye-de urəy tarəy t^haa ool-lar pol-gaš aššak-tar šuptə la tikka*
 MED time-LOC child seed PTCL son-PL become-GER old.man-PL all PTCL very
žorə-ksa-ar aŋna-ksa-ar tikka goya tikka džaahay üye
 go-DES-NPST hunt-DES-NPST very nice very nice time
 'At that time, really every one of the children, boys and the men want to go out and want to hunt very much; it is a very nice and pleasant time.'

(Ragagnin 2011: 203)

The assertive mood *-žik* is used by the speaker to ensure the hearer that the action is true and has really happened (Ragagnin 2011: 155).

(190) *a^ht-təy g^hh^a-ler gel-žak*
 horse-ADJV person-PL come-ASS
 'People on horseback have indeed arrived!'

(Ragagnin 2011: 156)

Apart from the emphatic mood, Dukha also has what Ragagnin calls an indirective mood *-(l)ptlr(l)*, which expresses that the speaker derived the evidence of the actions by seeing the results of the action (Ragagnin 2011: 157). In the section 4.2.2.3. *Evidentiality*, the meaning of this 'mood' will be further discussed.

(191) *erdene gel-əptərə*
 Erdene come-INDIR
 'Erdene has arrived (as I became aware of by seeing his horse).'

(Ragagnin 2011: 157)

The epistemic mood is formed by the suffix *-Kldey*, which expresses the speaker's impression of the likelihood of an action (Ragagnin 2011: 161). The example shows that the speaker is not sure whether the action of 'come' is really happening. Therefore, the *-Kldey* suffix is used on the verb.

- (192) *tünne irey gel-gədeγ*
 at.night bear come-EPIS
 ‘The bear might come in the night.’

(Ragagnin 2011: 161)

The last mood that will be discussed here is the imperative mood. As Tuvan, Dukha only has imperative meanings in the second person. The other persons have a hortative meaning. The imperative has no marking in the second person singular (193a). The plural suffix is used to mark second person plural (193b). The hortatives are expressed through *-əyn* (1SG; 193c), *-EEll* (1PL), *-Zin* (3SG) and *-ZInnEr* (3PL) (Ragagnin 2011: 159).

- (193) a. *in-ža-n-sa mee-ŋ pir gara-am-nə žu^hkšə-p per*
 PROX-VBLZ-REFL-COND PRO:1SG-GEN one eye-1SG.POSS-ACC dig.out-GER give.IMP
te-er žime
 say-NPST thing
 ‘(The bear) says, “If so, pluck out one of the eyes for me”.’

- b. [...] *inγay dž^ht-aŋar*
 further lie-IMP.2PL
 ‘Please, lie down further.’

(Ragagnin 2011: 158)

- c. *men höömey t^hu^hxay-ə žime söyle-γən*
 PRO:1SG throat.singing occasion-3.POSS thing say-IMP.1SG
 ‘Let me say something on throat-singing (höömey).’

(Ragagnin 2011: 159)

Dukha TAMs show phonologically and morphologically many similarities with Tuvan. The biggest differences can be found in the absence of a proper future tense or assertative mood in Tuvan, or a perfective or cessative aspect in Dukha. Furthermore, it is worthwhile to mention that the conditional is marked by a suffix in Dukha, whereas this is a circumfix in Tuvan.

4.2.2.3 Evidentiality

Evidentiality is not discussed in the grammar of Ragagnin, but the indirective mood discussed in section 4.2.2.2 *Tense-Aspect-Mood*, shows that Dukha actually expresses evidentiality by TAM suffixes. Another aspect of these TAM suffixes is the presence of *-Dir*. This suffix is found in the resultative aspect, emphatic mood, and indirective mood. It seems that the suffix *-Dir* marks evidentiality, but it is hard to gloss this suffix, for the meaning of the emphatic mood and the indirective mood are completely opposite. Looking at Tuvan and Turkish, the suffix *-Dir* is not that unexpected in the evidentiality category. In both languages, *-Dir* has a very ambiguous meaning since it is marked in witnessed actions and actions about which the speaker is uncertain. This analysis becomes stronger when one notes that there is a ‘marker’ *-l/E-dir(l)* or *-ydir(l)*. According to Ragagnin, this ‘marker’ denotes that the speaker expresses facts on the basis of his perceptions (Ragagnin 2011: 157). The following example shows an evidential meaning and, again, in combination with *-Dir*. This strengthens the suggestion that *-Dir* marks evidentiality, but an accompanying suffix is needed to complete denoting the category of evidentiality.

- (194) *ol alaža öγ-de pir gi^hhə ir-la-ydərə*
MED pole dwelling-LOC one person song-VBLZ-EVI?
'It sounds like somebody is singing in that tepee.'

(Ragagnin 2011: 157)

4.2.2.4 Valency

Valency in Dukha reflects many similarities with Tuvan, such as the relatively many causative suffixes and the (de)transitivizing options of the voices.

Decreasing valency

The passive voice is marked by the suffix *-(l)l* or *-(D)Dln* (Ragagnin 2011: 103). As the examples show, the suffixes are directly attached to the verbal stem.

- (195) *t^hp-* 'find' *t^hh-əl* 'be found'
pil- 'know' *pil-dən* 'be known'

(Ragagnin 2011: 103)

In context, it becomes clear that the passive voice can also be used for forming new intransitive verbs without a passive meaning. The verb 'discover' is derived from the transitive verb 'find'.

- (196) *ža in-ža-n-gaš am tu^hha gi^hhə ibi te-p žime in-ža*
yeah PROX-VBLZ-REFL-GER now Dukha person reindeer say-GER thing PROX-ADJZ

t^hh-əl-gan
find-PASS-REM
'Yeah, so, the Dukha person discovered the reindeer in this way.'

(Ragagnin 2011: 253)

The reciprocal suffix *-(l)š* is also used for the cooperative voice (Ragagnin 2011: 104).

- (197) *sooda-* 'speak' *sooda-š* 'speak together'

(Ragagnin 2011: 104)

- (198) *ara-sə-n-ga žugaa-la-š-kaš la žoro-or*
interval-3.POSS-LK-DAT speech-VBLZ-RECP-GER PTCL move-NPST
'There they have talked among themselves, then, they set out.'

(Ragagnin 2011: 192)

The reflexive voice, marked by *-(l)n*, can sometimes have a medial meaning (Ragagnin 2011: 103). Besides the medial meaning, the reflexive suffix can also trigger a different detransitivized meaning than a pure reflexive meaning. In (199), the reflexive suffix on the verb 'see' does not only give the verb the meaning 'see oneself', but also 'creates' a new verb 'appear'.

- (199) *gör-* 'see' *gör-ən* 'appear, see oneself'

(Ragagnin 2011: 103)

- (200) *haag-ən sal-ebet-kaš ženg-er-ten-əp pa^ht-a pa-ar*
 willow-3.POSS leave-CMPL-GER tumble-VBLZ-REFL-GER sink-GER go-NPST
 ‘He (just) lets go of his twig (lit. ‘willow’) and goes tumbling down [by itself].’

(Ragagnin 2011: 113)

Increasing valency

Dukha has a wide range of causative suffixes: *-(l)t*, *-Dlr*, *-lr*, *-Klr*, and *-(K)ls* (Ragagnin 2011: 103). The causative can also function as a transitivizer e.g. *tur* ‘stand’, an intransitive verb, becomes *tur-γəs* ‘build’, a transitive verb with a different meaning than ‘cause to stand’. Double causatives are used on verbs that are transitivized by a causative, making the new transitive verb a causative verb (201; Ragagnin 2011: 103).

- | | |
|---------------------------------------|---|
| (201) <i>iyla-</i> ‘cry’ | <i>iyla-t</i> ‘cause to cry’ |
| <i>ge^hs-</i> ‘cut’ | <i>ge^hs-tər</i> ‘cause to cut’ |
| <i>öl-</i> ‘die’ | <i>öl-ər</i> ‘cause to die’ i.e. ‘kill’ |
| | <i>öl-ər-t</i> ‘cause to kill’ |
| <i>ö^hs-</i> ‘grow (intr.)’ | <i>öt-kər</i> ‘grow (intr.)’ |
| <i>tur-</i> ‘stand’ | <i>tur-γəs</i> ‘build’ |

(Ragagnin 2011: 103)

- (202) *irey gusak-šə hayrahan-nə²⁴ tilgə-žek ool haya až-ər-γan*
 bear pine.nut-ADJZ merciful-ACC fox-NMLZ son rock pass-CAUS-REM
 ‘The little fox caused the pine nut-eating bear to fall of the rock.’

(Ragagnin 2011: 127)

4.2.2.5 Participles and gerunds

Like Tuvan, participles and gerunds play a major role in Dukha clause combining. Therefore, only the morphology of these participles and gerunds are discussed and the consequences for Dukha syntax are discussed in section 4.3.2 *Conjunction*.

Participles are formed to make relative clauses and mainly complement clauses. Gerunds are used for mainly adverbial clauses and some complement clauses. Both gerunds and participles are expressed through suffixes attached to the verb. The following example shows both a gerund and a participle. The participle functions as an adjective for the horns and the gerund is used to express an inchoative-like construction.

- (203) *piččə tur-ar miis-ə žas-ən ün-e pe-er*
 small stand-NPP horn-3.POSS spring-ADJZ exit-GER give-NPST
 ‘Its small [standing] horns start growing in springtime.’

(Ragagnin 2011: 163)

4.2.2.6 Modals

Modals in Dukha are expressed through a gerund *-(l)p* and an auxiliary, which denotes the meaning of the modal. Ragagnin does not discuss them as modals, but in sections of gerund and auxiliary constructions. I found five modals: *-(l)p pol-* ‘can’ (204a), *-(l)p pil-* ‘might’ (204b), *-(l)p šita-* ‘be able’

²⁴ ‘merciful’ is probably not reflected in the translation, because this example was taken from a text by Ragagnin.

(204c), *-(l)p yata-* ‘be unable’ (204d) and modal word *herek* ‘must’ or ‘need’ (204e; Ragagnin 2011: 114-117, 136).

- (204) a. *pörə-nə pol-sa ga^hkpa pile öl-ər-əp pol-ər*
 wolf-ACC become-COND trap with die-CAUS-GER become-NPST
 ‘As for the wolf, one can kill it with a trap.’

(Ragagnin 2011: 114)

- b. *pohən gar ža-ap pil-ər*
 today snow fall-GER know-NPST
 ‘Today, it might snow.’

(Ragagnin 2011: 115)

- c. *sen žara mun-əp šita-ar sen be*
 PRO:2SG riding.reindeer ride-GER be.able-NPST 2SG Q
 ‘Are you able to ride reindeer?’

(Ragagnin 2011: 116)

- d. *uləy žaaš in-da üt gas-əp yada-p ž^ht-kan žime turə*
 big calm PROX-LOC hole dig-GER be.unable-GER lie-NPP thing COP
 ‘There is a big calm lying bear there that was not able to dig a hole.’²⁵

(Ragagnin 2011: 117)

- e. *ah murgə-nə murgə-la-ar-da s#n ün-ə-n-ge*
 INTJ hunting.horn-ACC hunting.horn-VBLZ-NPP-LOC maral.deer voice-3.POSS-LK-DAT
teŋ po-or herek
 equal become-NPP need
 ‘When using the hunting horn, it must be the same as the voice of the maral deer.’

(Ragagnin 2011: 136)

4.2.2.7 Negation

The suffix *-BE* is used on most verbal stems to negate the action of the verb (Ragagnin 2011: 133). But, as Tuvan, Dukha has more than one negation suffix, of which the form depends on TAM. Another negation suffix, *-BEs*, is used on the non-past. Negation suffixes follow the verbal stem and voice suffixes. In (205a), suffix *-BE* in combination with a voice suffix is found. Example (205b) shows a phrase with the *-BEs* negation suffix.

- (205) a. *yan-ər par-yaš ol hün žime t^hee öl-ər-be-en*
 return-GER go-GER MED day thing PTCL die-CAUS-NEG-REM
 ‘He went back (home), he did not kill anything (else) that day.’

(Ragagnin 2011: 240)

²⁵ Translation is adapted in order to follow the original text more closely.

- b. *irə-k neš gi^hk-pas*
 get.rotten-ADJZ wood burn-NEG.NPST
 'Rotten wood does not burn.'

(Ragagnin 2011: 147)

Copula constructions are negated by the word *emes* (206a; Ragagnin 2011: 175). According to Ragagnin, this word corresponds with *değil* in Turkish (Ragagnin 2011: 175). Negation of *turə* and *par* is done by *žok* (206b).

- (206) a. *ol gi^hh'ə tu^hha gi^hh'ə emes*
 MED person Dukha person COP.NEG
 'That person is not a Dukha person.'

(Ragagnin 2011: 175)

- b. *irak-ta aŋ par po žook-ta aŋ žok*
 far-LOC game COP PROX near-LOC game COP.NEG
 'Far away (from here) there is a game, (but) no game in this neighborhood.'

(Ragagnin 2011: 125)

4.3 Syntax

In this section, the syntax of Dukha will be discussed. Dukha syntax is not discussed in the grammar of Ragagnin, so the information given in this section is based on my own observations on the data and examples provided by Ragagnin. Dukha shows nominative-accusative alignment and SOV word order. Subordinate clauses precede the main clause in Dukha, whereas Tuvan incorporates the subordinate clause into the main clause.

4.3.1 Word order

In Dukha the word order in the simple clause is Subject-Object-Verb. While (207a) shows a transitive sentence with the direct object preceding the verb, (207b) shows a sentence with a direct and indirect object. The indirect object precedes the direct object.

- (207) a. *sen žarə mun-əp gör-yeŋ sen iyeŋ*
 PRO:2SG riding.reindeer mount-GER see-REM 2SG PTCL
 S O V
 'You have evidently tried to ride a reindeer.'

(Ragagnin 2011: 116)

- b. *Sindeelə Bat-ka ibə-lər-əbas-tə ibə-le-t-ken*
 Sindeli Bat-DAT reindeer-PL-1PL.POSS-ACC reindeer-VBLZ-CAUS-REM
 S IndirO DirO V
 'Sindeli made Bat look for our reindeer.'

(Ragagnin 2011: 125)

The subordinate clause precedes the main clause; therefore, the word order of a complex clause is SOV in the subordinate clause and SOV in the main clause. The following example shows a complex sentence with an intransitive main clause and a transitive subordinate clause. The transitive

subordinate clause precedes the main clause subject and the rest of the main clause. Therefore, this example shows that the subordinate clause in Dukha is not inserted into the main clause, but it rather precedes the main clause.

