

Auxiliary Verb Constructions in Old Turkic and Altai-Sayan Turkic¹

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0 Introduction

Like all other Turkic languages, the language[s] of the of the Old Turkic sources made extensive use of auxiliary verb constructions.² Old Turkic exhibited a wide range of formal and functional types of constructions and an array of inflectional patterns as well. The modern Turkic languages of the Altai-Sayan region of south central Siberia likewise make elaborate use of auxiliary verb constructions. In certain instances, archaic forms are preserved in the Altai-Sayan Turkic languages; in addition, some modern forms lack parallels in the older sources while finally there are a number of constructions of Old Turkic lacking cognate forms in the modern Siberian tongues.

Before launching into a discussion of the types of auxiliary verb constructions in Old Turkic and Altai-Sayan Turkic, a few comments as to the definitions understood of the terms used in the present study. In this work auxiliary verb is considered to be, following Heine (1993: 70), an item on the lexical verb to functional affix/particle continuum, which tends to be at least somewhat semantically bleached, and grammaticalized to express one or more of a range of salient verbal categories, most typically aspectual and modal categories, but also not infrequently temporal, negative, or voice categories.³ Auxiliary verb constructions [AVCs],

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Note in Old Turkic [OT] sources, I have tried to keep as close to the transcription source as possible. Therefore there is considerable variation in sounds, e.g. o ~ u ö ~ ü e ~ i ä ~ e i ~ i s ~ š q ~ q~ k, g ~ γ, etc.

² Old Turkic is here understood to include primarily older Runic, Brahmi and Uyghur-script texts but mostly not Islamic sources, i.e. closer to von Gabain's understanding than to Clauson's.

³ This definition of auxiliary verb is admittedly somewhat nebulous. There is no, and probably cannot be, any specific, language-independent criteria that can be used to determine the characterization of any given element as a lexical verb (including in serialized functions) or an auxiliary verb. As in all scalar, gradual, or gradient phenomena, clines of grammaticalization and semantic bleaching will have 'gray areas', where the element in question has accrued certain features generally associated with end-points or focal points on the continuum, but perhaps not others. It seems likely that the degree of grammaticalization and semantic bleaching deemed sufficient to stop calling some particular verbal element X_v usages of lexical verb X_{lv} and start calling it auxiliary verb X_{av} will vary from researcher to researcher, even when working on the same language. As Heine (1993: 66) notes "...we are dealing with chains [of grammaticalization] and since chains are by definition continuous structures, setting up stages along these structures must remain an arbitrary and/or artificial endeavor...".

The grammaticalization path of L[exical] V[erb] > S[erial] V > A[uxiliary] V > AF[fi]X is a common path of grammaticalization. Both SVCs and AVCs, rather than being found within some definable, discrete space on this path, instead occupy some mid-point on the grammaticalization continuum from bi-/multi-clausal, fully lexical expressions, to bound functor elements, i.e. the mono-clausal stage. That they would behave similarly with respect to the locus of inflectional features should therefore not be too surprising.

In Serial Verb Constructions the left or rightmost verb can be the sole inflectional head, as in the 'Basic' pattern, neither can be inflected, or both can be inflected (a), even when the it has been grammaticalized as a

functor element (aii). Non-final or non-head lexical elements in SVCs may also appear in a dependent, non-finite, or 'special' form, depending on the language.

(a) Akuapem Akan [Niger-Congo; Atlantic-Congo; Volta-Congo; Kwa; Ghana]

- i. *me-de aburow mi-gu msum*
 1-take corn 1-flow water-in
 'I pour corn into the water' (Schachter 1974: 258)
- ii. *ma-ye adwuma ma-ma Amma*
 1.PERF-do work 1.PERF-give Amma
 'I have worked for Amma' (Schachter 1974: 258)

According to Heine (1993: 48ff.), during the period of shift from full lexical verb to grammaticalized functor element, there is a certain amount of ambiguity associated with the use of the not-yet semantically bleached auxiliary element. Thus, a form may have lexical- (including serial-) type functions simultaneous with other uses of the same (or almost the same) string as a grammatical operator, the former usually restricted to some particular context(s).

In fact, a single element can be found as a lexical verb, in a SVC, in a construction something nebulously in between a SVC and an AVC, in an AVC, and as a bound element within a single synchronic state in a single individual language. Take for example the verb stem *al-* in Xakas. As a main verb, it means simply 'take' or 'get'. It is also used in a serial type construction in this meaning. These functions have been extended to a marker of self-benefactive voice (action benefitting the actor); this is somewhere in the 'gray area' between an SVC and a AVC. It has been further bleached and grammaticalized as a marker of perfective aspect or capabilitive mood in true AVCs. Finally, for many speakers with the verb 'find' *tap-*, it has been fused in the SBEN function into a verbal voice affix; a similar phenomenon is encountered in some people's speech with the verb 'take' *al-* in the function of a capabilitive mood affix as well. These are illustrated in (b).

(b)

Xakas [Turkic; Siberia]

- i. *min tayyada čörčedıp, köp čistek teerıp alyam*
 I taiga-LOC walk-PRES-CV alot berry gather-CV TAKE-PAST.I-1
 'while walking in the taiga, I gathered up alot of berries' (Anderson 1998: 54)

[SVC]

- ii. *pıs köp aınar atıp alyanda, köp axča alyabıs*
 we alot animal-PL shoot-CV SBEN-PAST-LOC alot money get-PAST.I-1PL
 'when we shot ourselves alot of animals, we got a lot of money' (Anderson 1998: 69)

[S/AVC, LVC]

- iii. *ol pu nimenı alıp alar*
 s/he this thing-ACC take-CV CAP.II-FUT
 'she will be able to take this' (field notes, 23 yr. old woman)

[AVC]

- iv. *min anda özıp-teenıp alyanža polyabın*
 I there grow-CV open-CV PERF.AUX-PAST-P/E be-PAST.I-1
 'I was there until it grew and opened' (Anderson 1998: 79)

[AVC]

- v. *pu kniganı tabılzam min xayda örmem*

roughly speaking, consist of a combination of an auxiliary verb which contributes (some) grammatical information and a lexical verb which contributes the lexical content to the expression.

1.1 Formal Types of AVCs in Old Turkic

A range of formal types of auxiliary verb constructions are attested in the Old Turkic sources. These mainly vary according to the form that the lexical verb appears in. This in turn is dependent on both the particular auxiliary verb and the particular function that the construction has been grammaticalized to express. This is thus akin to the two different AVCs in English using the auxiliary verb ‘be’, viz. the progressive which is *be –ing* and the passive which is *be –ed*. In Old Turkic, and in modern Turkic languages, the order of elements in an AVC is rather Lexical Verb followed by Auxiliary Verb, as is typical of SOV languages.

In Old Turkic lexical verbs could appear in various individual AVCs in the following forms : one of a range of converb forms, various participle forms, other nominalized forms, or rarely in an inflected form as well. In addition, nominal forms, rather than verbal forms, could appear with certain auxiliary verbs, and various emergent copular forms were found in certain texts as well. Each of these is briefly discussed in turn below.