(208) [[*geže pol-sa*] [*žerle tayga gi^hh^ə-sə i^hhⁱ-er ži-ir že-m-ən*]
 evening become-COND really taiga people-3.POSS drink-NPP eat-NPP eat-NMLZ-ACC
 S_{sub} O_{sub}
ži-p al-gaš-ten] *gil-ər žime žok]*
 eat-GER take-GER-GEN make-NPP thing COP.NEG
 V_{sub} S_{main} V_{main}
 ‘As for the evening, once they have had their evening meals and drinks, taiga people don’t really have anything to do.’

(Ragagnin 2011: 111)

4.3.2 Conjunction

The conjunction of subordinate clauses can be achieved through participles and gerunds. Coordination is done through combining two clauses by juxtaposition, a coordinating conjunction or by a gerund.

4.3.2.1 Coordination

There are three possibilities to coordinate two phrases or clauses. The first is by juxtaposing the two components (209a-c). This seems to be the most convenient way for coordinating two NPs, although it is also found with verbs (209b). The second option is through the conjunction *pasa*, which means ‘and’ and is put between the two components (209b). The last option is coordination by the gerund *-(l)p* (209c).

(209) a. [[*ar^ht-ə-n-da öy-de ar^ht-kan*] *uləs-tar gatay-lar ton-ən taara-ar*
 behind-3.POSS-LK-LOC tent-LOC remain-PP people-PL woman-PL vest-3.POSS sew-NPST
mal-ən gö-ör než-ən neš-te-er]
 cattle-3.POSS see-NPST tree-3.POSS tree-VBLZ-NPST
 ‘The people and the women left behind in the tents sew their clothing, tend their cattle and chop their wood.’

(Ragagnin 2011: 134)

b. [[*uray-lar am hündəs ibə-sen ö^ht-kar-ar*] **pasa** [*neš-te-er*
 child-PL now during.the.day reindeer-3.POSS grass-VBLZ-NPST **and** tree-VBLZ-NPST
gusək-ta-ar hat-ta-ar ay-la-ar]
 pine.nut-VBLZ-NPST berry-VBLZ-NPST lily.bulb-VBLZ-NPST
 ‘The children, well, during the day, they graze their reindeer and chop wood, they hunt for pine nuts, berries and lily-bulbs.’

(Ragagnin 2011: 213)

- c. *[[mee-ŋ aža-m aba-m t^hožə hošoon-dan mool-ga*
 PRO:1SG-GEN father-1SG.POSS mother-1SG.POSS Toju banner-ABL Mongol-DAT
gel-əp] amədara-ar pol-gan]
 come-GER live-NPP become-REM
 ‘My father and mother came to Mongolia from the Toju province and settled down (here).’

(Ragagnin 2011: 126)

4.3.2.2 Subordination

Subordination is done by participles and gerunds. Roughly speaking, participles are used to construct complement clauses, while gerunds form adverbial clauses. However, when a participle takes a case, it can also form adverbial clauses. Gerunds do not allow any other suffix or morphology, except for the genitive case that is rarely found in combination of the gerund *-KEŠ*.

4.3.2.2.1 Relative clauses

Relative clauses are formed by participles. In a relative clause, the participle functions as an adjective and does not take any other morphology. Example (210a) shows a negation suffix which is merged with the participle. Example (210b) shows a very clear adjectivized participle.

- (210) a. *[[patə araha i^hš-pes] gi^hhə iyək]*
 Bat vodka drink-NPP.NEG person PTCL
 ‘Bat is surely somebody who does not drink!’

(Ragagnin 2011: 176)

- b. *[[öl-ər-ŋen] aŋ soy-əp šita-bas men]*
 die-CAUS-PP game skin-GER be.able-NEG 1SG
 ‘I am not able to skin a killed animal.’

(Ragagnin 2011: 116)

4.3.2.2.2 Complement and adverbial clauses

Complement clauses are formed by participles. In (211, repeated from 204e), the complement of *herek* ‘need’ is subordinated by the non-past participle suffix *-or*. At the same time, it shows an adverbial clause constructed by a participle marked by a locative clause.

- (211) *[[[ah murgə-nə murgə-la-ar-da] siin ün-ə-n-ge*
 INTJ hunting.horn-ACC hunting.horn-VBLZ-NPP-LOC maral.deer voice-3.POSS-LK-DAT
teŋ po-or] herek]
 equal become-NPP need
 ‘When using the hunting horn, it must be the same as the voice of the maral deer.’

(Ragagnin 2011: 136)

It is not clear what the difference is with adverbial clauses formed by a gerund, which is the other option to form adverbial clauses. The following example shows a sentence with many gerunds, all expressing adverbial clauses. Judging similar examples from the grammar, it seems that this example represents the possibilities and use of the gerunds.

- (212) [[*on-əŋ* *so-o-n-da* [*su-un* *gut-əp*] [*gular-ən* *gut-əp*] [*žuur-gaš-teŋ*]
 med-GEN end-3.POSS-LK-LOC water-3.POSS put-GER flour-3.POSS put-GER mix-GER-GEN

 [*ekkə niile-də žuur-əp*] *tur-yaš*] *ot* *iʃt-ə-n-de* *hül-ge* *höm-er*]
 good join-ADJZ mix-GER stand-GER fire inside-3.POSS-LK-LOC ash-DAT bury-NPST
 ‘After that, one puts the water, one puts the flower and after it is mixed and after the mixture
 is well-kneaded, one buries it in the ashes inside the fire.’

(Ragagnin 2011: 196)

The first gerund *gut-əp* starts the chain of coordination and the order of the gerunds determines the consecutive reading of the other gerunds *gut-əp*, *žuur-gaš-teŋ*, *žuur-əp* and *tur-yaš*. The gerunds in this example both show the coordination as well as the adverbial (‘after’) reading. If analyzed correctly, the adverbial reading is expressed by *tur-yaš* and the other gerunds are coordinated since all have the suffix *-(l)p*, which is also used to coordinate two verbal phrases.

4.3.3 Questions

Dukha marks both polar and content questions (Ragagnin 2011: 129, 193). Unlike Tuvan, Dukha attaches the question markers to the questioned part of the sentence, making the question word a suffix subjected to the rules of vowel and consonant harmony. The suffix *-ll* is used for content questions (213a) and the suffix *-BE* for polar questions (213b; Ragagnin 2011: 129, 193).

- (213) a. *see-ŋ* *at-əŋ* *gim-əl*
 PRO:2SG-GEN name-2SG.POSS who-INT
 ‘What’s your name?’

(Ragagnin 2011: 129)

- b. *batə gel-gen-be*
 Bat come-REM-INT
 ‘Has Bat arrived?’

(Ragagnin 2011: 193)

4.4 Lexicon

The Dukha basic word list is not complete because 49 words are missing. These are mostly words that do not occur frequently, such as ‘vomit’ and ‘stab’, but also ‘nose’ and ‘because’.

Dukha lexicon shows Turkic origin and Mongolic influence, but not significantly more than in Tuvan. Moreover, I found two words which are of Turkic origin in Dukha and which also have also a Mongolian option in Tuvan:

(214)	Tuvan	Dukha	Mongolian	Turkish	
	<i>bügü</i>		<i>büy</i>		‘all’
	<i>xamik</i>	<i>hamək</i>		<i>hep</i>	‘all’
	<i>salgin</i>		<i>salgi</i>		‘wind’
	<i>xat</i>	<i>hat, xat</i>		<i>rüzgâr</i> ²⁶	‘wind’

²⁶ *rüzgâr* is a Persian loan in Turkish.

Dukha does not prefer consonant clusters in the onset of the syllable, so Mongolian loans are adapted to the Dukha phonology and consonant clusters are split by a schwa.

(215) Dukha Mongolian
amədərə- *am'dray* 'live'

The cognates with Tuvan show differences in fortition or lenition. The examples below show that lenition and fortition depend on a specific sound rather than on more general features, such as voiceless stops.

(216) Tuvan Dukha
biče *piččə* 'small'
daš *taš* 'stone'
kuduruk *gudəru* 'tail'
čitta- *žit-* 'smell'

The biggest difference with Tuvan can be found in the expression of the concepts of 'foot' and 'leg'. Tuvan does not distinguish these two concepts and has one word, *but*, for both 'leg' and 'foot'. Dukha has a word for 'foot', *atak*, and for 'leg', *but*. 'arm' and 'hand' are both expressed through the word *hol*.

4.5 Discussion

The Dukha consonant and vowel inventory show many similarities with Tuvan. Dukha has uvular and glottal consonants which are not found in Tuvan. Furthermore, the distribution of aspirated vowels is not seen in Tuvan. The harmony rules with I-harmony in Dukha are less extended than in Tuvan. Tuvan has several vowels, which are substituted in the vowel of the suffix: in Dukha this is reduced to a schwa. The syllable structure of Dukha has the same restrictions as in Tuvan.

The morphology in general shows similarities with Tuvan. The differences are rather in the phonology of the suffixes than structural morphological differences. One of the more distinct differences is the allative suffix *-Kidl* (Tuvan allative: *-Je*, *-Dive*). According to Ragagnin, the auxiliary verbs in Dukha are direct calques of Mongolian auxiliary verbs and constructions (Ragagnin 2011: 114). Furthermore, it should be mentioned that the conditional circumfix of Tuvan is 'just' a suffix in Dukha.

Dukha syntax shows more Mongolian influences. The subordinate clause precedes the main clause and is not incorporated into the main clause, which is done in Tuvan. The construction of subordinate clauses, on the other hand, is 'typical' Turkic and is done by participles and gerunds which forms are cognates with the forms in Tuvan.

The Dukha basic word list is very incomplete. However, based on the words that were available, one can conclude that the majority of the words from the Swadesh list are cognates with Tuvan. Dukha does not appear to have more Mongolian loans than Tuvan, but again, words, such as 'sea' and 'fruit' are missing in this list. The differences between the two languages are mainly found in the phonology of the lexicon. One prominent difference is the Dukha distinction of 'foot' and 'leg', which is expressed through different non-derived words.

5. Results: Soyot

In this chapter, the grammar of Soyot will be discussed. The Soyot grammar is compared with the Tuvan grammar. The language was spoken in Buryatia and the lexicon reflects Buryat influences.

5.1 Phonology

The Soyot phonology shows many similarities with Tuvan. However, the Soyot phonology seems to have fortitized its phonemes and has uvular and pharyngeal phonemes.

5.1.1 Vowel inventory and vowel harmony

Soyot has nine vowels. The /i/ can be palatalized.

Table 27: Soyot vowel inventory (Rassadin 2010: 10)

	front			back	
high	i	ü		ɨ	u
mid	e	ö			o
low	ä			a	

All vowels can be lengthened and short vowels can be pharyngealized. These differences can be found in minimal pairs.

short vowel	pharyngealized vowel	long vowel
ɨt 'send (IMP)'	ɨʔt 'dog'	ɨt 'sound, voice'
eš 'friend'	eʔš 'paddle (IMP)'	eeš 'she-bear'

(Rassadin 2010: 10)²⁷

Diphthongs are formed by the vowel + [j]. This is possible for every Soyot vowel (Rassadin 2010: 10).

Vowel harmony is also found in Soyot (Rassadin 2010: 12). The harmony only is based on the front-back opposition and occurs even word-internally. The word-internal vowel harmony has one other 'subrule'. The vowel in the next syllable must have an opposite shape (rounded or unrounded) to the preceding vowel. The shape-rule is only applied to the vowels in the stem of the word and [e] is excluded. The example below shows two Soyot words, one with only front vowels and one with only back vowels, which shows that the harmony rules are also applied at word-internal syllable level.

(217) *ederiškäk* 'inseparable'
utasin 'thread'

(Rassadin 2010: 13)

The round-unrounded opposition in suffixes, as found in Tuvan, is not attested in Soyot.

The biggest difference with the Tuvan vowel inventory is the extra vowels <ä> and palatalized /i/. The <ä> is also used as one of the vowels in the vowel harmony.

²⁷ For all examples from Rassadin (2010), I added the glosses and morpheme boundaries. Some of the examples are translated from Russian.

5.1.2 Consonant inventory

The consonant inventory of Soyot is more extensive than Tuvan. Consider the following table.

Table 28: Soyot consonant inventory (adapted from Rassadin 2010: 12)

	labial		labio-dental	alveolar		palatal		velar		uvular		pharyngeal
plosives	p	b		t	d			k	g	q		
nasals		m			n				ŋ			
trills					r							
fricatives			(f)	s	z	š	ž	x			ɣ	ħ
affricates				c		č	dž					
laterals					l							
approximants				v			y					

As can be seen in table 28, Soyot has two uvular and one pharyngeal consonant (Rassadin 2010: 12). The word-initial [r] and the word-initial [v] are only found in loans. However, these consonants can be found in every other position of the syllable of proper Soyot words. The [f] is, like Tuvan, very rare and solely occurs in loans.

The word-final consonant can be dropped when a suffix that starts with a vowel is added. The following example shows the word-final [q] being dropped due to the possessive suffix.

- (218) *baliq* *bali-i*
 fish fish-3.POSS
 ‘fish’ ‘his fish’

(Rassadin 2010: 11)

Besides the option of deletion, the possibility of voicing exists in this context. The next example shows the word-final [q] again, but instead of the /q/ being dropped and the /q/ is voiced and fricativized.

- (219) *aq* *aɣ-i*
 steppe steppe-3.POSS
 ‘steppe’ ‘his steppe’

(Rassadin 2010: 11)

Furthermore, voiceless consonants in monosyllabic words can become voiced when a vowel from a suffix is added (220a). However, when the vowel of the first syllable is pharyngealized, the voiceless consonant is preserved (220b).

- (220) a. *at* *ad-i*
 name name-3.POSS
 ‘name’ ‘his name’

b. <i>aʰt</i>	<i>aʰt-i</i>
horse	horse-3.POSS
'horse'	'his horse'

(Rassadin 2010: 16-17)

5.1.3 Syllable structure

Although Rassadin does not mention the syllable structure, it is possible to deduce it from the data and examples. It seems that it is rather simple and that Soyot avoids consonant clusters. So the basic syllable structure is (C)V(V)(C)(C). The following list shows examples of the possible syllables.

(221) V	<i>od-i</i>	'his fire'
VV	<i>ee</i>	'heel'
VC	<i>as</i>	'loose your way (IMP)'
CV	<i>čü</i>	'what'
VVC	<i>aar</i>	'heavy'
CVV	<i>boo</i>	'rifle'
CVC	<i>baʁ</i>	'belt'
CVVC	<i>keer</i>	'he will come'
CVCC	<i>dört</i>	'four'

(Rassadin 2010: 11-14, 40, 89, 98, 228)

5.2 Morphology

The morphology of Soyot is highly agglutinative. In this section, the nominal and verbal morphology are discussed. Affixes are mostly suffixes and are attached to the stem of nouns and verbs. The grammar by Rassadin does not mention morphological gender, but it seems that this does not play a role in Soyot. If needed, one can express gender lexically.