1.1.1 Lexical Verb in Converb form

Perhaps most characteristic of all the formal subtypes of Turkic auxiliary verb constructions is the formation where the lexical verb appears in a converb form. Several different converbs were found in this function in Old Turkic sources, these include the vocalic series in –I, –U or –A, or the characteristic Old Turkic form in –IpAn. Unlike most modern Turkic languages, the converb forms in –U and –IpAn were quite frequently used, while the Common Turkic converb in –p that is statistically speaking perhaps the most common converb form that lexical verbs appear in in AVCs in modern Turkic languages is mostly lacking in the earliest sources, appearing only secondarily. AVCs with the converb form in –A were and remain relatively common as well. Examples of various AVCs with the lexical verb in a converb form in Old Turkic may be found in (1).

- | | |
|---|---|
| <p>(1) <i>örü bolmaz</i>
 rise-CV AUX-NEG.AOR
 ‘one cannot rise’
 [Ht VII Anm. 1870] (von Gabain 1974: 127)</p> | <p><i>oguz bodunug igidü olurur</i>
 Oguz people-ACC elevate-CV AUX-AOR
 ‘he elevates the Oguz people’
 [Toñ 62] (Kondrat’ev 1981: 117)</p> |
|---|---|

inim äčim ... üčün bängümin tikä bär̄ti
younger.brother-1 older.brother-1 ...for monument-1-3.ACC erect-CV AUX-PAST

<p>this book-ACC find-SBEN-CON-1 I ‘if I find this book, boy will I be happy’</p>	<p>oh.boy be.happy-FUT-1 (field notes, 45 yr. old man)</p>
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[AFX]

<p>vi. <i>ol ani al(i)bal yan</i> s/he 3.ACC take-CV-CAP.II-PAST.I ‘she could have taken it’</p>	<p>(field notes, 18 year old man)</p>
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‘my younger and older brother(s) erected this monument of mine for me’

[Altın-köl I] (Malov 1952: 54)

qayanladuq qayanin içyini idmis

make.kagan kagan-3.acc lose-CV AX-PAST.II

‘they let their *qagan* who they had made/‘crowned’ *qagan* be lost’

[O F2] (following Tekin 1968)

oglı ögintä k(a)ñinta öbk(ä)läp(ä)n t(ä)z(i)p(ä)n b(a)rmiš

son-3 mother-2-ABL father-3-ABL anger-CV flee-CV AUX-PAST.II

‘a son fled in anger from his mother and father’

[IB #58] (Tekin 1993: 24)

Note that a range of different auxiliary verbs is attested in these examples as well. In terms of abstractified AVC templates, these have the following forms *–U bol*, *–U olur*, *–A bär*, *–I id*, and *–IpAn bar*. The original lexical meaning of these verbs is, as is well known to Turkic specialist, ‘be[come]’, ‘sit’, ‘give’, ‘send’, and ‘go’ all of which are commonly found in the Altai-Sayan Turkic languages.⁴

As alluded to above, the *–p* converb has become the default form in the modern Altai-Sayan Turkic [AST] languages.

(42) Tofa

at otta-p čoru

horse graze-CV AUX.PROG.II

‘the horse is grazing’

men sana-p oliri men

I read-CV AUX.PROG.III 1

‘I am reading’ (Rassadin 1978: 133)

Xakas

ol čooxta-p six-xan

s/he speak-CV INCH-PAST

‘he began to speak’

Pritsak (1959: 620)

However, other older converb forms are found in AVCs as well. Thus, one finds the old converb forms in *–A* and *–I*. In most modern Siberian Turkic languages, these have fallen into a single paradigm, with *–A* found after consonant-final stems and *–I* realized as *–y* after vowel-final ones.

(41) Tofa

ıñja dıj-ıp turu-da, boriika ble üšpül iyle-yi ber-di-ler

thus say- recip-CV AUX-LOC, wood-grouse and hazel-grouse cry-CV INCH-REC.PST-PL

‘when they spoke thus, the wood-grouse and hazel-grouse began to cry’

(ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

Tıva dıl

ol ara-zın-da biçii urug-lar

that between-3-LOC small child-PL

kiskiriz-a

shout-CV

ber-gen

INCH-PAST.I

⁴ As well as in AVCs from around the world for that matter.

'in the mean time the small children began to shout' (Babushkin n.d [1960] 68, 204)

Individual languages have also innovated particular forms which may also appear within the system of auxiliary verbs, e.g. –GAš in Tuvan (Anderson and Harrison 1999).

As with Old Turkic, variation as to the particular converb form in which a lexical verb is required to appear in a given AST language or when comparing two AST languages. Thus, the cislocative may appear with a lexical verb in either the –A/y converb or the –p converb in Tofa.

(72) Tofa

hün bāt-a bar-gan

sun descend-CV TLOC-PST

'the sun set' (Rassadin 1978: 155)

(73) Tofa

ay-da-a čil bağa ol ool-ni al-ip bar-yan ay-ya
 moon-LOC-DC demon that boy-ACC take-CV TLOC-PST moon-DAT

'the moon-demon took this boy up to the moon'

(ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

Note, however, that choice of converb with a particular auxiliary may yield different functions within a given AST language, e.g. in Tuvan

(69) i. Tıva dıl

biži-(y) ber-di-m

read-CV INCH-PAST.II-1

'I began to write'

ii. Tıva dıl

biž-ip ber-di-m

write-CV BEN-PAST.II-1

'I wrote (it) for someone else' (A & H 1999)

Also, apart from a few frozen forms in Tofa (e.g. *туру*), the –U converb form and the –IpAn converb forms of Old Turkic are not preserved in the system of AVCs in the modern AST languages.

1.1.2 Lexical Verb in Participle form

In addition to the converb forms discussed above, there were a variety of AVCs in Old Turkic where the lexical verb appeared in a participial form. Generally speaking, these might be considered a special sub-type of where the lexical verb appears in an inflected form, here only limited to tense/aspect/mood, not personal inflection. In every instance of this subtype of formal auxiliary verb construction, the auxiliary verb is one of three verbs that are used as copula forms in Old Turkic. Most commonly this is *är-*, occasionally *bol* or *tur*. The participle forms themselves are generally either the –*mİš/s* (past or evidential) participle and the aorist (present/future) in –(y)*Ur/-Ir* or the corresponding negative aorist in –*MAz*.

Functionally speaking, these formations generally are compound tense/mood/aspect forms, with the lexical verb bearing one tense/mood/aspect form and the auxiliary verb serving as an expletive/dummy/light/copular form that serves to mark other tense/mood/aspect forms and person. Some examples demonstrating these types of forms are found in (2).

(2) *bo ät' özümün titsür män ötrü ... qadaylariy barčani titmiş idalamış bolur män*
 this body-1-3.ACC give.up-COND then sin-PL-ACC all-ACC give.up-PAST.II give.up-PAST.II AUX-AOR I
 'if I give up this body of mine, then I will have given up all my sins'
 [Suv. 614,1] (von Gabain 1974: 128)

kül tigin bir qırq yaşayur ärti
 KT 1 40 live-AOR AUX-PAST
 'Kül Tegin was 31'
 [KT N3] (Following Tekin 1968)

türk bodun tabyačqa körür ärti
 Türk people China-DAT be.subject.to-AOR AUX-PAST
 'the Türk people were subject to China'
 [Toñ I W1] (Following Tekin 1968)

ol sabin äsidip tün yämä udisiqim kälmäz ärti
 that message hear-CV also night sleep-FUT/NEC-1 AUX-NEG.AOR AUX-PAST
 'having heard their words, I also had no desire to sleep at night'
 [Toñ I E5] (Following Tekin 1968)

añy iqa bayür ärtimiz
 horse-ACC trees-DAT tie-AOR AUX-PAST-1PL
 'we used to tie the horse to trees'
 [Toñ I N3] (Following Tekin 1968)

y(a)yl(a)g t(a)g(i)ma (a)g(i)p(a)n y(a)yl(a)yur turur män
 summer.residence mountain-1-DAT climb-CV spend.summer-AOR AUX-AOR I
 'climbing my mountain summer residence, I pass the summer [there]'
 [IB #62] (Tekin 1993: 24)

Like Old Turkic, modern Altai-Sayan Turkic languages likewise make use of compound tense forms with a lexical verb in an inflected or participial form and an inflected auxiliary. Some examples may be found below.