5.2.1 Nominal morphology

The order of suffixes on the noun is as follows:

STEM-plural-possessive-case

(Rassadin 2010: 15)

The grammar of Rassadin does not mention animacy and it seems that Soyot indeed does not distinguish animacy morphologically.

5.2.1.1 Plural

The plural is marked by the suffix *-LÄr* (Rassadin 2010: 15). The /l/ changes into [n] after nasals and [t] after voiceless consonants.

(222) <i>daʁ</i>	<i>daʁ-lar</i>	'mountain – mountains'
<i>ħem</i>	<i>ħem-när</i>	'river – rivers'
<i>čečäk</i>	<i>čečäk-tär</i>	'flower – flower'

(Rassadin 2010: 15)

The only difference with Tuvan is the absence of the suffix *-dÄr*. The rules for consonant harmony of the plural suffix are the same for both Soyot and Tuvan.

5.2.1.2 Nominal case marking

Soyot has seven cases. It is not clear whether the directive case denotes the meaning of ‘near X’ or ‘towards X’. The examples suggest an allative meaning, so in this thesis, the directive is called allative. As in Tuvan, the Soyot case markers display vowel and consonant harmony.

Table 29: Case suffixes in Soyot (Rassadin 2010: 17-18)

		‘bee’	‘bees’	‘cow’	‘cows’
NOM	-∅	<i>ari</i>	<i>ari-ler</i>	<i>inek</i>	<i>inek-ter</i>
GEN	-NIŋ	<i>ari-niŋ</i>	<i>ari-ler-niŋ</i>	<i>inek-tiŋ</i>	<i>inek-ter-niŋ</i>
DAT	-KÄ	<i>ara-a</i>	<i>ari-ler-gä</i>	<i>inek-kä</i>	<i>inek-ter-gä</i>
ACC	-NI	<i>ari-ni</i>	<i>ari-ler-ni</i>	<i>inek-ti</i>	<i>inek-ter-ni</i>
LOC	-DÄ	<i>ari-da</i>	<i>ari-ler-dä</i>	<i>inek-tä</i>	<i>inek-ter-dä</i>
ABL	-DÄn	<i>ari-dan</i>	<i>ari-ler-dän</i>	<i>inek-tän</i>	<i>inek-ter-dän</i>
ALL	-KIdI	<i>ari-vidi</i>	<i>ari-ler-gidi</i>	<i>inek-kidi</i>	<i>inek-ter-gidi</i>

Ditransitive sentences are not found in the grammar; therefore, they will not be treated in this thesis.

5.2.1.3 Articles

Rassadin does not mention articles in his grammar. However, it seems that Soyot acts like Tuvan. The difficulty is that Russian does not have articles and the indefinite article in Tuvan resembles the numeral ‘1’. When I looked at the sample text in the Soyot grammar, *bir* was often translated with *odin* ‘1’, although a translation with ‘a’ seems to be more suitable. The example below shows a phrase with *bir*. In Russian this is translated with *odin* ‘1’, but it would make more sense to translate it as an indefinite article.

- (223) *šaanda šav šaanda bir aŋ-ši kiši tur-ван iik*
 long.ago time long.ago one hunt-NMLZ person AUX-PP PTCL
 ‘Даваным-давно был один охотник.’
 ‘Once upon a time/Ages ago, there was a hunter.’

(Rassadin 2010: 53)

5.2.1.4 Possession

Pronominal possession is expressed through a set of suffixes that show many similarities with the Tuvan possessive suffixes.

- (224) *ava* ‘mother’
ava-m ‘my mother’
ava-ŋ ‘your mother’
ava-si ‘his, her mother’
ava-vis ‘our mother’
ava-ŋar ‘your (PL) mother’
ava-si ‘their mother’

(Rassadin 2010: 16)

The text of the grammar shows an example of a predicative possession, in this case also in a negation construction. The construction, which can be found in example (225), shows that the (negative) copular verb is used in combination with the possessive suffixes on the possesses. This construction is close to the construction in Turkish.

(225) *aŋn-ar* *čoru-ur* *aʰt-i* *ta* *ivis-i* *ta* *čoq*
 hunt-NPST go-INF horse-3.POSS neither reindeer-3.POSS nor COP.NEG

bol-ɸan iik

AUX-PP PTCL

‘He didn’t have a horse or a reindeer to go hunting.’

(Rassadin 2010: 53)

5.2.1.5 Pronouns

Soyot has six personal pronouns. As can be seen below, there is no gender distinction or inclusive-exclusive marking.

Table 30: Personal pronouns in Soyot (Rassadin 2010: 40)

	1SG	2SG	3SG
NOM	<i>men</i>	<i>sen</i>	<i>ol</i>
GEN	<i>mii-ŋ</i>	<i>sii-ŋ</i>	<i>on-iŋ</i>
DAT	<i>mii-gä</i>	<i>sii-gä</i>	<i>aa-ɸa</i>
ACC	<i>men-i</i>	<i>sen-i</i>	<i>on-i</i>
LOC	<i>men-dä</i>	<i>sen-dä</i>	<i>in-da</i>
ABL	<i>men-dän</i>	<i>sen-dän</i>	<i>on-uun</i>
ALL	<i>men-gidi</i>	<i>sen-gidi</i>	<i>in-aari</i>
	1PL	2PL	3PL
NOM	<i>bis(ter)</i>	<i>si-lär</i>	<i>o-lar</i>
GEN	<i>bis-tiŋ</i>	<i>si-lär-niŋ</i>	<i>o-lar-niŋ</i>
DAT	<i>bis-kä</i>	<i>si-lär-gä</i>	<i>o-lar-ga</i>
ACC	<i>bis-ti</i>	<i>si-lär-ni</i>	<i>o-lar-ni</i>
LOC	<i>bis-tä</i>	<i>si-lär-dä</i>	<i>o-lar-da</i>
ABL	<i>bis-tän</i>	<i>si-lär-dän</i>	<i>o-lar-dan</i>
ALL	<i>bis-kidi</i>	<i>si-lär-gidi</i>	<i>o-lar-gidi</i>

The case endings of the pronouns show a huge symmetry with the case suffixes and the pronominal stems and conjugations show fewer irregularities than in Tuvan. For example, the dative case in the singular persons is still clearly recognizable. However, the third person singular still shows major irregularities in the stem.

The reflexive pronoun is formed by the word *bot* ‘body’ and the possessive suffixes (Rassadin 2010: 39). Again, except for the meaning of *bot*, the construction is similar to the construction of the reflexive pronoun in Tuvan. The example below shows the Soyot reflexive pronoun. The possessive marker is attached to the noun *bot* and the translation gives a clear reflexive reading.

(226) *bod-im* *džana* *ber-gäy* *men*
 body-1SG.POSS return.home AUX-OPT 1SG
 ‘I, myself, returned home.’

(Rassadin 2010: 54)

The interrogative pronouns also show many similarities with Tuvan. Most interrogative pronouns show only phonological differences with Tuvan. The biggest difference is the word for ‘why’. I did not find a cognate, so it is not clear where this word came from and how it is constructed.

(227) <i>qim</i>	‘who’
<i>kan’džanʁaš</i>	‘why’
<i>kayda</i>	‘where’
<i>ka’s(y)an, ka’ňyan</i>	‘when’
<i>čü, džü</i>	‘what’
<i>čüdän</i>	‘from what’
<i>ka’s, če’ňä</i>	‘how much/many’
<i>kayı, kaysı</i>	‘which’
<i>kayı, kae, kaynaarı</i>	‘whereto’
<i>kayın, kaydan</i>	‘from where’

(Rassadin 2010: 39-40, 110)

Indefinite pronouns are formed by the interrogative pronouns and the particle *tÄ*. The example below shows the interrogatives *kayda* ‘where’, *kim* ‘who’ and *čü* ‘what’.

(228) a. <i>kayda</i>	<i>kayda</i>	<i>ta</i>
where	where	PTCL
‘where’	‘somewhere’	
b. <i>kim</i>	<i>kim</i>	<i>ta</i>
who	who	PTCL
‘who’	‘someone’	
c. <i>čü</i>	<i>čü</i>	<i>te</i>
what	what	PTCL
‘what’	‘something’	

(Rassadin 2010: 39-40)

Soyot makes a threefold division in demonstratives: *bo* ‘this’ (PROX), *ol* ‘that’ (MED), and *tee* ‘that (far away, DIST)’ and moreover, Soyot has two demonstrative pronouns: *muuya* ‘this one’ and *uuya* ‘that one (close to the hearer)’ (Rassadin 2010: 39). Rassadin only includes the paradigms of the first three demonstratives in his grammar. Because these paradigms have many irregularities, I am not able to reconstruct the other two paradigms.

Table 31: Demonstratives in Soyot (Rassadin 2010: 39-40)

	‘this’	‘that’	‘that (far away)’
NOM	<i>bo</i>	<i>ol</i>	<i>tee</i>
GEN	<i>mo-niŋ</i>	<i>on-iŋ</i>	<i>tee-niŋ</i>
DAT	<i>maa-ʁa</i>	<i>aa-ʁa</i>	<i>tee-gä</i>
ACC	<i>mo-ni</i>	<i>on-i</i>	<i>tee-ni</i>
LOC	<i>min-da</i>	<i>in-da</i>	<i>tee-dä</i>
ABL	<i>mo-nuun</i>	<i>on-uun</i>	<i>tee-dän</i>
ALL	<i>min-aarı</i>	<i>in-aarı</i>	<i>tee-gidi</i>

5.2.1.6 Numerals

The Soyot cardinal numerals are as follows:

(229)	<i>bir(ää)</i>	'1'	<i>on birää</i>	'11'
	<i>iʰhi</i>	'2'	<i>čeerbi</i>	'20'
	<i>üş</i>	'3'	<i>üdžön</i>	'30'
	<i>dört</i>	'4'	<i>dörtön</i>	'40'
	<i>beš</i>	'5'	<i>bedžön</i>	'50'
	<i>aʰlti</i>	'6'	<i>aʰlton</i>	'60'
	<i>čedi</i>	'7'	<i>čedon</i>	'70'
	<i>ses</i>	'8'	<i>ses on</i>	'80'
	<i>tos</i>	'9'	<i>tos on</i>	'90'
	<i>on</i>	'10'	<i>čüs</i>	'100' (<i>iʰhi čüs</i> '200', etc.)

(Rassadin 2010: 21)

The numerals above 'thirty' show the numeral *on* 'ten' with vowel harmony. This construction is quite regular.

The numerals precede the noun and do not trigger a plural suffix, which can be seen in example (230).

(230)	<i>ol</i>	<i>aŋ-ši</i>	<i>kiši</i>	<i>iʰhi</i>	<i>urivliɯ</i>	<i>iik</i>
	DIST	hunt-NMLZ	two	child.having	PTCL	
	'That hunter had two children.'					

(Rassadin 2010: 53)

5.2.1.7 Adjectives

Adjectives precede the noun and do not have any marking.

(231)	<i>bičii</i>	<i>èrgi</i>	<i>bažiŋ</i>
	small	old	house
	'a small, old house'		

(Anderson & Harrison 1999: 32)

Reduplication is used to emphasize the meaning of the adjective. This is done the same way as in Tuvan. The first syllable is reduplicated and ends with a [p]. However, this is not the only way. The adjective can also be completely reduplicated, as in example (232) (Rassadin 2010: 20). This gives the adjective the meaning 'X-er than X'.

(232)	a.	<i>kap-kara</i>	b.	<i>uliv-dan uliv</i>
		RED-black		big-ABL big
		'very black'		'very big'

(Rassadin 2010: 20)

5.2.1.8 Postpositions

In Soyot, the postpositions always seem to occur with the third person possessive suffix and the locative, ablative or dative case depending on the direction of the movement. Rassadin does not provide an example of a locational postposition in context, but he does show a temporal postposition which has the same construction as the locational postposition.

(233) *udu-ur-iŋ beʰt-i-n-dä em iš-er sen*
 sleep-NPST-2SG before-3.POSS-LK-LOC medicine drink-NPST 2SG
 ‘Before you go to sleep, take the medicine.’

(Rassadin 2010: 43)

5.2.2 Verbal morphology

The agglutinative character of the Soyot language is also seen in the verbal morphology. The order of the verbal suffixes is:

STEM-voice-negation-mood-aspect-tense-evidential person-number

The pronominal markers are not attached to the verb but resemble the form of the pronouns. However, the place of these pronominal markers is behind the verb, instead of at the start of the phrase.

Table 32: Pronominal markers on verbs in Soyot (Rassadin 2010: 28, 33)

	General markers		Recent past, conditional	
	SG	PL	SG	PL
1	<i>men</i>	<i>bis</i>	<i>-(l)m</i>	<i>-(l)vls</i>
2	<i>sen</i>	<i>siler</i>	<i>-(l)ŋ</i>	<i>-(l)ŋEr</i>
3	\emptyset	<i>(-lEr)</i>	\emptyset	<i>(-lEr)</i>

5.2.2.1 Copula constructions

Copula constructions are not treated in the grammar by Rassadin (2010), nor did I find a copula construction in the sample text. Therefore, Soyot copula constructions will not be discussed in this thesis.

5.2.2.2 Tense-Aspect-Mood

TAMs are expressed to suffixes attached to the verbal stem. As found in Tuvan Soyot also uses gerund constructions for some TAMs.

Tense

The present tense is formed by *-l*, *-Ä* or *-y* *durɨ* (Rassadin 2010: 31). The pronominal markers occur behind the auxiliary *durɨ*. If the speaker is an eye-witness, the present tense is formed by *-(l)p* and one of the auxiliaries *turɨ* ‘stand’, *olɨrɨ* ‘sit’, *čoorɨ* ‘go’ or *čɨʰtɨ* ‘lie (down)’ (Rassadin 2010: 31).

(234) *men talač-ɨp turɨ men*
 PRO:1SG hurry-GER AUX 1SG
 ‘I am in a hurry.’

(Rassadin 2010: 32)

Besides the present, Soyot has a non-past, marked by the suffix *-Är/lr*, as also found in Tuvan. This tense denotes a general present or actions that will certainly happen in the near future (Rassadin

2010: 35). Example (235) shows a general comment, whereas (234) is more specific and emphasizes on the moment right now.

(235) *aqs-im bilä men či-ir men*
 mouth-1SG.POSS with PRO:1SG eat-NPST 1SG
 'I eat with my mouth.'