(44) Tofa
kih'in ajiy sook-ta kar-ya šom-yaš kon-ar bol-yan-nar
 wintertime heavy cold-LOC snow-DAT dive-SS overnight-FUT AUX-PST-PL
 'in the wintertime they would dive into the snow and spend the night'
 (ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

Tıva dıl
Ayan daarta mejee kel-ir bol-du
 A. tomorrow I-DAT come-P/F AUX-PAST.II
 'A promised to come to me tomorrow' (Cheremisina 1995: 14)

Xakas
sinap xis-tar-niñ pidi to yın-čatxan-nar-in püdir ig-niñ desyatnig-ı
 if girl-PL-GEN thus work-PRS.PRTCPL-PL-3.ACC construction.site-GEN foreman-3

Sidar Ivanovič *kör-gen* *pol-za*
 S. I. see-PAST AUX-CON
 'if the construction site foreman S. I. saw the girls working like that.' (Baskakov et al. 1975: 408)

1.1.3 Lexical Verb in Other Nominal[ized] Form

In addition to the converb and participle forms mentioned above, which are not uncommonly found in many Eurasian languages in auxiliary verb constructions, Old Turkic exhibited lexical verbs in a range of other 'nominalized' forms in specific, individual AVCs. Broadly speaking, these appear to primarily have modal functions in Old Turkic. There are at least three sub-types of these constructions with 'other' nominalized forms.

In (3i) is offered an example of desiderative form marked by a combination of the lexical verb in the *-GU* verbal noun and the auxiliary *är-*, i.e. *-GU är*. A second, perhaps historically related formation consists of a lexical verb in a nominalized form in *-GUIUK*, followed by one of the two auxiliaries *är* or *bol*. The meaning of this (3ii) is a kind of deontic modality.

(3) i. *sinxadiwipqa baryu ärsär suw yolın barmaq käreksiz*
 Ceylon-DAT go-CV AUX-COND water way-3.ACC go-INF NEC-2PL
 'if you want to go to Ceylon, you must go by the waterway'
 [Ht VII Anm. 1870]
 (von Gabain 1974: 127)

ii. <i>kizlägülik ärmöz</i> conceal-NEG.CV AUX-NEG.AOR 'they should not conceal' [S87] (von Gabain 1974: 127)	<i>ärtgülik bolzun</i> pass-NEG.CV AUX-3.IMP 'let it pass' [SA48] (von Gabain 1974: 127)
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Finally, there is another formation that belongs to this broad type marked by a combination of a lexical verb in a possessed (often first person singular) form to mark subject, followed by an appropriate negative form of the auxiliary verb *käl-*. The function of this construction is to mark a mild negative desiderative.

(4) *ol sabin äsidip tün yämä udisiqim kälmöz ärti*
 that message hear-CV also night sleep-FUT/NEG-1 AUX-NEG.AOR AUX-PAST
 'having heard their words, I also had no desire to sleep at night'
 [Toñ I E5] (Following Tekin 1968)

küntüz olursiqim kälmädi
 during.day SIT-FUT/NEG-1 AUX-NEG-PAST
 'I had no wish to rest by day'
 [Toñ I S 5] (Following Tekin 1968)

1.1.4 Lexical Verb in Inflected Form

One interesting formal subtype of auxiliary verb construction in Old Turkic is characterized by a (definite/recent past) tense and person inflected form of the lexical verb followed by a tense marked form of the default auxiliary verb *är/er*.

(5) <i>täpräñčsiz boltum ärmäz mu</i>	<i>berdimiz erdi</i>
unshakable AUX-PAST-1 AUX-NEG.AOR Q	give-PAST-1PL AUX-PAST
‘am I not unshakable?’	‘we had given’
[Suv. 626, 18] (von Gabain 1974: 128)	[USp] (Shcherbak 1961: 151)

bosuşlug kadyuluş boltumuz erti
 sorrowful grieving become-PAST-1PL AUX-PAST
 ‘we all became sad and grieving’
 [Man III] (Shcherbak 1961: 150)

A similar but non-identical form gave rise to the past probabilitive in Shor where the lexical verb is fully inflected for tense and subject but the auxiliary appears in a frozen (third person) form. This reflects the so-called ‘Inverted’ inflectional pattern and is discussed in section 3 below.

1.1.5 Nominal + Auxiliary Verb

In a number of Eurasian languages, both ancient and modern, there are (lexicalized) uses of nominal + verb constructions to mark certain predicates. Old Turkic is no exception in this regard. Two verb stems are usually used, namely *bol* and *q/kil*, depending on whether the resultant form is intransitive or transitive, respectively (6).

(6) <i>inim küil tigin kärgäk bolti</i>	<i>sakinč kilu alksar</i>
y.b K T lacking AUX.ITRANS-PAST	thought AUX.TRANS-CV AUX-COND
‘my younger brother KT died’	‘when he reflected, meditated’
[KT N10]	[TTV A41]
(following Tekin 1968)	(Kondrat’ev 1981: 118)

Some combinations are found in paradigmatically opposed sets where the nominal element remains constant but the verb used reflects the transitivity of the expression as in (7)

N V [aux] → *bol* [intransitive], *qil* (~ *qiš/s*) [transitive]

(7) *qul bol* ‘become slave’ [BK E36] vs. *qul qil* ‘enslave’ [BK E20]
 (Tekin 1968: 119)

The functional equivalent of the nominal + verb formations of Old Turkic are perhaps best found in the use of Russian infinitive + inflectable verb, seen in spontaneous discourse in almost all of the modern Turkic languages of Siberia, and especially so in the most endangered of these, e.g. Tofa, Chulyum, dialects of Altai and Xakas.

1.1.6 Copula

In Old Uyghur texts the auxiliary verb *tur* ‘stand’ is found in a copula function.

- (8) rare → *näčükin turur munitäg* *qadyuta turup*
 why COP thus grief-LOC be-CV
 ‘why is it like this’ ‘being in grief’
 [Suv. 627, 1] (von Gabain 1974: 126) [Suv 622, 5] (von Gabain 1974: 126)

This element became highly elaborated in such a function in Tuvan and Tofa. In Tuvan, *tur* even alternates with *bol* in compound ‘tense’ formations

i. Tıva dıl

bir eves bo bažıñ-ni tiv-al-gan tur-gan bol-z-um-za men amıra-ar tur-gan men
 if this house-ACC find-(SBEN)-PAST AUX-PAST(.I) AUX-CON-1-CON I rejoice-P/F AUX-PAST.I I
 ‘if I had found this house I would have been happy’ (Anderson & Harrison 1999: 67)

ii. Tıva dıl

bis-ke bildin-mes bol-du
 we-DAT be.known-NEG.FUT AUX-PAST.II
 ‘we didn’t know’ = (it wasn’t known to us) (Anderson & Harrison 1999: 67)

1.2 Functional Types of AVCs in Old Turkic

In addition to the range of formal subtypes of Old Turkic auxiliary verb constructions adduced in 1.1 above, the formations similarly exhibit considerable variability in the types of functions that the AVCs express. Roughly speaking, the AVCs of Old Turkic fall into at least the following functional categories: tense, aspect/aktionsart, and mood, or in other words the same types of basic functions associated with auxiliary verb formations cross-linguistically. However in Old Turkic, as in modern Turkic languages, one also finds AVCs the function of which is rather different from the standard paradigm. In particular, auxiliary verbs can be used to mark such categories as version, orientation or directionality of the action as well as self-deprecation. Each of these subtypes is presented below.