(Rassadin 2010: 35)

Opposed to the certain future or the non-past, Soyot has a hypothetical future *-KÄy*. This suffix is also analyzed as an optative (Rassadin 2010: 35). This future expresses actions that can happen or that the speaker wants to happen.

(236) *men al-ɣay men*
 PRO:1SG take-FUT 1SG
 'I may take.'

(Rassadin 2010: 35)

The past tense is divided into three tenses. The first past tense is the remote past *-KÄn*. Actions expressed by this suffix are started in the past and because they are remote in the past, the actions are often finished before the moment of speech. Therefore, this past can also have a perfective reading (Rassadin 2010: 34), which is also reflected in the translation of example (237).

(237) *sen ħiläöp sa^ht-ip al-ɣan sen*
 PRO:2SG bread sell-GER take-REM 2SG
 'You had bought bread.'

(Rassadin 2010: 34)

The recent past *-DI* also denotes that the speaker was an eye-witness of the action in the past. This past tense has pronominal markers attached to the verb. So in contrast to the rest of the TAM suffixes, *-DI* triggers pronominal markers suffixes (238; full paradigm can be found in section 5.2.2. *Verbal Morphology*).

(238) *men nom nomči-di-m*
 PRO:1SG book read-REC-1SG
 'I read the book.'

(Rassadin 2010: 34)

The last past tense, marked by the suffix *-Čik*, is used to emphasize the evidence and trustworthiness of the action for the speaker (Rassadin 2010: 34). In this thesis, it will be glossed with evidential past. The following example shows that the verbal action *al* 'take' is deduced from what the speaker saw himself.

(239) *men al-džik men*
 PRO:1SG take-EVIP 1SG
 'I took' (... because it is visible I took it)

(Rassadin 2010: 34)

The biggest difference with Tuvan is the presence of the present tense and the evidential past. On the other hand, there are many similarities with Tuvan, such as the distribution of the pronominal markers and the form of the tense markers.

Aspect

There are four aspects in Soyot: the perfective, imperfective, inchoative and continuous aspect (Rassadin 2010: 26, 33).

The perfective aspect can be formed by the suffix *-(l)vt* (240a) or by the suffix *-(l)p* and the auxiliary *kaβ* or *kaavit*, which has the meaning ‘discontinue’ (240b; Rassadin 2010: 26).

- (240) a. *bar-ivit-qan* b. *utt-up* *kaa-vit-qan*
 leave-PFV-REM forget-GER AUX-PFV-REM
 ‘He left.’ ‘He forgot.’

(Rassadin 2010: 26)

The imperfective aspect is constructed by the suffix *-(l)p* and the auxiliaries *turi*, *čoori*, *čičiri* or *oliri*. Tense is marked on the auxiliary (Rassadin 2010: 26). Example (241) shows the remote past marked on the auxiliary.

- (241) *bo* *čiliŋ* *aħam* *ol* *taγva-da* *aŋna-p* *tur-βan*
 PROX year older.brother MED taiga-LOC hunt-GER AUX-REM
 ‘This year my older brother has hunted in that taiga.’

(Rassadin 2010: 26)

Beside the imperfective-perfective opposition, Soyot also has the inchoative and continuous. The inchoative is formed by the suffix *-Ä(l)* and the auxiliary *ber* (Rassadin 2010: 26).

- (242) *suβ* *ħayn-i* *ber-di*
 water boil-INCH AUX-REC
 ‘The water began to boil.’

(Rassadin 2010: 26)

The continuous is not described in the section of aspects in the grammar of Rassadin. However, the continuous is visible in the present tense. The present tense also has a continuous meaning, whereas the non-past does not have that reading. As can be seen in example (243), the construction resembles the present tense construction with *-y duri*.

- (243) *uriβ* *iβla-y* *duri*
 child cry-CONT AUX
 ‘The child is crying.’

(Rassadin 2010: 33)

Soyot lacks a cessative and a resultative. The latter is merged with the past tense. The continuous has a stronger present tense reading than the continuous in Tuvan, which lacks a proper present tense.

Mood

The conditional mood is marked by the suffix *-sÄ* (Rassadin 2010: 37). The pronominal markers are the suffixes that also can be found in the recent past (*-m* in example 244).

- (244) *bir.emäs men kel-se-m tuš-qay bis*
if PRO:1SG come-COND-1SG meet-FUT 1PL
'If I come, we will meet.'

(Rassadin 2010: 37)

Closely related in meaning and construction to the conditional, is the concessive mood. The concessive mood is formed by the conditional suffix and the particle *ta* (Rassadin 2010: 38).

- (245) *men kel-se-m ta sen bilä duč-ip šida-vas men*
PRO:1SG come-COND-1SG CONC PRO:2SG with meet-GERcan-NEG 1SG
'Although I will come, I cannot meet you.'

(Rassadin 2010: 38)

The subjunctive mood is formed by the non-past and the particle *iik* (246a) or infinitive and auxiliary *ergän* (246b).

- (246) a. *sen kel-se-ŋ bis tuč-ar iik bis*
PRO:2SG come-COND-2SG PRO:1PL meet-NPST PTCL 1PL
'If you had come, we would have met.'
- b. *men ke-er ergän men*
PRO:1SG come-INF SJV 1SG
'I would have come.'

(Rassadin 2010: 38)

Optative mood resembles the future tense. Example (236) shows the optative mood.

The desiderative mood is expressed through the suffix *-(I)KsE* (Rassadin 2010: 30). The grammar does not give a phrasal example. The example below shows the verbal stem in combination with the desiderative suffix.

- (247) *al-* 'take' *al-iqsa* 'want to take'

(Rassadin 2010: 30)

The last Soyot mood that will be discussed in this section is the imperative mood. The second person singular imperative is the bare verbal stem (248a). The second person plural is marked by the plural suffix (248c; Rassadin 2010: 29). As in Tuvan, the first and third person imperative forms express a hortative meaning (248b and 248d).

- (248) a. *kel* b. *kel-iyım* c. *kel-iŋär* d. *kel-sin*
come come-1SG.IMP come-2PL.IMP come-3SG.IMP
'Come! (SG)' 'Let me come!' 'Come! (PL)' 'Let him come.'

(Rassadin 2010: 29-30)

(252) <i>al-</i> ‘take’	<i>al-dir</i> ‘to make someone take’
<i>ko^ʁrt-</i> ‘fear’	<i>ko^ʁrč-it</i> ‘frighten’
<i>a^ʁk-</i> ‘flow’	<i>a^ʁč-is</i> ‘pour’

(Rassadin 2010: 28)

It is possible to use more than one causative suffix on the verb (Rassadin 2010: 28). Judging from the example below, it seems that double causative marking is used to transitive the intransitive verb and then, with a second causative, make the new transitive verb a causative verb.

(253) <i>či-</i> ‘eat’	<i>či-dir-t</i> ‘to feed, give to eat’
<i>öl-</i> ‘die’	<i>öl-ir-t</i> ‘to make someone kill’

(Rassadin 2010: 28)

5.2.2.5 Participles and gerunds

The grammar of Rassadin describes two participles, the past participle *-Ken* and the non-past participle *-Ir/Är* (Rassadin 2010: 24). The example below shows verbal stem when the participles are attached.

(254) <i>al-</i> ‘take’	<i>al-van</i> ‘taken’
	<i>al-ir</i> ‘the one who takes’

(Rassadin 2010: 24)

As in Tuvan, Soyot has many suffixes, such as *-(l)p*, *-KÄš* and *-Ä*, to form gerunds and various can be found in previous examples since the gerunds can be used for expressing TAM. The consequences for the syntax when the participles and gerunds are used will be discussed in the section 5.3.2.2 *Subordination*.

5.2.2.6 Modals

Three modals, *ħentig* ‘it seems’ (255a), *ħeräktiv* ‘it is needed’ (255b) and *yostiv/yos(i)liv* ‘must’ (255c) are discussed in the grammar, but going through the grammar another modal, *šida-* ‘can’ (255d, repeated from 245), was found in the examples. The modals *yostiv/yos(i)liv* and *šida-* function as a verb. Modal *ħentig* needs an auxiliary, but then also functions as a verb. *ħeräktiv* seems to be a fossilized verb which takes a subordinate clause. The following examples exhibit clauses with the discussed modals.

(255) a. <i>am</i>	<i>ča^s</i>	<i>ča-ar</i>	<i>ħentig</i>	<i>turi</i>
	now	rain	rain-INF	seems AUX
	‘It seems that it will soon rain.’			

b. <i>sii-ge</i>	<i>ava</i>	<i>dil-iŋ</i>	<i>öören-ir</i>	<i>ħeräktiv</i>
	PRO:2SG-DAT	mother	tongue-2SG.POSS	learn-NPST necessary
	‘You have to learn your mother tongue.’ (lit. ‘It is necessary to learn your mother tongue.’)			

c. *men ħün bolkan udu-ur-im beʿt-i-n-dä em iš-är*
 PRO:1SG day every sleep-NPP-1SG.POSS before-3.POSS-LK-LOC medicine drink-NPST

yosti *men*

must 1SG

‘Every day before going to bed, I have to take medicine.’

(Rassadin 2010: 43)

d. *men kel-se-m ta sen bilä duč-ip šida-vas men*
 PRO:1SG come-COND-1SG CONC PRO:2SG with meet-GER **can**-NEG 1SG

‘Although I will come, I cannot meet you.’

(Rassadin 2010: 38)

5.2.2.7 Negation

Soyot has a wide range of negation suffixes. The construction and position of the verb and the same as in Tuvan. However, the variety of negation suffixes is broader than in Tuvan. The suffix *-BEs* is used for the negation of the subjunctive, non-past and non-past participle. *-BEE*n is used in the remote past and to negate the particle *iik*. The future and optative are negated through *-BEE*y. Gerunds and the present tense have the suffix *-biyn* (256a), except for the gerund with the perfective meaning, which takes *-BEE*š. All other TAMs, such as the desiderative, conditional, past participle, recent past, evidential past and imperative, are negated by *-BE* (256b-c). The following examples show a few varieties of negation suffixes.

(256) a. *men nom qııır-biyn turi men*
 PRO:1SG book read-NEG AUX 1SG
 ‘I am not reading the book.’

(Rassadin 2010: 32)

b. *ol kiši kör-vä-sä lä*
 MED person see-NEG-COND DES
 ‘If only that man would not see that.’

(Rassadin 2010: 30)

c. *kel-bä-när*
 come-NEG-PL
 ‘Do not come! (PL)’

5.3 Syntax

This section will be about basic Soyot syntax. The grammar does not discuss syntax extensively, so a major part of the description of Soyot syntax is based on my own observations on texts and examples. Soyot has nominative-accusative alignment. This is found in all phrases and word classes.

5.3.1 Word order

In Soyot, the basic word order of a simple clause is Subject-Object-Verb (257). Since there is no example of a ditransitive sentence, it is not possible to say something about the position of the indirect object. However, looking at Tuvan and Dukha, it could be that the indirect object has the same location in the sentence and is placed before the direct object.

- (257) *uriv qis oynaašqin al-dı*
 child girl toy take-REC
 S O V
 ‘The girl took her doll.’

(Rassadin 2010: 27)

Complex clauses seem to have the same word order as in Tuvan, which means that the subordinate clause is embedded in the main clause. The example below shows an embedded subordinate clause (the clause with ‘hear’) and within the subordinate clause, another clause (the clause with the first ‘say’) is subordinated (my brackets).

- (258) *[[biyä kiši diŋna-p olir-ar-va] in’dža didž-ip tur-ar bol-gan]*
 then person hear-GER AUX-NPP-DAT that.much say-GER AUX-NPP AUX-PP
 S_{main} V_{sub} V_{sub}
hamni džala-ar didž-ir bol-vaŋ]
 shaman invite-NPP say-NPST AUX-REM
 O_{main} V_{main}
 ‘He invited the shaman after/because he heard that it was often said.’²⁸

(Rassadin 2010: 54)

5.3.2 Conjunction

Conjunction can be achieved through gerunds, participles, and conjunctions. The scarce data suggests that conjunction works like in Tuvan. If this is correct, it means that this is also one of the most diverse parts of Soyot grammar.

5.3.2.1 Coordination

Coordination of verb phrases is achieved through gerunds. The following example has two coordinations and both are expressed by the suffix *-(l)p*.

- (259) *[[[čičiħälä-p] kel-dir-gän bod-ı-n-dan aray burin] eerän]*
 go.straight-GER come-CAUS-REM body-3.POSS-LK-ABL just before amulet
ša’s-ı-n-a e’sir kel-ip qon-vaš] bod-ı-n-gidı göö-r]
 middle-3.POSS-LK-DAT eagle come-GER spend.night-GER body-3.POSS-LK-ALL see-INF
bol-vaŋ]
 AUX-REM

‘He saw himself that the eagle had spent the night and that it had flown to the middle of the amulet, just before he let [it] go from him and let it go straight away.’

(Rassadin 2010: 54)

Coordination of NPs in disjunctive phrases is done by repeating the question word *bE* and the conjunction *azi*, which can be translated by ‘or’.

²⁸ The original translation provided by Rassadin is quite free (‘Then that person heard that it is often said that he/one should invite the shaman.’), so I altered the translation in order to stay closer to the literal meaning of the clauses.

(260) *[[qim baar-i] [men be] [azi sen be]]*
 who go-INT PRO:1SG Q or PRO:2SG Q
 'Who will go, I or you?'

(Rassadin 2010: 43)

NP coordination by 'and' is done through the conjunction *iʰhi* which is also the numeral '2' and can be translated with 'and'. This conjunction follows the second NP of the coordination.

(261) *biyä džaahay aʰt kiši iʰhi čoq bol-ip turı*
 then red horse person two COP.NEG AUX-GER AUX
 'Then the red horse and the man disappeared.'

(Rassadin 2010: 55)

5.3.2.2 Subordination

As already mentioned in section 5.3.1 *Word order*, subordinate clauses are incorporated in the main clause. The verb of the subordinate clause is marked by a gerund or a participle.

5.3.2.2.1 Relative clauses

Relative clauses are formed by participles. The verb of the relative clause is marked by a participle, deriving it into an adjective. The participle takes the place of an adjective in the sentence and, therefore, it is put in front of the noun. The participle does not trigger any other marking since adjectives have no morphology either. The following example shows that relative clauses behave like adjectives. There are three participles (*-mas*, *-qan* and *-iq*) and only one (*-iq*) is translated with an adjective. The other two (*-mas* and *-qan*) are put in a relative clause. However, in Soyot all three participles take the adjective position and behave like the one participle translated with an adjective.

(262) *[[[kiši mim-mas it-qan] aʰt] [[id-iq] aʰt]]*
 person ride-NEG.NPP let.go-PP horse sanctify-PPP horse
 'The horse not ridden by anybody and set free, is a sacred horse.'

(Rassadin 2010: 35)

5.3.2.2.2 Complement and adverbial clauses

Complement clauses can be formed by gerunds and participles. Participles can take cases; gerunds do not take any further morphology. Example (263a, repeated from 258) shows that a participle can take a case. Since this is not elaborated in the grammar, it is difficult to see what the consequences are for the meaning of the clause when a participle is marked by case. In (263b), an example of an adverbial clause is given. Adverbial clauses are marked by gerunds and have no further marking for person, TAM or case. Example (263c) is somewhat strange, for the main clause precedes the subordinate clause. How this should be perceived is not clear.

(263) a. *[[biyä kiši diŋna-p olir-ar-va] in'dža didž-ip tur-ar bol-gan]*
 then person hear-GER AUX-NPP-DAT that.much say-GER AUX-NPP AUX-PP
ħamni džala-ar didž-ir bol-vaŋ]
 shaman invite-NPP say-NPST AUX-REM
 'He invited the shaman after/because he heard that it was often said.'²⁹

(Rassadin 2010: 54)

b. *[[iš-ip či-p tur-vaš] toda ver-gän]*
 drink-GER eat-GER AUX-GER be.full AUX-REC
 'He was full, because he was drinking and eating.'

(Rassadin 2010: 53)

c. *[diŋna-an-im [ħek eʰt-e duri iik]]*
 hear-REM-1SG cuckoo howl-GER AUX PTCL
 'I heard that the cuckoo cuckooed.'

(Rassadin 2010: 35)

5.3.3 Questions

As in Tuvan, content and polar questions in Soyot are both marked, by a question word and an interrogative suffix. The suffix *-(i)* is attached to the interrogative pronoun (264a), whereas the question word *bE* is used for polar questions (264b; Rassadin 2010: 29, 43).

(264) a. *bo džimä kandiŋ-il* b. *ol bar-di ba*
 PROX thing what-INT PRO:3SG leave-REC Q
 'What is this thing?' 'Has he left?'

(Rassadin 2010: 29, 43-44)

5.4 Lexicon

There are a few gaps in the Soyot word list that can be found in *Appendix B*. These include infrequently used basic words, such as 'vomit' and 'stab'. The translations of the words 'seed' and 'fruit' were not found in the data. This gives rise to the question whether the Tuvan languages have a Turkic word for these concepts. However, this question is impossible to answer on the basis of the available data.

The majority of the words in the Soyot list are cognates with the Tuvan words.

(265) Tuvan Soyot
men *men* '1'
üş *üş* 'three'
tar *tar* 'narrow'
čilan *čilan* 'snake'
sorar *sorar* 'suck'

On the other hand, there are some phonological differences with the Tuvan cognates, like the [q] in Soyot, which is found with back vowels, whereas Tuvan would produce a [k]. Pharyngealization is

²⁹ See footnote 28.

mostly found in combination with back vowels or in the context where Tuvan would display low pitch. The next example shows the /k/ in front of a front vowel and /k/ in front of a back vowel. The other two words are examples of pharyngealization in Soyot in combination of a back vowel or the low pitch in Tuvan, which results in a pharyngealized vowel in Tuvan.

(266)	Tuvan	Soyot	
	<i>kiži</i>	<i>kiši</i>	‘person’
	<i>kuš</i>	<i>quʃ</i>	‘bird’
	<i>it</i>	<i>iʔt</i>	‘dog’
	<i>èt</i>	<i>eʔt</i>	‘meat’

One last difference in the phonology of cognates that should be discussed in this section is fortition in Soyot, which can take any form. Soyot shows more devoiced stops, even in intervocalic context, but also the deletion of [y] or fricativization of the glide [y].

(267)	Tuvan	Soyot	
	<i>iyi</i>	<i>iʔhi</i>	‘two’
	<i>miyis</i>	<i>miis</i>	‘horn’
	<i>diskek</i>	<i>tiskek</i>	‘knee’
	<i>dürbüür</i>	<i>tüʔrhüür</i>	‘rub’
	<i>ider</i>	<i>iʔtär</i>	‘push’

Soyot has Mongolian loans in its basic vocabulary. However, there is no pattern to be found as to which parts of the semantic fields or word classes are borrowed. Example (268) shows four instances of different word classes and semantic fields that are borrowed from Mongolian.

(268)	Soyot	Mongolian	Tuvan	
	<i>örgän</i>	<i>örgön</i>	<i>delgem</i>	‘wide’
	<i>dalay</i>	<i>dalay</i>	<i>dalay</i>	‘sea’ ³⁰
	<i>eläsin</i>	<i>els</i>	<i>elezin</i>	‘sand’
	<i>noɣaan</i>	<i>nogoon</i>	<i>nogaan</i>	‘green’

5.5 Discussion

Soyot phonology shows more obstruents than Tuvan phonology and Soyot has the uvular and pharyngeal consonants [q], [ɣ] and [ħ], which are absent in Tuvan. Beside these consonants, Soyot has pharyngealized consonants which are found in minimal pairs, which confirms the phonemic status of these vowels. According to Rassadin, the word-internal vowel harmony rules resemble the rules for Kalmyk (Rassadin 2010: 46), which is a Mongolic language originally spoken in Buryatia.

Soyot morphology has many similarities with Tuvan morphology. For nominal morphology, the biggest differences can be found in the phonology of the suffixes. However, the allative suffix is one of the more significant deviant suffixes (Soyot *-KIdI* vs. Tuvan *-Je*, *-DivE*). In verbal morphology, differences can be found in the absence of the present tense in Tuvan, which, on the other hand, is found in Soyot. The presence of the Soyot third past tense beside the recent past tense and the remote past tense is another difference with Tuvan. It should be mentioned, however, that this third past tense seems to resemble the Tuvan resultative. Furthermore, Soyot only has suffixes. The conditional circumfix in Tuvan is a suffix in Soyot.

The syntax is not described in the grammar by Rassadin (2010). Section 5.3 *Syntax* is based on observations made on the data provided in that grammar. At first sight, it seems that Soyot syntax is

³⁰ Soyot also has a Turkic word for ‘sea’, which is *deŋgis* (cf. Turkish *deniz* ‘sea’).

similar to Tuvan syntax, but the word order of the complex clauses is not the same. Whereas Tuvan tends to embed the subordinate clause in front of the main verb, Soyot at times seems to put the subordinate clause in a sentence-final position. If this is true, this would be very unexpected, for all its surrounding languages have embedded subordinate clauses which precede the verb of the main clause.

The lexicon shows Mongolian influences. This is confirmed by Rassadin, who states in his grammar that “the [Mongolian] loanwords are not connected to a concrete lexical-semantic group, but have penetrated the Soyot lexicon deeply” (Rassadin 2010: 51). The biggest differences with Tuvan can be found in the phonology of the words. In contrast to Tuvan, Soyot tends to fortitize its phonology.

6. Discussion

In this section, the results of the previous sections will be discussed by means of a summarizing table (table 33), which shows the WALS features that were used to compare the languages. I added vowel harmony as a feature, which is not discussed in WALS but is a salient feature of Turkic languages. Features, such as the origin of ‘tea’ are excluded. The same goes for the extensive chapters on negation (143A-G, 144A-Y). I only included the general description of ways in which negation is expressed and the description of the forms of negation following the verb. I chose to exclude all other negation chapters (i.e. the chapters about negation strategies preceding the verb), because it would not make sense to add a list of negation strategies preceding the verb when these are not found in any of the six described languages in this thesis. When a cell is filled with *not found*, this feature is not discussed or found in the grammars used for this thesis.

Structural differences are found in all parts of speech. In phonology, the differences are found in the number of consonants and vowels and, therefore, also in the inventories. The biggest differences are the lack of <ä> in Tuvan and Dukha, which is found in Tofa and Soyot, and the presence of uvular and pharyngeal consonants in all Sayan languages but Tuvan. Furthermore, there is no cohesion concerning pharyngealization (Tofa and Soyot), aspiration (Dukha) or low pitch (Tuvan) of the vowels. On the other hand, the vowel harmony and its conditions are found in all Sayan languages, except for Soyot, which only allows vowel harmony based on the front-back opposition. According to Ragagnin, the pharyngealization, aspiration and low pitch are a fortition process found in the Sayan languages by the influence of Mongolic neighboring languages (Ragagnin 2011: 84). However, Mongolian does not have pharyngeal consonants, nor does it display a more complex consonant inventory. On the other hand, the loss of the rounded-unrounded vowel harmony in Soyot can be explained by Mongolic influence, for Mongolian only has vowel harmony based on the front-back opposition. The origin of <ä> is somewhat ambiguous. Mongolian (and Buryat), Turkish or Russian do not have the <ä> sound. However, the <ä> is found in languages, such as Ket, Uzbek, and Bashkir (Moran et al. 2014). It could be that one of these or other neighboring languages with an <ä> sound have borrowed the vowel to the Sayan languages.

Morphologically, the Sayan languages are quite homogeneous. Deviant differences are found in the allative case. This case is absent in Tofa and the Tuvan suffix (*-Je*, *-DivE*) differs from Dukha and Soyot (*-Kidl*). Tofa also varies from the other Sayan languages in its demonstratives. All other Sayan languages have one demonstrative resembling the third person singular. Tofa has the demonstrative *ol* and the third person singular *oŋ*. However, the paradigms suggest that the two lexemes are related. Furthermore, the way distributives are formed is divided into two scenarios: a suffix (found in Tofa and Soyot) or reduplication (found in Tuvan and Dukha). Other differences can be found in the range of TAMs, which obviously depends on the analysis of the linguist as well. For example, the optative is glossed as a future tense in Tuvan, but as a mood and a tense in Tofa and Soyot, respectively. The allative case is interesting because it is said that it is an areal feature (Anderson 2006: 25), although Tofa does not display this feature. The allative case is also not found in Turkish and Mongolian. If the allative is an areal feature, it could explain why the Sayan languages do not show homogeneity in their allative forms.

The syntactic differences of the Sayan languages are mainly found in word order. Tofa allows the indirect object between the direct object and the verb. Soyot allows for main clauses to precede subordinate clauses. Minor differences are found in the marking of questions. Dukha uses a suffix instead of a question word and Tofa does not seem to mark content questions. The marking of content questions seems to come from Mongolian and it is not found in Turkish. This could explain the content question marking in the Sayan languages, but it also does not make it seem strange that Tofa lacks it. The word order differences are somewhat unexpected. Neither Mongolian nor Turkish show an OXV order nor Noun-Relative order.

The lexicons are more difficult to compare since not all lexicons are complete. For example, the word for fruit is a Mongolian loan in Tuvan. But this cannot be checked with the other languages, for this word was not found in the sources. Overall, Tofa has the smallest number of Mongolian loans. Tuvan, Soyot and Dukha all show Mongolian influences, but Mongolian loans can be found throughout the whole lexicon, not in one particular semantic field. Tofa and Dukha have two words for the 'leg/foot' concept, whereas Tuvan and Soyot have one word to express 'leg/foot'. Furthermore, in Tofa I found the stem *el-* in *eldik* 'mitten'. This shows that Tofa once had a Turkish cognate to express 'hand'. Nowadays, the concept 'hand' is merged with 'arm' and Tofa has only one word, *qol*, to express both.

Although table 33 is quite complete, it does not address the use of auxiliary verbs or participles and gerunds. Nor does this table show that most differences are found in phonology, but that the base of most suffixes and lexemes are more often cognates. The use of auxiliary verbs is not seen in Turkish but is attested in Mongolian. The use of gerunds and participles can be explained by the process described by Theunissen & Türkmen (2005), who argue that Turkish (and the other Turkic languages) did not have TAM markers, but express verbal actions through participles and gerunds. Later on, these suffixes developed into TAM markers (Theunissen & Türkmen 2005: 298). If their hypothesis holds, this can explain the wide extend of use of gerunds and participles in the TAM class. It would mean that the Sayan languages are still in the process of grammaticalization of TAM suffixes.

Another result of this study is the family tree below. This tree is reconstructed by means of the history (discussed in section 1.2 *History of the Tuvan people*). When the Kirgiz started to raid and the Russians asked for *yasak*, the Tuba clan of the Tuvan people left the Tuva Basin and moved to the Altai Republic. This must have happened around 1661. The second split is around 1860 when the Tuva again were submitted to double taxes. The people who wanted to avoid the double tax fled to the Tuba, or to the western side of the Sayan Mountains, where the Russians started to call those Tuvan people Tofa. The Tuva who fled to Buryatia joined the Soyot, who already lived there. The Soyot moved to Buryatia around 1550-1660. This caused a split with the Dukha language. The Dukha stayed in Mongolia and continued their lives. The biggest uncertainty is the common ancestor of the Dukha and Tuvan. It is unknown whether there are more proto-languages or that Tuvan and Dukha share directly a common ancestor which I would call Proto-Sayan. In the tree below I assume the latter, simply because I did not find other (extinct) languages mentioned in the sources.