1.2.1 (Tense and) Aspect/Aktionsart

Among the most characteristic of functions of auxiliary verb constructions in Old Turkic are those that mark various tense, aspect or aktionsart categories. Some of the compound tense formations were alluded to above and will not be repeated here. In terms of aspectual formations, OT shows a considerable range. In Old Turkic one often finds AVCs marking perfective or completed action, the beginning of an action, an uninterrupted action, or an action that has not yet been accomplished but is about to be, or is getting ready to be accomplished.

An unaccomplished or unfulfilled action that is getting ready or is about to be done is expressed through a particular AVC in Old Turkic. Strictly speaking there are two separate formal subtypes, although functionally they are identical. The formation consists of the lexical verb in a nominalized form in –GAI followed by either *tur* ‘stand’ or *yat* ‘lie’.

- (9) *kirgäli tur* (10) *ölgäli yat*
 enter-CV AUX die-CV AUX
 ‘be about to enter’ ‘be about to die’
 (von Gabain 1974: 132) (von Gabain 1974: 132)

öz eliye bargalı turur

self homeland-3-DAT go-MOD.CV AUX-AOR
'he himself is getting ready to set off for his homeland'
[Ht 269] (Kondrat'ev 1981: 120)

amti balik içiye kirgeli turur

now city inside-3-DAT enter-MOD.CV AUX-AOR
'he now is getting ready to enter the city'
[TTX 51] (Kondrat'ev 1981: 120)

Note that these two auxiliaries along with *olur* 'sit' and *yori/yoru* 'walk' are the forms that have become progressives themselves becoming unmarked present tense formations (or a copula form) in a range of modern and older Turkic languages (Anderson in press). That they would show some functional interchangeability here is thus from a Turkic internal perspective hardly surprising and might even be expected.

A range of completive or perfective constructions formed with auxiliary verbs are found in the Old Turkic text sources. The presence of several functionally overlapping constructions in this semantic domain is a feature shared by most modern Altai-Sayan Turkic languages as well. However, while certain constructions have been preserved in this latter group of languages in whole or part, there are a number of constructions found in Old Turkic that are lacking modern cognates, as well as constructions found in various modern languages unattested (but not necessarily non-existent) in older sources.

One such formation found in Old Turkic but lacking in modern Altai-Sayan languages is the completive in *-U alk*.

(13) *sakinč kilu alksar*

thought AUX.TRANS-CV AUX-COND
'when he reflected, meditated'
[TTV A41] (Kondrat'ev 1981: 118)

In Orkhon Runic Turkic one finds a perfective or completive formation in *-U ur*.

(14) *bayirkuniñ ak adgiriğ uđlikin siyu urti*

B-GEN white stallion thigh-3.ACC break-CV AUX-PAST
'(the enemy) broke the thigh of a white stallion from Bayırku'
[KT E36] (or hit and broke) (Axemtov 1978: 127)

Another Orkhon formation lost in the Altai-Sayan Turkic languages is the completive in *-A elt*.

(16) *süñüglüg qantın kälipän sürä eltdi*

lancer from.where come-CV drive.away-CV AUX-PAST
'from where did the lancer come and drive you away?'
[KT E23] (Tekin 1968)

In the Irk Bitig, one finds the construction *-I/U kal* to mark a perfective action.

(15) *özlük (a)t öñ yirdä (a)r(i)p oñuup turu k(a)lmış*

favorite horse desert place-LOC tired-CV wilt-CV stand-CV AUX-PAST.II
'a favorite horse came to a standstill in a desert, exhausted and wilting'
[IB #17] (Tekin 1993: 12)

This auxiliary verb may be found in this function in certain modern Turkic languages as well, e.g. Tofa. Here, however, the converb in –U, which is mostly lacking in the modern languages, has been replaced by the emergent default form in –p.

(49) i. Tofa

*ol ašpak onu gör-geš kis-tar-ni kiškir-**ip** hal-gan*
that man that.ACC see-SS girl-PL-ACC shout-CV PRFV₂-PST
'the man saw this and shouted out for the girls' (Rassadin 1978: 155)

One especially important formation from the perspective of the history of the Altai-Sayan Turkic languages is the perfect[ive] formation in –I *id*.

(17) *qayanladuq qayanin ičyini idmis*

make.kagan kagan-3.acc lose-CV AX-PAST.II
'they let their *qagan* they had made/'crowned' *qagan* be lost'
[O F2] (Tekin 1968)

This AVC is found in all modern Turkic languages of south central Siberia; in some it has been preserved as an auxiliary verb construction (Telengit), while in others it has moved further along the grammaticalization cline of fusion and is an affix synchronically (e.g. Xakas, Tuvan).

ii. Tofa

*šaanda šay šaanda kas-ördek čazin kel-**ibit**-er bol-yan isiy čer-den*
long.long.ago goose-duck during.summer come-PRF-FUT AUX-PST warm place-ABL
'long, long ago, geese and ducks would come from warm places'
(ASLEP Field Notes, sponsored by the Volkswagen Stiftung)

(50) Tıva dıl

*koža aal-ga ba-ar-im-ga kiži čok bo-or-ga, uda-vayn=daa čan-**ip**-kan men*
next village-DAT go-P/F-1-DAT person not be-P/F-DAT sleep-NEG.CV=EMPH go.home-PRF-PAST.I 1
'(when) I got to the neighboring village and there being returned ~~perth~~ but there,
even spending the night' (Babushkin 1960: 137)

(51) Xakas

*ol xi-yir-(**ib**)is-xan kniga-ni, xayzi pol-da čat-ča*
s/he read-PRF-PAST book-ACC which floor-LOC lie-PRES.I
'he read the book that is lying on the floor' (Field Notes)

(52) Chulym Turkic

*Kus udžup ke:**bisken***
Bird fly-CV CLOC-PRF-PST
'the bird came flying'
(Dul'zon 1960: 115)

(53) Quu-kizhi
ol ayıǵnıñ terezini sadiygem
that bear-GEN pelt-3-ACC sell-PRF-PST-1
'I sold the bear's pelt'
(Baskakov 1985:74)

(54) Shor
apşak inineñ şiyip turubisti
Bear den-3-ABL leave-CV stop-PRF-REC.PST
'the bear came out of its den and stopped'
(Nevskaja 1993: 36)

(55) Telengit
altinin ködürip bolbiy ariyla, köl döön taştap iygen
Gold-3.ACC carry-CV CAP-NEG.CV almost/with.difficulty lake down throw-CV PRFV-PST
'he got tired, became unable to carry his gold and threw into a lake'
(Baskakov 1958: 87)

Lastly, in the Hungry Tigress tale one finds constructions such as the following functioning as a marker of completive action.

(11) *etin barča yep kodti*
meat-3.ACC all eat-CV AUX-PAST
'she ate up all his meat'
[Suv. 618, 12]
(Kondrat'ev 1981: 118)

As mentioned above, auxiliary verb constructions with the converb –p were quite rare in Old Turkic text sources despite become the default form in AVCs in certain modern Turkic languages. In this form, however, one sees an instance of its usage in an older state of the language family.

In addition to completion of an action, means of indicating its start could be signaled with an auxiliary verb construction in older text sources as well. One means of marking inchoative or inceptive action ('begin to X') in Old Turkic was through a combination of the lexical verb in the –A converb form followed by the auxiliary verb *kir* 'enter'.

(18) *sevü kirsä*
love-CV AUX-COND
'if (starts to) fall[s] in love...'
[KB II 42]
(Shcherbak 1961: 153)

Finally, a continuous or uninterrupted action could be marked in Old Turkic with an auxiliary verb construction in –U *tut* ('hold'). This auxiliary verb is rare but is found in certain individual modern Turkic languages of the Altai-Sayan region.

(12) *alkinču öliim küni öyü tutar*
annihilation death day-3 think-CV AUX-AOR
'he constantly thinks of the day of death and annihilation'

[Man III 22, 6] (Kondrat'ev 1981: 117)

1.2.2 Modal

A wide range of modal categories were expressed through various auxiliary verb constructions in Old Turkic. These include ability, desire, intent, etc. One common way to mark ability to perform an action (or lack thereof) was through the AVC in *-U bol*.

(19) *örü bolmaz*

rise-CV AUX-NEG.AOR

'one cannot rise'

[Ht VII Anm. 1870] (von Gabain 1974: 127)

Note that the lexical verb with *bol-* to mark capability may appear in either the *-U* form as in (19) or the *-GAll* form as in (20).

(20) *oyargalı bolmaz*

make.better-MOD.CV AUX-NEG.AOR

'can't make him better'

[Ht 1870] (Kondrat'ev 1981: 119)

This capability with *bol* is found in many modern Altai-Sayan Turkic languages as well. However, the converb form of the lexical verb in *-U* has been replaced with *-p*.

(61) Tofa

Bis al-ıp bol-bas sler-ni! irt-a ber-işer bod-i-nar-niñ çer-işer-de!

we take-CV CAP-NEG.FUT you.PL-ACC.remain-CV INCH-2PL.IMP self-3-PL-GEN land-2PL-LOC

'we can't take you! Stay in your own land!'

(ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

(62) i. Tıva dıl

men oyna-p bol-ur men

I play-CV CAP-P/F I

'I can play (Anderson & Harrison 1999: 67)

67)

ii. Tıva dıl

olar oyna-p bol-ur tur-gan

they play-CV CAP-P/F AUX-PAST.I

'they could have played' (Anderson & Harrison 1999:

Perhaps more common in Old Turkic however, was the capability form in with *u*. As with *bol-*, the preceding lexical verb could appear in either the *-U* converb form or the 'modal converb' or deverbal noun formant in *-GAll*.

(21) *edgü ayig kilinçig adirtgali uyur*

good bad deed-ACC distinguish-MOD.CV AUX-AOR

'can distinguish good and evil deeds'

[Uyg III 5, 12] (Kondrat'ev 1981: 119)

qılu u

DO-CV AUX

'able to do'

(von Gabain 1974: 129)

In addition to ability, Old Turkic possessed a range of formations to express desire or intent (or their lack) to perform an action. One such formation consisted of an auxiliary verb *är* preceded by the –GU nominalized form of the lexical verb.

(22) *sinxadiwipqa baryu ärsär suw yolın barmaq kargäksiz*
Ceylon-DAT go-CV AUX-COND water way-3.ACC go-INF NEC-2PL
'if you want to go to Ceylon, you must go by the waterway'
[Ht VII Anm. 1870] (von Gabain 1974: 127)

Another desiderative formation found in Uyghur texts is in –*GAll* *sakin*.

(24) *eki kolin kötürgeli sakinip*
two hand-3.ACC lift-MOD.CV AUX-CV
'wanting to lift both hands'
[Uyg III 35, 30] (Kondrat'ev 1981: 120)

An intentional construction was found in –*GAll* *ogra* in Uyghur texts.

(25) *ne negü iş işlegeli oğrasar*
work work-MOD.CV AUX-COND
'if he intends to complete some act'
[Uyg II 23, 26] (Kondrat'ev 1981: 119)

As mentioned above, in Old Turkic there was a curious negative desiderative form consisting of a nominalized lexical verb in –*SIK* followed by a negative form of the auxiliary verb *käl*. Like the compound tense forms, this construction marks the subject on the lexical verb, not the auxiliary verb. For more on this see 1.3 below.

(23) *ol sabın äsidip tün yämä udisiqim kälmöz ärti*
that message hear-CV also night sleep-FUT/NEC-1 AUX-NEG.AOR AUX-PAST
'having heard their words, I also had no desire to sleep at night'
[Toñ I E5] (Following Tekin 1968)

One last modal formation of note in Old Turkic is the use of –*A* *kör* 'see' as a marker of attempted action. This is preserved in a number of modern Altai-Sayan Turkic languages.

(27) *katiy yani kura kördüm*
hard bow-ACC draw-CV AUX-PAST-1
'I tried to pull the difficult bow'
[MK III 219] (Shcherbak 1961: 153)

(56) Tofa
bis inda aña-p kör-dü-vüs
we there hunt-CV ATT-REC.PST-1PL
'we tried to hunt here' (Rassadin 1978: 169)

(57) Tıva dil

bo xem-ge balıkta-p kör-dü-viis
 this river-DAT fish-CV ATT-PAST.II-1PL
 ‘we tried to fish in this river’ (Anderson & Harrison 1999: 65; Shamina 1995: 35)

(58) i. Xakas ii. Xakas
pu suy-ni kič-ıp kör ol tixta-p kör-gen
 this river-ACC cross-CV ATT s/he fix-CV ATT-PAST
 ‘try to cross this river’ ‘he tried to fix it’ Pristak (1959: 620)

(59) i. Teleut
D’aykap kör --dedi
 Jump-CV ATT say-REC.PST
 ‘try to jump, he said’
 (Baskakov 1958: 90)

1.2.3 Version/Voice

Among the most characteristic (and yet cross-linguistically atypical) features of the system of auxiliary verb constructions in Old Turkic from a functional perspective is the system of voice or version. These are forms that indicate that the action was performed for the benefit of the subject or a non-subject. These categories were described as belonging to the domain of voice by Anderson (1998) but as version by (Anderson 2001a), as they do not properly involve adding of arguments, but rather degree of ‘affectedness’ of verbal participants by the action.

In Old Turkic as in modern Altai-Sayan Turkic, there are two such version categories, viz. object version and subject version. The former is marked by a construction in *–A ber/bär* in Old Turkic.