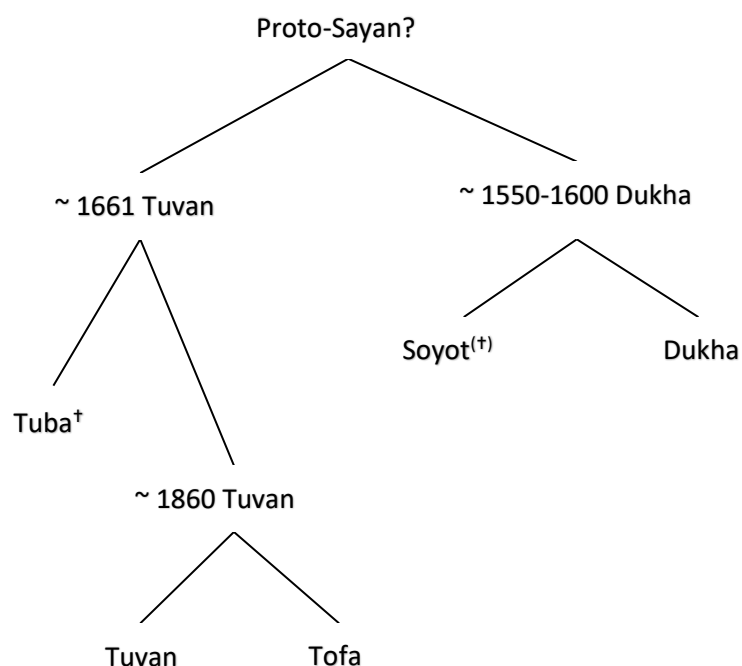


Figure 1: Sayan language tree

Table 33: The Sayan languages, Mongolian and Turkish described according to the WALs features

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Consonant inventories	20 consonants	24 consonants	25 consonants	24 consonants	21 consonants	19 consonants
Vowel quality inventories	8 vowels	9 vowels	8 vowels	9 vowels	8 vowels	6 vowels
Consonant-vowel ratio	2.5 (moderately low)	2.7 (moderately low)	3.1 (average)	2.7 (moderately low)	2.6 (moderately low)	3.2 (average)
Voicing in plosives and fricatives	In both plosives and fricatives	In both plosives and fricatives	In both plosives and fricatives	In both plosives and fricatives	In both plosives and fricatives	In both plosives and fricatives
Voicing and gaps in plosive systems	Absent	Absent	Absent	Absent	Absent	Absent
Uvular consonants	Absent	Uvular stops and continuants	Uvular stops and continuants	Uvular stops and continuants	Absent	Absent
Glottalized consonants	Absent	Absent, but pharyngealized vowels	Absent, but aspirated vowels	Absent, but pharyngealized vowels	Absent	Absent
Lateral consonants	/l/	/l/	/l/	/l/	/l/	/l/
The velar nasal	No initial velar nasal	No initial velar nasal	No initial velar nasal	No initial velar nasal	No velar nasal	No initial velar nasal
Vowel nasalization	Absent	Absent	Absent	Absent	Absent	Absent
Front rounded vowels	High and mid	High and mid	High and mid	High and mid	High and mid	Absent
Syllable structure	Moderately complex	Moderately complex	Moderately complex	Moderately complex	Moderately complex	Moderately complex
Tone	Absent	Absent	Absent	Absent	Absent	Absent
Vowel harmony	Front-back, rounded-unrounded	Front-back, rounded-unrounded	Front-back, rounded-unrounded	Front-back	Front-back, rounded-unrounded	Front-back
Fixed stress locations	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	No fixed stress	No fixed stress
Weight-sensitive stress	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Unbounded	Unbounded
Weight factors in weight-sensitive stress systems	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Lexical stress	Long vowel
Rhythm types	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	No rhythmic stress	No rhythmic stress
Absence of common consonants	All present	All present	All present	All present	All present	All present

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Presence of uncommon consonants	None	None	None	None	None	None
Fusion of selected inflectional formatives	Exclusively concatenative	Exclusively concatenative	Exclusively concatenative	Exclusively concatenative	Exclusively concatenative	Exclusively concatenative
Exponence of selected inflectional formatives	Monoexponential case	Monoexponential case	Monoexponential case	Monoexponential case	Monoexponential case	Monoexponential case
Exponence of Tense-Aspect-Mood	Monoexponential TAM	Monoexponential TAM	Monoexponential TAM	Monoexponential TAM	Monoexponential TAM	Monoexponential TAM
Locus of marking in the clause	Dependent marking	Dependent marking	Dependent marking	Dependent marking	Dependent marking	Dependent marking
Locus of marking in the possessive noun phrase	Double marking	<i>Not found</i>	Double marking	<i>Not found</i>	Double marking	Dependent marking
Locus of marking: whole language typology	Inconsistent marking	Inconsistent marking	Inconsistent marking	Inconsistent marking	Inconsistent marking	Dependent marking
Zero marking of A and P arguments	Non-zero marking	Non-zero marking	Non-zero marking	Non-zero marking	Non-zero marking	Non-zero marking
Prefixing vs. suffixing in inflectional morphology	Strongly suffixing	Strongly suffixing	Strongly suffixing	Strongly suffixing	Strongly suffixing	Strongly suffixing
Reduplication	Productive full and partial reduplication	Productive full and partial reduplication	Productive full and partial reduplication	Productive full and partial reduplication	Productive full and partial reduplication	Productive full and partial reduplication
Case syncretism	No syncretism	No syncretism	No syncretism	No syncretism	No syncretism	No syncretism
Syncretism in verbal person/number marking	No syncretism, sometimes 3SG = 3PL	No syncretism, sometimes 3SG = 3PL	No syncretism, sometimes 3SG = 3PL	No syncretism, sometimes 3SG = 3PL	No syncretism, sometimes 3SG = 3PL	No person marking
Number of genders	None	None	None	None	None	None

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
System of gender assignment	No gender	No gender	No gender	No gender	No gender	No gender
Coding of nominal plurality	Plural suffix	Plural suffix	Plural suffix	Plural suffix	Plural suffix	Plural suffix
Occurrence of nominal plurality	All nouns	All nouns	All nouns	All nouns	All nouns	All nouns
Plurality in independent personal pronouns	Person stem + nominal plural suffix	Person stem + nominal plural suffix	Person stem + nominal plural suffix	Person stem + nominal plural suffix	Person stem + nominal plural suffix	Person stem + nominal plural suffix
The associative plural	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Associative same as additive plural	Associative same as additive plural
Definite articles	Only indefinite article	Only indefinite article	Only indefinite article	Only indefinite article	Only indefinite article	No definite article
Indefinite articles	Indefinite article same as '1'	Indefinite article same as '1'	Indefinite article same as '1'	Indefinite article same as '1'	Indefinite article same as '1'	No indefinite article
Inclusive/exclusive distinction in independent pronouns	No inclusive/exclusive	No inclusive/exclusive	No inclusive/exclusive	No inclusive/exclusive	No inclusive/exclusive	Inclusive/exclusive
Inclusive/exclusive distinction in verbal inflection	No inclusive/exclusive	No inclusive/exclusive	No inclusive/exclusive	No inclusive/exclusive	No inclusive/exclusive	No person marking
Distance contrasts in demonstratives	Three-way contrast	Three-way contrast	Three-way contrast	Three-way contrast	Three-way contrast	Two-way contrast
Pronominal and adnominal demonstratives	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Different inflection	Different inflection
Third person pronouns and demonstratives	Identical	Related	Identical	Identical	Identical	Related

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Politeness distinctions in pronouns	Binary politeness distinction	Binary politeness distinction	Binary politeness distinction	Binary politeness distinction	Binary politeness distinction	Binary politeness distinction
Indefinite pronouns	Interrogative-based indefinites	Interrogative-based indefinites	Interrogative-based indefinites	Interrogative-based indefinites	Generic-noun-based	Interrogative-based indefinites
Intensifiers and reflexive pronouns	Identical	Identical	Identical	Identical	Identical	Identical
Person marking on adpositions	Pronouns and nouns	Pronouns and nouns	Pronouns and nouns	Pronouns and nouns	Pronouns and nouns	No person marking
Number of cases	7 cases	6 cases	7 cases	7 cases	6 cases	7 cases
Asymmetrical case-marking	Symmetrical	Symmetrical	Symmetrical	Symmetrical	Symmetrical	Symmetrical
Position of case affixes	Case suffixes	Case suffixes	Case suffixes	Case suffixes	Case suffixes	Case suffixes
Comitatives and instrumentals	Identical	Identical	Identical	Identical	Identical	Different
Ordinal numerals	<i>Not found</i>	One-th, two-th, three-th	Different	Different	First/one-th, two-th, three-th	First/one-th, two-th, three-th
Distributive numerals	Reduplication	Marked by suffix	Reduplication	Marked by suffix	Marked by suffix	Marked by suffix
Numeral classifiers	Absent	Absent	Absent	Absent	Absent	Absent
Conjunctions and universal quantifiers	Formally different	Formally different	Formally different	Formally different	Formally different	Formally similar; interrogatives
Position of pronominal possessive affixes	Possessive suffixes	Possessive suffixes	Possessive suffixes	Possessive suffixes	Possessive suffixes	Possessive suuffixes
Obligatory possessive inflection	Absent	Absent	Absent	Absent	Absent	Absent
Number of possessive nouns	None	None	None	None	None	None
Possessive classification	No possessive classification	No possessive classification	No possessive classification	No possessive classification	No possessive classification	No possessive classification

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Genitives, adjectives and relative clauses	High differentiation	High differentiation	High differentiation	High differentiation	High differentiation	High differentiation
Adjectives without nouns	Without marking	Without marking	Without marking	Without marking	Without marking	Without marking
Action nominal constructions	Possessive-accusative	Possessive-accusative	Possessive-accusative	Possessive-accusative	Possessive-accusative	Possessive-accusative
Noun phrase conjunction	'and' identical to 'with'	'and' different from 'with'	'and' different from 'with'	'and' different from 'with'	'and' different from 'with'	'and' different from 'with'
Nominal and verbal conjunction	Different	Different	Different	Different	Different	<i>Not found</i>
Perfective/imperfective aspect	Grammatical marking	Grammatical marking	Grammatical marking	Grammatical marking	Grammatical marking	No grammatical marking
The past tense	Past/non-past distinction; 2 degrees of remoteness	Past/non-past distinction; 2 degrees of remoteness	Past/non-past distinction; 2 degrees of remoteness	Past/non-past distinction; 2 degrees of remoteness	Past/non-past distinction; no remoteness	Present; no remoteness
Future tense	Inflectional future	Inflectional future	Inflectional future	Inflectional future	Inflectional future	No inflectional future
The perfect	No perfect	No perfect	No perfect	No perfect	No perfect	Other perfect
Position of Tense-Aspect affixes	Tense-aspect suffixes	Tense-aspect suffixes	Tense-aspect suffixes	Tense-aspect suffixes	Tense-aspect suffixes	Tense-aspect suffixes
The morphological imperative	Second singular and second plural	Second singular and second plural	Second singular and second plural	Second singular and second plural	Second singular and second plural	Second person number neutral
The prohibitive	Normal imperative + special negative	Normal imperative + special negative	Normal imperative + special negative	Normal imperative + special negative	Normal imperative + normal negative	Normal imperative + special negative
Imperative-hortative systems	Neither type of system	Neither type of system	Neither type of system	Neither type of system	Maximal system	Maximal system
The optative	Absent	Present	Absent	Present	Absent	Present
Situational possibility	Verbal constructions	Verbal constructions	Verbal constructions	Verbal constructions	Verbal suffixes	Verbal constructions
Epistemic possibility	Verbal constructions	Verbal constructions	Suffix on the verb	Verbal constructions	Verbal suffixes	Other
Overlap between situational and epistemic modal marking	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Overlap	No overlap

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Semantic distinctions in evidentiality	Indirect only	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Direct and indirect	Direct and indirect
Coding of evidentiality	Mixed	Part of the tense system	Part of the tense system	Part of the tense system	Part of the tense system	Mixed
Suppletion according to Tense and Aspect	Tense	Tense	Tense	Tense	Tense	None
Suppletion in imperatives and hortatives	Imperative	Imperative	Imperative	Imperative	None	None
Verbal number and suppletion	None	None	None	None	None	None
Order of Object and Verb	SOV	SOV	SOV	SOV	SOV	SOV
Order of Object, Oblique and Verb	XOV	XOV (OXV)	XOV	XOV	XOV	XOV
Order of adjective and noun	Adjective-noun	Adjective-noun	Adjective-noun	Adjective-noun	Adjective-noun	Adjective-noun
Order of demonstrative and noun	Demonstrative-noun	Demonstrative-noun	Demonstrative-noun	Demonstrative-noun	Demonstrative-noun	Demonstrative-noun
Order of numeral and noun	Numeral-noun	Numeral-noun	Numeral-noun	Numeral-noun	Numeral-noun	Numeral-noun
Order of relative clause and noun	Relative clause-noun	Relative clause-noun	Relative clause-noun	Relative clause-noun	Relative clause-noun	Relative clause-noun
Prenominal relative clauses	Relative clause-noun dominant	Relative clause-noun dominant	Relative clause-noun dominant	Relative clause-noun dominant	Relative clause-noun dominant	Relative clause-noun dominant
Postnominal relative clauses	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>
Internally-headed relative clauses	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>
Order of degree word and adjective	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Degree word-adjective	Degree word-adjective

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Order of adverbial subordinator and clause	Subordinating suffix	Subordinating suffix	Subordinating suffix	Subordinating suffix	Mixed	Final subordinator word
Relation between the order of Object and Verb and the order of adpositions and noun phrase	OV and postpositions	OV and postpositions	OV and postpositions	OV and postpositions	OV and postpositions	OV and postpositions
Relationship between the order of Object and Verb and the order of relative clause and noun	OV and RelN	OV and RelN	OV and RelN	OV and RelN	OV and RelN	OV and RelN
Relationship between the order of Object and Verb and the order of adjective and noun	OV and AdjN	OV and AdjN	OV and AdjN	OV and AdjN	OV and AdjN	OV and AdjN
Alignment of case marking full noun phrases	Nominative-accusative	Nominative-accusative	Nominative-accusative	Nominative-accusative	Nominative-accusative	Nominative-accusative
Alignment of case marking of pronouns	Nominative-accusative	Nominative-accusative	Nominative-accusative	Nominative-accusative	Nominative-accusative	Nominative-accusative
Alignment of verbal person marking	Accusative	Accusative	Accusative	Accusative	Accusative	Accusative
Expression of pronominal subjects	Subject suffixes/markers on verb	Subject suffixes/markers on verb	Subject suffixes/markers on verb	Subject suffixes/markers on verb	Subject suffixes on verb	No person marking
Third person zero of verbal person marking	Zero in 3sg	Zero in 3sg	Zero in 3sg	Zero in 3sg	Zero in 3sg	No person marking

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Ditransitive constructions: the verb 'give'	Indirect-object construction	Indirect-object construction	Indirect-object construction	Indirect-object construction	Indirect-object construction	Indirect-object construction
Reciprocal constructions	Distinct from reflexive	Distinct from reflexive	Distinct from reflexive	Distinct from reflexive	Distinct from reflexive	Distinct from reflexive
Passive constructions	Present	Present	Present	Present	Present	Present
Antipassive constructions	No antipassive	No antipassive	No antipassive	No antipassive	No antipassive	No antipassive
Productivity of the antipassive construction	No antipassive	No antipassive	No antipassive	No antipassive	No antipassive	No antipassive
Applicative constructions	No applicative	No applicative	No applicative	No applicative	No applicative	No applicative
Other roles of applied objects	No applicative	No applicative	No applicative	No applicative	No applicative	No applicative
Periphrastic causative constructions	Purposive but no sequential	Purposive but no sequential	Purposive but no sequential	Purposive but no sequential	Purposive but no sequential	<i>Not found</i>
Nonperiphrastic causative constructions	Morphological	Morphological	Morphological	Morphological	Morphological	Morphological
Negative morphemes	Negative suffix	Negative suffix	Negative suffix	Negative suffix	Negative suffix	Negative suffix
Symmetric and asymmetric standard negation	Both	Both	Both	Both	Both	Both
Subtypes of asymmetric standard negation	Verbal category	Verbal category	Verbal category	Verbal category	Verbal category	Verbal category
Negative indefinite pronouns and predicate negation	Predicate negation also present	Predicate negation also present	Predicate negation also present	Predicate negation also present	Predicate negation also present	<i>Not found</i>