(28) *kapayın ača berti*
 door-3.ACC open-CV AUX-PAST
 ‘opened (his) door (for him)’
 [Man I 13] (Shcherbak 1961: 153)

(29) *inim äčim ... üčün bängümin tikä bärți*
 younger.brother-1 older.brother-1 ...for monument-1-3.ACC erect-CV AUX-PAST
 ‘my younger and older brother(s) erected this monument of mine for me’
 [Altın-köl I] (Malov 1952: 54)

Curiously, although the converb in *–A* is found in AST languages, the object version or benefactive construction has replaced the *–A* form with the common converb in *–p*. In such languages as Tuvan, Tofa, or Xakas, the *–A ber* form now marks a type of inchoative and thus overtly contrasts with the object version construction in *–p ber*.

(68) Tofa
bos-tar boriika-ni haramza-af, tüg-ün uz-ıp ber-gen
 wild.duck-PL wood-grouse-ACC feel.sorry-SS feather-3.ACC pull.out-CV BEN-PST
 ‘the wild ducks felt sorry for the wood-grouse, so they pulled out their feathers (for him)’
 (ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

- (69) i. Tıva dıl
biži-(y) ber-di-m
 read-CV INCH-PAST.II-1
 'I began to write'
- vs. ii. Tıva dıl
*biž-**ip** ber-di-m*
 write-CV BEN-PAST.II-1
 'I wrote (it) for someone else' (A & H 1999)

The corresponding subject version construction on the other hand used the auxiliary verb construction *-I al* (but see also 1.3 below).

- (30) *toquz oğuz bodunimin tirü qobratı altım*
 Toquz Oguz people-1-ACC gather-CV umnozhat-CV AUX-PAST-1
 'I gathered up and increase my Toquz Oguz people'
 [MCh.] (Kononov 1980: 173)

In the modern Turkic languages of southern Siberia, the self-benefactive or subject version construction appears with the lexical verb in the *-p* converb form, as with many of the AVCs in AST languages discussed above. In Tofa, however, there is variation between the lexical verb in the *-p* form or in the functionally similar *-GAš* form, co-opted from the system of switch reference typical of Tofa (and Tuvan), see Anderson (2003-ms).

- (63) Tofa
höörüik kiš-ka kusak-tu orula-p al-yan
 chipmunk winter-DAT pinecone-ACC gather/store.for.winter-CV SBEN-PST
 'the chipmunk gathered pinecones to store for winter'
 (ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

- (64) Tofa
dilyi oluk bar-ip brææ üšpül tüt-kaš al-yan.
 fox right.away go-CV one hazel.grouse catch-SS SBEN-PST
 'right away the fox caught a hazel grouse'
 (ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

- (65) i. Tıva dıl
biži-p al-dı-m
 write-CV SBEN-PAST.II-1
 'I wrote (it) (down) for my self' (A & H 1999: 68)
- ii. Tıva dıl
*süt-ten iž-**ip** al*
 milk-ABL drink-CV SBEN
 'drink some milk' (Anderson & Harrison 1999: 68)

- (66) Xakas [AVC]
*pıs köp aŋ-nar at-**ip** al-yan-da, köp axča al-ya-bis*
 we alot animal-PL shoot-CV SBEN-PAST-LOC alot money get-PAST.I-1PL
 'when we shot ourselves a lot of animals, we got a lot of money' (Anderson 1998: 69)

1.2.4 Orientation

Another group of categories marked by auxiliary verb constructions characteristic of Old Turkic but cross-linguistically relatively marked can be broadly described as orientation or directionality of the action. This comes in two varieties, translocative (andative), that is motion away from the speaker/subject/discourse locus and cislocative (venitive), motion towards the speaker/subject/discourse locus.

Like many of the formations discussed above, there was variation, even within the same text, as to the specific formal shape of the AVC. Thus, the translocative could appear as *-p bar*, *-U bar*, or even *-IpAn bar*.

- | | |
|----------------------------------|--------------------------------|
| (31) <i>yürüp bartılar</i> | <i>(ä)r ümäl(ä)yü b(a)rmiš</i> |
| move-CV AUX-PAST-PL | man go.visiting-CV AUX-PAST.II |
| ‘they set off’ | ‘a man went visitng’ |
| [Suv. 620] (Shcherbak 1961: 153) | [IB #47] (Tekin 1993: 20) |

uluy irkin azqıñā ärin täzip bardı
Great Irkin few men-3.ACC flee-CV AUX-PAST
‘the Great Irkin fled with a few men’
[KT E34] (Following Tekin 1968)

yirin öp(ä)n yügürü b(a)rmiš
land-3.ACC think-CV run-CV AUX-PAST.II
‘thinking of its place, it went off running there’
[IB #16] (Tekin 1993: 12)

(ä)sri (a)mga y(a)l(i)m k(a)yaka ünüp b(a)rmiš
spotted wild.mtn/goat steep rock-DAT climb/rise-CV AUX-PAST.II
‘the spotted wild goat went up a steep rock’
[IB #49] (Tekin 1993: 20)

oglı ögintä k(a)ñinta öbk(ä)läp(ä)n t(ä)z(i)p(ä)n b(a)rmiš
son-3 mother-2-ABL father-3-ABL anger-CV flee-CV AUX-PAST.II
‘a son fled in anger from his mother and father’
[IB #58] (Tekin 1993: 24)

In modern Turkic languages of southern Siberia, the translocative is also found with the verb *bar/par*. Interestingly, the variation found in Old Turkic is also reflected in the modern languages, albeit not the same variation. In Tofa, the lexical verb can appear in either the *-A/y* form or the *-p* converb form. In Tuvan only the *-A/y* variant is found, while in Xakas, only the *-p* variant is found.⁵

(72) Tofa
hün bät-a bar-gan
sun descend-CV TLOC-PST
‘the sun set’ (Rassadin 1978: 155)

(73) Tofa
ay-da-a čil baya ol ool-ni al-ip bar-yan ay-ya
moon-LOC-DC demon that boy-ACC take-CV TLOC-PST moon-DAT
‘the moon-demon took this boy up to the moon’
(ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

⁵ In Xakas, the *-p* converb is realized as a \emptyset allomorph with consonant-final lexical stems and consonant initial auxiliaries. If either the lexical verb stem ends in a vowel or the auxiliary begins in one, the *-p* will be overtly realized.

- (74) i. Tıva dıl ol *çoru-y bar-gan*
 he go-CV TLOC-PAST.I
 'He's gone away' (A&H'99:69)
- ii. Tıva dıl àt *maḡna-p çoru-y bar-gan*
 horse run-CV AUX-CV TLOC-PAST.I
 'the horse ran away, went running away' (Babushkin n.d. [1960]: 204)

- (75) Xakas
učux par-yan
 fly TLOC-PAST
 'flew away' (Pritsak 1959: 620)

The cislocative likewise exhibited formal variability between *-A käl* and *-p käl* in Old Turkic.

- (32) *üč oγuz süsī basa kälti* *süt akıp kelti*
 U O army-3 set.upon-CV AUX-PAST milk flow-CV AUX-PAST
 'the Üč-Oguz army set upon us' 'suddenly the milk flowed out'
 [BK E32] (Following Tekin 1968) [Suv 621, 15] (Kondrat'ev 1981: 118)

In the modern languages of southern Siberia, only the converb form in *-p* is found in the cislocative AVC.

- (69) Tofa
men čazın üh^γ-up kel-geš, tütüş sler-ni kör-üp soodağ-ıp tur-ar men
 I summertime fly-CV CLOC-SS always you.PL-ACC see-CV converse-CV PROG-FUT I
 'in the summertime, I will fly here, see you and tell you all'
 (ASLEP Field Notes, Sponsored by the Volkswagen Stiftung)

- (70) Tıva dıl *čed-ıp ke-er men*
 come-CV CLOC.P/F I
 'I'll come' (Anderson & Harrison 1999: 69)
- (71) i. Xakas *učux kil-gen*
 fly CLOC-PAST
 'flew here' Pritsak (1959: 620)

1.2.5 Respect/Honorific/Self-Deprecation

In addition to the categories discussed above which as discussed throughout the preceding sections often have reflexes in the modern Turkic languages of Siberia, there are a range of social status forms marked through auxiliary verb constructions. These convey such notions as honorificity, respect, self-deprecation, etc.

The honorific construction is created by the verb *yarliqa* 'order' preceded by a lexical verb in either the *-GAlI* or the *-GU* form.

- (33) *bošuryali yarliqa* *ayityu yarliqa*
 learn-CV AUX ask-CV AUX
 'order (honorific) to learn' 'order (honorific) to ask'
 (von Gabain 1974: 130) [Ht G 29, 19] (von Gabain 1974: 130)

The respectful construction is indicated by the verb *ötün* preceded by a verb in the –U converb form. With exactly three verbs of speaking, the form of lexical verb is rather the –p converb form instead.

(34) <i>yükünü ötün</i>	<i>*tip ötün</i> (+ ay, ayit only)
worship-CV AUX	say-CV AUX
‘respectfully worship’	‘speak respectfully’
(von Gabain 1974: 130)	(von Gabain 1974: 130)

The ‘self-deprecating’ construction—often rendered ‘venture to’ or words meaning the same thing in other languages— is used most frequently in the first person singular. The AVC has the shape –A *tegin* in Old Turkic.

(35) <i>köyülümtä tuta tegindim</i>
heart-1-LOC hold-CV AUX-PST-1
‘in my heart I ventured to preserve’
[Suv. 78] (Shcherbak 1961: 153)

1.3 Inflectional Types of AVCs in Old Turkic

In this section I present the typology of inflection in auxiliary verb constructions in Old Turkic. Inflection is here taken to mean the generally obligatory indexing of categories relating the verbal action to time, the real world, its actants, etc. in a quasi-semantically predictable way. There are at least four logical possibilities with respect to the locus of inflection in auxiliary verb constructions. These are: 1) inflected auxiliary verb, with the lexical verb in an unmarked or ‘special’ (non-finite, participial, gerundive, etc.) form; 2) neither auxiliary verb nor lexical verb inflected; 3) both inflected; or 4) unmarked or specially marked auxiliary verbs, with inflected lexical verbs. Split-systems or mixings of the above are also theoretically possible and often attested (Anderson 1999, 2001b).

1.3.1 Basic

The first (or ‘Basic’) pattern of inflection in auxiliary verb constructions is the standard one for the major languages of the world, and indeed for Harris and Ramat (1987), the only possible pattern. This basic pattern consists of an inflected auxiliary, with the lexical verb appearing in a ‘special form’. This dependent form may appear in any number of formal guises, called, depending on the language and the grammatical tradition, converb, participle, infinitive, ‘nominalized’ or ‘dependent’ form. This categorization of the lexical verb in an AVC as a ‘special’ form predetermined by the specific auxiliary verb and its particular function would also include in my reckoning zero allomorphs or unmarked stem forms as well.

To be sure, the ‘Basic’ pattern is the unmarked system cross-linguistically and in Old Turkic as well. The majority of AVCs in Old Turkic exhibit this pattern. Note that how the inflection is realized with the auxiliary verb depends on the grammatical form it appears in. There were two inflectional patterns in Old Turkic, one using bound markers of possessive origin, the other using postposed or enclitic pronouns. Both of these counting as reflecting this ‘Basic’ pattern. Further, as discussed throughout 1.1 and 1.2 above, the ‘special’ form

that the lexical verb may appear in also exhibits considerable variation in Old Turkic, including several converbs and other nominalized formatives. Some examples of AVCs showing the ‘Basic’ pattern of inflection in Old Turkic may be found below.

(36) *y(a)yl(a)g t(a)g(i)ma (a)g(i)p(a)n y(a)yl(a)yur turur män*
 summer.residence mountain-1-DAT climb-CV spend.summer-AOR AUX-AOR 1
 ‘climbing my mountain summer residence, I pass the summer [there]’
 [IB #62] (Tekin 1993: 24)

<i>añıy iqa bayür ärtimiz</i>	<i>udu yoridim</i>
horse-ACC trees-DAT tie-AOR AUX-PAST-1PL	there pursue-CV AUX-PAST-1
‘we used to tie the horse to trees’	‘I pursued’
[Toñ I N3] (following Tekin 1968)	[MCh. E6] (Tekin 2000: 229)

iraktin teñri burxanıg öge yıva turdılar
 from.afar god Buddha-ACC praise-CV praise-CV AUX-PAST-PL
 ‘they praised Buddha from afar’
 [TT X, 146] (Kondrat’ev 1981: 83)

Not surprisingly, the standard pattern found in modern AST languages is also the ‘Basic’ pattern.

(76) Xakas
annañar ijem xazixta-n par-ar-ina ızen-ıp odır-ya-m
 therefore mother-1 be.healthy AUX-FUT-3.DAT hope-CV AUX-PAST.I-1
 ‘for that reason I hoped that mama will get healthy’ (Anderson 1998: 67) cf. *odır*- ‘sit’

1.3.2 Other

In addition to the ‘Basic’ pattern, a range of other minor sub-types are attested in various Old Turkic text sources. While rare, the so-called ‘Doubled’ inflectional pattern may be found. This consists of both the lexical and auxiliary verb bearing the same inflection. A range of different individual sub-types of Doubled inflection are attested. In Yenisei Runic Turkic, one may encounter forms both bearing the past tense in –DI. According to Heine (1993), doubled formations of this type reflect their origin in a serialized construction.

(38) ‘doubled tense inflection’ in Yenisei Runic Turkic
yügür-ti bar-di
 run-REC.PST TLOC-REC.PST
 ‘(he) ran away’
 [M I7, 17: Yen] (Clauson 1972: 354)

In the Kül Tegin inscription, double marking of various categories is found with the self-benefactive or subject version AVC. Thus one finds forms such as the following where either the ‘past’ in –mİš is realized on both the lexical verb and the auxiliary verb, or even forms where the –DI past and first plural subject are found.

(39) Doubled Inflection

Türgiř bodun-uy ölür-miř al-miř

Türgiř people-ACC kill-PST.II SBEN-PST.II

‘killed the Türgiř people (to our benefit)’ [KT] (Von Gabain 1974: 278 1.26*)

(39) Doubled Subject Inflection

ölür-tü-müz al-ti-miz

kill-PST-1PL SBEN-PST-1PL

‘we killed them (to our benefit)’ [KT] (Von Gabain 1974: 279 1.3)

In addition to ‘Basic’ and ‘Doubled’ inflection, there are auxiliary verb constructions in Old Turkic that show a split pattern. That is, some categories are marked on the lexical verb and some on the auxiliary. With compound past tense forms involving the auxiliary *er/är*, subject inflection is marked on the lexical verb generally.