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
Polar questions	Question particle	Question particle	Question suffix	Question particle	Question particle	Question particle
Predicative possession	Locational/genitive	Genitive	Locational/genitive	Genitive	Genitive	Locational
Predicative adjectives	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Non-verbal	Non-verbal
Nominal and locational predication	Identical	Identical	Identical	Identical	Identical	Identical
Zero copula for predicate nominals	<i>Not found</i>	Possible	<i>Not found</i>	<i>Not found</i>	Possible	Possible
Comparative constructions	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Locational	Locational
Relativization on Subjects	Gap	Gap	Gap	Gap	Gap	Gap
Relativization on Obliques	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Gap	Gap
'want' complement subjects	Desiderative verbal suffix	Desiderative verbal suffix	Desiderative verbal suffix	Desiderative verbal suffix	Verbal construction; subject left implicit	<i>Not found</i>
Purpose clauses	Deranked	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Deranked	Deranked
'when' clauses	Deranked	Deranked	<i>Not found</i>	<i>Not found</i>	Deranked	Deranked
Reason clauses	Deranked	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Balanced/deranked	<i>Not found</i>
Utterance complement clauses	<i>Not found</i>	<i>Not found</i>	Balanced	Balanced	Balanced/deranked	<i>Not found</i>
Hand and arm	Identical	Identical	Identical	Identical	Different	Identical
Finger and hand	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	<i>Not found</i>	Different	Different
Numeral bases	Decimal	Decimal	Decimal	Decimal	Decimal	Decimal
M-T pronouns	M-T pronouns, paradigmatic	M-T pronouns, paradigmatic	M-T pronouns, paradigmatic	M-T pronouns, paradigmatic	M-T pronouns, paradigmatic	M-T pronouns, paradigmatic
M in first person singular	M in first person singular	M in first person singular	M in first person singular	M in first person singular	M in first person singular	M in first person singular
N-M pronouns	No N-M pronouns	No N-M pronouns	No N-M pronouns	No N-M pronouns	No N-M pronouns	No N-M pronouns

Features	Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian
M in second person singular	No M in second person singular	No M in second person singular	No M in second person singular	No M in second person singular	No M in second person singular	No M in second person singular
Order of negative morpheme and verb	VNeg	VNeg	VNeg	VNeg	VNeg	VNeg
Preverbal negative morphemes	None	None	None	None	None	None
Postverbal negative morphemes	VNeg	VNeg	VNeg	VNeg	VNeg	VNeg

7. Conclusion

Although the Tuvan have lived in isolation for centuries, this does not mean that the Tuvan did not have contact with the Mongols, Chinese or the Russians. Moreover, during the nineteenth century, the Tuvan were obliged to pay taxes to the Russians and the Chinese. This caused the Tofa to flee to the Irkutsk Oblast' and, thus, fall outside the Mongolian sphere of influence. The Tofa lived in relative isolation and preserved their language quite well. The Tuba who fled earlier to the Altai Republic assimilated to the Altai and their original Tuba language died out. The Soyot and Dukha lived in the northwestern part of Mongolia. The Soyot, at some point in the history, moved to Buryatia, where most of them adapted to the Buryat. Their language became extinct in the second half of the twentieth century. The Dukha were sent to Russia over and over by the Mongols but simply moved back once they were relocated in the Tuva Republic. The Dukha language is moribund, but because the Dukha culture is unique in Mongolia and is getting more and more attention, the Dukha have a more positive attitude towards their language.

In the chapters following the introduction, the grammars of Tuvan, Tofa, Dukha, and Soyot were discussed. The four languages have a Turkic base, but Mongolian influences cannot be denied. Differences amongst the Sayan languages can be found in all parts of the grammar, but Tofa seems to be the most deviant. It has fewer Mongolian loans, it has some auxiliary verbs, but they are not as widespread as in Tuvan, Soyot or Dukha. These results lead to some historical implications. Tofa has less Mongolian influences, so this could mean that the Mongolian influence on the other Sayan languages became strong after the Tofa left the Tuva Basin in the second half of the nineteenth century.

The linguistic vitality of the Sayan languages can be explained by two interdependent conditions. The first is the number of speakers. Tuvan has the biggest number of speakers (about 400,000 vs. several hundred or less for the other languages). The other factor is isolation. The Tuva remained isolated and autonomous in the second half of the twentieth century, whereas the other Sayan peoples were forced to integrate and assimilate to the Mongols or Russians. However, isolation cannot be seen as the sole factor of survival of the Sayan languages, since the Tofa have lived relatively isolated as well, but their language is moribund anyway. The small number of Tofa speakers is an accelerative contributor to the decline of the language. It did not take many Tofa to shift to Russian to cause the Tofa language to become moribund.

Further research

During this research, it became clear that I could have looked at many more subjects. Due to space and time limits and relevance, this was not always possible. Not all Sayan languages are fully described. For example, the syntax of Dukha and Soyot is not described in the existing grammars. Furthermore, there is no lexicon or dictionary of the Dukha language. Tuba is not described at all and could be reconstructed with the data of the other Sayan languages. The data of especially Tofa and Tuvan can be used to reconstruct Tuba: Tuvan for its more western Sayan features and Tofa because it shows the Turkic language before the Mongolian influences on Tuvan. This can help to reconstruct the Turkic grammar of the language, whereas Tuvan can be used to reconstruct the western Sayan phonology of the Tuba language.

On the grammar level, evidentiality and the suffix *-Dir* could be studied more profoundly. Both phenomena are not or poorly described in the existing grammars. Furthermore, the meaning and use of many participles, like *iik* (Soyot), *la* (Tuvan, Dukha), *tE* (Tofa) is not clear.

In section 6. *Discussion*, I mentioned the hypothesis of Theunissen and Türkmen. They argue that the origin of the TAM markers in Turkish lies in the suffixes of the participles and gerunds. It seems that this is also the case for the Sayan languages, but they appear to be in the middle of the process. This is seen in the use of gerunds in TAM expressions in the Sayan languages, whereas Turkish hardly displays gerund constructions to express TAM, but at the same time, the Turkish TAMs are derived

from the gerund and participle suffixes and are grammaticalized as TAM markers. The Sayan process of grammaticalization of gerund and participle constructions into TAM markers could also be a topic for further research.

Another loose end is the difference between gerunds and participles. Although the morphological differences are clear (no further morphology or person and case marking), it is not always clear when and why gerunds are used and the same goes for participles. My theory is that participles are used when the subject of a subordinate clause is different from the subject of the main clause and that gerunds are used for same subjects in both the subordinate clause and main clause. However, I did not test this theory, so this could be done in another study.

The last recommendation is for Soyot and Dukha. Both languages do not have an ISO-code and are not registered in Ethnologue or Glottolog. Registration would help with the awareness for and recognition of these languages. Besides, it will become clearer what research has already been done and what research can still be done.

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Appendices

Appendix A: WALs features used to describe Tuvan, Tofa, Dukha, and Soyot

Appendix B: Comparative lexicon of Tuvan, Tofa, Soyot, Dukha, Mongolian, and Turkish

Appendix A: WALS features used to describe Tuvan, Tofa, Dukha, and Soyot

Features

Consonant inventories
Vowel quality inventories
Consonant-vowel ratio
Voicing in plosives and fricatives
Voicing and gaps in plosive systems
Uvular consonants
Glottalized consonants
Lateral consonants
The velar nasal
Vowel nasalization
Front rounded vowels
Syllable structure
Tone
Fixed stress locations
Weight-sensitive stress
Weight factors in weight-sensitive stress systems
Rhythm types
Absence of common consonants
Presence of uncommon consonants
Fusion of selected inflectional formatives
Exponence of selected inflectional formatives
Exponence of Tense-Aspect-Mood
Locus of marking in the clause
Locus of marking in the possessive noun phrase
Locus of marking: whole language typology
Zero marking of A and P arguments
Prefixing vs. suffixing in inflectional morphology
Reduplication
Case syncretism
Syncretism in verbal person/number marking
Number of genders
System of gender assignment
Coding of nominal plurality
Occurrence of nominal plurality
Plurality in independent personal pronouns
The associative plural
Definite articles
Indefinite articles
Inclusive/exclusive distinction in independent pronouns
Inclusive/exclusive distinction in verbal inflection
Distance contrasts in demonstratives
Pronominal and adnominal demonstratives
Third person pronouns and demonstratives
Politeness distinctions in pronouns
Indefinite pronouns
Intensifiers and reflexive pronouns
Person marking on adpositions
Number of cases

Asymmetrical case-marking
Position of case affixes
Comitatives and instrumentals
Ordinal numerals
Distributive numerals
Numeral classifiers
Conjunctions and universal quantifiers
Position of pronominal possessive affixes
Obligatory possessive inflection
Number of possessive nouns
Possessive classification
Genitives, adjectives and relative clauses
Adjectives without nouns
Action nominal constructions
Noun phrase conjunction
Nominal and verbal conjunction
Perfective/imperfective aspect
The past tense
Future tense
The perfect
Position of Tense-Aspect affixes
The morphological imperative
The prohibitive
Imperative-hortative systems
The optative
Situational possibility
Epistemic possibility
Overlap between situational and epistemic modal marking
Semantic distinctions in evidentiality
Coding of evidentiality
Suppletion according to Tense and Aspect
Suppletion in imperatives and hortatives
Verbal number and suppletion
Order of Object and Verb
Order of Object, Oblique and Verb
Order of adjective and noun
Order of demonstrative and noun
Order of numeral and noun
Order of relative clause and noun
Prenominal relative clauses
Postnominal relative clauses
Internally-headed relative clauses
Order of degree word and adjective
Order of adverbial subordinator and clause
Relation between the order of Object and Verb and the order of
adpositions and noun phrase
Relationship between the order of Object and Verb and the order of
relative clause and noun
Relationship between the order of Object and Verb and the order of
adjective and noun
Alignment of case marking full noun phrases
Alignment of case marking of pronouns

Alignment of verbal person marking
Expression of pronominal subjects
Third person zero of verbal person marking
Ditransitive constructions: the verb 'give'
Reciprocal constructions
Passive constructions
Antipassive constructions
Productivity of the antipassive construction
Applicative constructions
Other roles of applied objects
Periphrastic causative constructions
Nonperiphrastic causative constructions
Negative morphemes
Symmetric and asymmetric standard negation
Subtypes of asymmetric standard negation
Negative indefinite pronouns and predicate negation
Polar questions
Predicative possession
Predicative adjectives
Nominal and locational predication
Zero copula for predicate nominals
Comparative constructions
Relativization on Subjects
Relativization on Obliques
'want' complement subjects
Purpose clauses
'when' clauses
Reason clauses
Utterance complement clauses
Hand and arm
Finger and hand
Numeral bases
M-T pronouns
M in first person singular
N-M pronouns
M in second person singular
Order of negative morpheme and verb
Preverbal negative morphemes
Postverbal negative morphemes

Appendix B: Comparative lexicon of Tuvan, Tofa, Dukha, Soyot, Mongolian and Turkish

The table below shows the comparative 207-word Swadesh list of the languages that are discussed in this thesis. The lexicons of Tuvan, Tofa, Soyot, and Mongolian come from sources written in a Cyrillic script. This script is transcribed to the Roman script according to the rules used and conventions that are followed in the Roman script grammars.

Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian	English
men	men	men	men	ben	bi	I
sen	sen	sen	sen	sen	či	you (sg.)
ol	oŋ	ol	ol	o		he
bis, bister	bi ^ʕ s	pis, pister	bis, bister	biz	bida, ba	we
siler	siler	siler	siler, silär	siz	ta	you (pl.)
olar	olarıŋ	olar	olar, olarlar	onlar		they
bo	bo	bo	bo	bu	ene	this
doo, oon, oonŋ	de, ol	ol, tee	amdıı, ol, teevär	şu, o	ter	that
mında	mında	mında	maa, maawa, mında	burada	end	here
aŋaa, minaar	ında	ında	deede, teede, ında	şurada, orada	tend	there
kim	qum	gım	qım, gım	kim	ŷen	who
kandıg	čü	džüü	čü, džü	ne	yuu	what
kayda	qayda	gaeda	qayda, čüde, čüdä, džüde, džüdä	nerede	ŷaana	where
kažan	qa ^h hin	ga ^h yan	qa ^h yan	ne zaman	ŷezee	when
kandıg, kančap	qandža	ganža	kan ^h dža(n)	nasıl	yaaž	how
-BE, čok	-BE, emes	-BE, emes	-bE, čok	değil, -me, -ma	-gÜy, -BEI	not
xamik, bügü	barša, tödö	hamək	barša, bügedä, tödi	hep, bütün	büŷ	all
xöy, kövey, enderik	bla, kö ^h p	gö ^h p	kö ^h häy, kö ^h p, kö ^h fäy	çok	olon, iy	many
kaš, čamdık		žamdək	bir če ^h hä, bir ka ^h š	biraz, birkaç, bazı	zarim	some
bičii, eveeš	biče, ebeš		eveš, eväš	az	ŷedŷen	few
baza bir, daraazında, öske	ba ^h ška, öske	öske	ba ^h šqa, ö ^h ske, ö ^h skö	öbür, başka, diğər	öör	other
bir	bir	pir	bir	bir	nigen	one
iyi, ini	ihi	iki, ixə	i ^h hi	iki	qoyar	two

Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian	English
üş	üş	üiř, üüř, üř	üş	üç	γurban	three
dört	dört	döört	dört	dört	dörben	four
beř	beř	beiř, beř, beeř	beř	beř	tabun	five
moçak	uluy, day	uləγ	ulıı	büyük	tom	big
uzun	uzun	uzən	uzun	uzun	urt	long
delgem	alñıγ		örgän, engiri	geniř	örgön	wide
dıγıγ, dıγıγř	ñılım	yoon	nyoon	şıřman, kalın	büdüün	thick
aar	aar	aar	aar	ađır, sert	γünd	heavy
biçe, biçii	biçe	piçčə	biçe, bičä	küçük	žižig	small
kirbey	qısqɑ	gı ^h ska	qı ^h sqa	kısa	nam	short
kızaa, tar, sıgır	dar	t ^h ar	tar	dar	nariyyan	narrow
çinge	çuqa		çinge, çuɣɑ, džuɣɑ	ince	cööγön	thin
kaday	e ^h při	gatay, gaday, ebži	qaday, e ^h při kiři	kadın	emegtey	woman
er kiři (male person)	er	er, er giřə	ařřyaq, er kiři, er	adam	γün	man
kiři	kiři	giřə, gižə	kiři	kiři	γün	man/person
urug	uruy	urəı	urıı	çocuk	γüüγed	child
ög-iřti	qorñınyaq	gatay	qu ^h rñayaq	karı	avgay, aγner	wife
ařak	ařınaq	ařřak	ařřyaq	koca	nöγör	husband
ava, avay	iñe, aba	aba, ike, ixe	ava, i ^h ä	anne, ana	eγ, eež	mother
aça, ada	ada	adža	ata, aça, adža	baba	eceg, aav	father
amıtan		amətan	adıguusin	hayvan	am ^h tan	animal
balık	balıq	paləq	balıq	balık	zagas	fish
kuř	qu ^h ř		qu ^h ř	kuř	řuvuu	bird
ıt	i ^h t	i ^h t	i ^h t	köpek	noγoy	dog
bit	bi ^h t		bi ^h t	bit, pire	böös, řiry	louse
çılın	çılhan	džiłan	uzın-ıu ^h rt, çılın, džiłan	yılan	mogoy	snake
kurt	qu ^h rt	gu ^h rt	qu ^h rt	solucan, kurt (maggot)	öt	worm
ıyař	nyeř	nyeř, yeř	nyař	ağaç	mod	tree
arga, arıg	arıγ		arıı	orman	oy	forest
çipři	dayaq, merbe		tayaq	çubuk, deđnek	savaa	stick

Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian	English
čimis, frukt				meyve, meyva	žims	fruit
ürezin		tarəɣ		tohum	ür	seed
bürü	bür		bür	yaprak	navč	leaf
dazıl, dös	sıldıs, dös	gök	ündäsin	kök	ündes	root
čövüree	čöʷrää	žü ^h həree	čöʷırää	kabuk	ɣoltos	bark (n.)
čeček	aqqaš	dže ^h ček	čiček, čečäk	çiçek	ceceg	flower
òt, sigen	kök, oʷt, sigen	o ^h t ^h , sigen	kök, gök, oʷt, sigen, sigän	çim	övs, nogoo	grass
kanat, xendir, čep	biropka, bag		baɞ	ip	dees, tatlaga, argamž	rope
soyar	tere	ge ^h š	keʷš	deri	arʷs	skin
èt	eʷt	e ^h t	eʷt	et	may	meat
xan	qan	han	qan, gan, ħan	kan	cus	blood
söök	söök	söök	söök	kemik	yas	bone
üs, čag	čay	džaɞ	üs, baarsıq	yağ	ööɣ	fat (n.)
čuurga	nyumurba		čuurħa	yumurta	öndög	egg
miyıs	miis	miis	miis	boynuz	ever	horn
kuduruk	quduruq	gudəru	quduruq, qudurıq, qudıriq	kuyruk	süül	tail
čük	dük	yöök	čaʷħin	tüy	salbar	feather
dük	dük, čeʷs	düg, dük	čaʷš, džaʷš	saç	üs	hair
baš	baʷš	baš	baʷš	baş	tolgoy	head
kulak	qulaq	gulak	qulaq	kulak	čiy	ear
karak	qaraq	garaq	qaraq	göz	nüd	eye
dumčuk, xaay	ħaay		ħaay	burun	ɣamar	nose
aas, aks	aas	aaz, aas	aas	ağız	am	mouth
diš	diš	diš	diš	diş	šidün	tooth
dıl	dıl		dıl, tıl	dil	xel	tongue
dırqak	dırqaq	dirbak	dırqaq	tırnak	ɣums	finger nail
but	but, daman	atak	but	ayak	ɣöl	foot
but	but, daman	but	but	bacak	ɣöl, guya	leg
diskek	boloq		tiskek, tiskäk	diz	övdeg	knee
xol	qol	hol	qol, gol	el	ger	hand

Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian	English
čalgın	hanat		hanat	kanat	dalavč	wing
ižin, xirın	hırın	hırən	hırın	karın, göbek	gedes	belly
möön, šöyündü	baarsıq		šööndi, šööndü	bağırsak	cuvday	guts
moyun	möen	moyn	moyın	boyun	γüzüü	neck
oorga	oorha	oorha	oorha, si ^{rt}	sırt	ar, γoyt	back
xörek, emig	emiy	emey	döš, emiy	göğüs	ceež, γenydeg	breast
čürek	čürek	džürek	čüräk, džüräk	kalp, yürek	zürγ	heart
baar	baar	baar	baar	çiğer	eleg	liver
ižer	iš-	i ^h š-	išär	içmek	uuy	to drink
čiir	či-	ži-	džemnenir, čiir, džiir	ekmek	γoolloy, idey, zoogloy	to eat
izirar	i ^s ir-		i ^s (i)rär	ısırmak	γazay	to bite
sorar, emer (breast)	em-, sor-		sorar	emmek	γöyöγ	to suck
dükpürer, tükpürer	tükkür-		tükkirär	tükürmek	nulimaγ	to spit
kusturari				kusmak	beelziγ	to vomit
ürer, xoradaar	ür-		ürer	öflemek	uleey	to blow
tınar	dın-		tınar	solumak	am'sgalay	to breathe
kattırar			qa ^k kkırar	gülmek	ineey	to laugh
köör	kör-	gör-	köör	görmek	üzey	to see
dıɣnaar	dıɣna-		dıɣnaar	öğrenmek, duymak, işıtmek	duulay, sonsoy	to hear
bilir	bil-	pil-	biir	bilmek	medey, taniγ	to know
bodaar	sagin-	pota-	bodaar, saqtır	düşünmek	bodoγ, sanay	to think
čittaar	čidi-	žit-	čidiir, džidiir, čitsiir	koklamak	uleey	to smell
korgar	qo ^r t-	gor ^h t-		korkmak	ayγ	to fear
uduur	udu-	ud-	uduur	uyumak	untay	to sleep
amidıraar, čurttaar	čerle-	amədära-	čerläär, džerläär	yaşamak	am'dray	to live
ölür	öl-	öl-	öler, öläär	ölmek	üvey, nas baray	to die
ölürer		ölär-	ölirär	öldürmek	alay	to kill
demisežir	so ^q -			çaışmak	bayldaγ, zadaldoy	to fight
aɣnaar, aɣnıir, aɣnaari, aɣnaaškiin	aɣna-	aɣna-	aɣnaar	avlamak, ava çıkmak	agnay	to hunt

Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian	English
šančar, xak-, sok- kezer čarar bižekteer	qa ^ɕ q- diin-, ke ^ɕ s-	ge ^h s-	ke ^ɕ sär čarar	dövmek, vurmak kesmek ayırmak, yarmak saplamak, bıçaklamak	dayray taslay cuulay yurga dürey	to hit to cut to split to stab
dırbak kazar eštir užar čoruur, kılaštaar kelir megeleer, nügüldeer, čidar olur turar	qas- u ^ɕ š- kel- či ^ɕ t- olır- dur-	tırba- gas- u ^h š- gel- dži ^h t- olər- tur-	dırbaar qazar e ^ɕ štir u ^ɕ šar, u ^ɕ h ^ɕ yar qulaštaar, qılaštaar kelir, gelir či ^ɕ tar, džitar olırar turar	kaşınmak kazmak yüzmek uçmak yürümek gelmek yatmak, uzanmak oturmak durmak, kalkmak, dikilmek dönmek	maažiy uğay seley nisey zugaalay irey yevtey suuy zogsoy ergey	to scratch to dig to swim to fly to walk to come to lie (in bed) to sit to stand to turn
dolgaar, dolganır ergiler dužer	eğ- dü ^ɕ š-	tolga- tü ^h š-	dolbaar tü ^ɕ šär, tü ^ɕ här, džaylır, džuılır	düşmek	ynay	to fall
beer tudar kızar, dıkpıžidar dürbүүr čodar čunar čodar, aštaar tırtar söörtür ider, oktaar dažaar, oktaar, šivadaar argıır, baglaar, kızar	ber- tu ^ɕ t- qi ^ɕ s- sürt- ču- čot- moŋ-, ti ^ɕ rt- i ^ɕ t-	per- tu ^h t- dıgo-, ti ^ɕ go- t ^h ürhə- tır ^h t- ga- tak-	beer, bäär tu ^ɕ tar qi ^ɕ sar tü ^ɕ rhүүr čuur čodar tı ^ɕ rtar i ^ɕ tär qozuur baılaar	vermek tutmak sıkmak sürmek, ovmak yıkamak silmek çekmek itmek atmak bağlamak	öröy barıy šayay, yavčiy ürey ugaay arčiy tatay daray yayay, šidey, orıy uyay	to give to hold to squeeze to rub to wash to wipe to pull to push to throw to tie

Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian	English
daaraar	daara-		daaranır	dikmek	oyoy	to sew
sanaar			sanaar	saymak	tooloy	to count
de-, di-, segleer	de-	te-	deer, soodaar	demek, söylemek	geγ, yeley, yemeey	to say
irlaar	irla-	irla-	irlaar	şarki söylemek	duulay	to sing
oynaar	oyna-	oyna-	oynaar, tolgaar	oynamak	togloy	to play
köstüp keer	e ^h in-			yüzmek	dürey	to float
agar, töktür	a ^q -	a ^h k-	a ^q	akmak	yalıy	to flow
doŋar	doŋ-	toŋ-	door	donmak, dondurmak	γöldöoy, carcaay	to freeze
ižar	iš-		išar	şişmek	γabday	to swell
xün	hün	hün	kün, gün	güneş	nar	sun
ay	ay	ay	ay	ay	sar	moon
sıldıs	sıldıs	sıldas	siltıs	yıldız	od	star
sug	suγ	suɤ	sug	su	us	water
čaaşkin, čàs	ösken	dža ^h s	ča ^s	yağmur	boroo	rain
xem	hem	hem	hem	nehir, ırmak	gol	river
xöl	höl	höl	höl	göl	nuur	lake
dalay	dalay		dalay, dengis	deniz	dalay	sea
dus	dus	duz	tus	tuz	davs	salt
daš	daš	taš	daš	taş	čuluun	stone
elezin	hum		hum, eläsin	kum	els	sand
doozun	to ^q praq		bulamdži	toz	toos	dust
deviskeer, dovurak, xörzün, čer, čurt	čer		čer, džer	dünya, yer	delyiy	earth
bulut	bulut	bulət	bulıt	bulut	үүл	cloud
tüman	duman		duman	sis	manan	fog
deer	deere, talay	deeri	a ^s sar, a ^s sar-deeri, dündük, deeri, oqtarhiy	gök	tenger	sky
salgin, xat	qat	hat, xat	qat	rüzgâr	salγi	wind
xar	qar	gar	qar	kar	cas	snow
doš	do ^s š	doš	to ^s š	buz	mös	ice
iš	iš	iš	iš	duman	tatay	smoke

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ot	ot	ot, ört	ot	ateş, od	gal	fire
xül		höm (pl.)	ħül	kül	üns, nuram	ash
kıvar, örttedir	adži-	ör ^h te-	adžiř	yakmak, yanmak	galday	to burn
oruk	oruq	orəq	oriq	yol	zam	road
dağ	day	daɞ	daɞ	dağ	uul	mountain
kızıl	qızıl	gısəl	qızıl	kızıl, kırmızı	ulaan	red
nogaan	kök, şanzır	nogaan	noɞaan	yeşil	nogoon	green
sarıg	sarıɣ	sarəɣ	sarıg	sarı	şar	yellow
ak	aq	ag	aq	ak, beyaz	cagaan	white
kara	qara	gara	qara	kara, siyah	ɣar	black
dün, düne	dün	dün	dünnä, tün, tünnä	gece	şönö	night
xün	ħün	hün	kün, gün	gün	ödör, yonog	day
čil, xar	čil	džıl	čil, džıl	yıl, sene	žil, on	year
čilıg	čilıq	i ^h sıɣ, džaləɞ	čilıɞ, džılıɞ	sıcak, ılık	dulaayın	warm
sook	sooq	sooq	sooq	soğuk, serin	ğüyten, ɣaniad	cold
burun, dolgan, dolu, çetçe	dolu	tolə		dolu	düüren	full
çaa	nyaa	yaa	nyaa	yeni	şine	new
kırgan, xooçun, şagdagı, ergi	erħi	erħə	qırɞan, e ^r ħi	eski, yaşlı	xögşin, xuuçin	old
eki	e ^r kki, be ^r t	ekkə	ekki	iyi	sayn, tomootoy	good
bagay, bak, karži, xey	baçay, ba ^r q, çoraanda	ba ^h q	pa ^r k	kötü	muu	bad
irik	irik	irək	irik	çürük	ömy, yalaaryay	rotten
boktug, xirliq	ħirliɣ		ħirliɞ	piş, kirli	şavartay	dirty
dort, xönü, çige	ħönö		çi ^r ħä, dži ^r ħä	doğru, düz	şuluun, cey	straight
borbak, börbek, tögerik				yuvarlak	dugarig	round
çidig	çiti	ži ^h tə	çi ^r ti	keskin	ɣurc	sharp (knife)
dınmas	tınmas		dınmas	kör	moyoo, irgüy	dull (knife)
kılaq orgu, suuk	kileger		kilegär	pürüzsüz	tegşyen	smooth
öl, şık	öl	öl	çıɞ, žıɞ, çi ^r ħıɞ, şıq	ıslan	noyton	wet

Tuvan	Tofa	Dukha	Soyot	Turkish	Mongolian	English
kurgag	qurqay		kurɣaɣ	kuru	ɣuuray	dry
šin(niɣ), eder, taptiɣ	lap	žöp	šinɳɪɣ	doğru	mön	correct
čook	čooqaš	džooq	čooɣaš	yakın	derged	near
irak(ki)	iraq	irak	iraq(qa)	uzak	ɣol	far
oŋ	oŋ	parɪɪn	oŋ	sağ	yag, baruun	right
solagay	dal'džir	žöön	solagay	sol	zүүн	left
-DE, kiyɪnda, čanında	-DE	-DE	-DE, kirɪnda	-DE	-d, -t	at
-DE, niŋištinde, iŋiŋ ištinde	-DE	-DE, ište	-DE, iʃsti	-DE, için	dotop	in
-bile, yozugaar, čanında	bile	bile, pile	-b(l)IE	ile, -le	-EEr	with
baza, -bile, bolgaš	tE	basa	iʃhi	ve	ba	and
-ZI...ZE	-ZE	-ZE	bir-emes, bir-emäs, emes	-sa, -se	ɣerev	if
čüge deerge, deeš, užun				çünkü, V için	tul, učraas, yum čin', yuu gebel	because
at	at	at	at	ad, isim	ner, aldar	name