(37) *berdimiz erdi*

give-PAST-1PL AUX-PAST

‘we had given’

[USp] (Shcherbak 1961: 151)

bosuřlug kadyuluy boltumuz erti

sorrowful grieving become-PAST-1PL AUX-PAST

‘we all became sad and grieving’

[Man III] (Shcherbak 1961: 150)

bän özüm bilgä toñuquq qazyanmasar bän yoq ärtim ärsär

I self-1 BT win-NEG-COND I NEG.COP AUX-PAST-1 AUX-COND

‘if I B. T had not won and never existed’

[Toñ. II N1-2] (following Tekin 1968)

One exception is with certain negative forms. Here the lexical verb takes the negative, and the auxiliary the subject inflection.

jazukka tüřä teginmägäj ertimiz teyrim

sin-DAT fall-CV SELF.DEPREC.AUX-NEG-OPT AUX-PAST-1PL God-1

‘oh my God, we would not venture to fall to sin’

[KP] (Shcherbak 1961: 152)

Indeed, negative is a category that invariably occurs in a split manner, but not always on the lexical verb. In the negative desiderative, negative occurs on the auxiliary verb, but subject on (a nominalized form of) the lexical verb. Note that in both of these instances, the negative element occurs where one might expect it semantically, i.e. with the predicate that it has negative scope over—{not venture} (itself strictly speaking an auxiliary verb in the given example) and {not desire}.

ol sabın äsidip tün yämä uđisiqim kälmöz ärti

that message hear-CV also night sleep-FUT/NEC-1 AUX-NEG.AOR AUX-PAST

‘having heard their words, I also had no desire to sleep at night’

[Toñ I E5] (Following Tekin 1968)

Other examples of negative on an auxiliary verb over which it has scope may be seen in (40)

(40) *örü bolmaz*

rise-CV AUX-NEG.AOR

‘one cannot rise’

[Ht VII Anm. 1870] (von Gabain 1974: 127)

täpränčsiz boltum ärmüz, mu

unshakable AUX-PAST-1 AUX-NEG.AOR Q

‘am I not unshakable?’ [Suv. 626, 18] (von Gabain 1974: 128)

In virtually all AST languages, negative AVCs often consist of the negative converb followed by a subject inflected auxiliary, i.e. in a Split manner.

(6)

In Xakas, the probabilitive marks tense on the lexical verb and subject on the auxiliary.

(79) i. Xakas

sin it-ken polar-zıñ

you do-PAST.I PROB-2

‘you probably did it’

ii. Xakas

min nime-e čobal-čatxan-ım-ni sırer pil-če polar-zar

I what-DAT be.sad-PRES.PRTCPL-1-ACC y’all know-PRES.I PROB-2

‘you probably know what I am sad about’ (Anderson 1998: 60)

There are also combinations of patterns discussed above. One such pattern, the so-called ‘Split-Doubled’ pattern, consists of certain categories marked on both the lexical and auxiliary verbs, but others are realized only on one or the other. For example, in Middle Chulym, the counterfactual conditional is marked by a past tense form of the lexical verb and a conditional form of the auxiliary, but subject is marked on both.

(77) Chulym Turkic [Middle Chulym]

Señ suryañ bolzañ, men aytır e:dim

You ask-PST-2 AUX-CON-2 I say-FUT AUX/SBJ-REC.PST-1

‘if you had asked, I would have said’

(Dul’zon 1960: 139)

[‘split-doubled’ marking]

This is not a common pattern in the world’s languages statistically speaking, but it does occur with individual AVCs in a wide range of languages. In addition, in at least one Warekena, an Arawak language of Venezuela and Brazil.

(68) Warekena [Arawakan, Venezuela, Brazil] Warekena

ya-wa-fa-pia wa-pala

NEG-1PL-AUX-NEG 1PL-run

‘we will not run (now)’

(Aikhenvald 1998: 388)

ya-pi-be-pia pi-da-yu

NEG-2-CAP-NEG 2-see-3SG.FEM

‘you cannot see her’

2.3.3 Inverted Inflection

In addition to the ‘Basic’, ‘Split’ and ‘Doubled’ patterns, sometimes the inverse of the ‘Basic’ form is found in modern AST languages. That is, the lexical verb is inflected and the auxiliary is simply marking the grammatical category that the formation serves to index. These constructions are not often described as AVCs but rather grammatical ‘particles’ [of sometimes clear verbal origin], the nature of which often typifies a grammaticalization path or event schematicization for a particular functional category, but given the typology presented in Anderson (1999, 2001a, 2003), it is clear that these forms must simply be considered to reflect the so-called ‘Inverted’ inflectional type.

In Shor, unlike the closely related Xakas where the cognate construction receives subject marking, the probabilitive appears in an uninflecting form *polar*, preceded by a lexical verb marking tense and subject.

(78) Shor

üş kün ertip, aylanmaan polzam men ažip ölgem polar
 3 day pass-CV return-NEG.CV AUX-CON-1 I ‘already’ die-PST-1 PROB
 ‘if three days pass and I don’t return, I am probably dead’
 (Nevskaja 1993: 35)

Other languages showing ‘Inverted inflectional AVCs include Acholi and Ainu.

Acholi [Nilo-Saharan; W. Nilotic; Uganda, Sudan]

in omyero i-cam mot
 you should 2-eat slowly
 ‘you should eat slowly’ [*omyero* < **o-myero* 3-be.suitable/fit.PAST]
 (Heine 1993: 41)

(20) i. Ainu, Ishikari dialect [language isolate; Japan, Russia; possibly extinct]

nep kamuye i-turen rok kus
 what god 1-bless PERF perhaps
 ‘perhaps some god has blessed me’
 (Shibatani 1990: 79)

Summary

Old Turkic made extensive use of a wide range of formal and functional subtypes of auxiliary verb constructions as do many of the modern Turkic languages of the Altai-Sayan region of southern Siberia. In some instances, these languages have preserved archaic structures in tact, in others, new converb forms are taking on the functions of ones that had been lost but the construction formally and functionally more or less remains constant. Old Turkic naturally possessed a range of forms which lack parallels in the modern Siberian languages, and certain AVCs in the latter appear to be innovations, or at least not found in the attested Old Turkic sources. Among the more noteworthy functions of AVCs in Old Turkic are the marking of version and orientation categories, both of which are well developed in the modern Siberian Turkic languages. In addition, unlike the majority of familiar European languages, some subset from subject, tense, and/or negative may be marked on either the lexical verb, or the auxiliary (or both!).

Text sources

IB	Irk Bitig
Suv.	Suvarṇaprabhāṣasūtra
KT	Kül Tegin
BK	Bilgä Kagan
Toñ	Toñukuk
O	Ongin
MCh.	Moyun Chur
Chuast.	Chuastuqanift (Manichaeon)
TT	Türkische Turfan-Texte
Man	Manichaica aus Chotscho
Uyg	Uigurica (Müller)
Ṭiš	Ṭišasvustik (Radloff)
KP	Kalyāṇaṃkara/Pāpaṃkara
KB	Kutadgu Bilig
MK	Maḥmūd Kašyarī Divān luyāt at-turk
Ht	Hüen-tsuang Biographie

Abbreviations Used

ABL	Ablative	DS	Different Subject	PL	Plural
ACC	Accusative	DUR	Durative	PRES/FUT	Present/Future
ACCLTM	Acclimative	EMPH	Emphatic	PRETEND	Pretendative
AFX	Affix	EVID	Evidential	PRFV	Perfective
ALL	Allative	FUT	Future	PROB	Probabilitive
ALMST	Almost.Completed	GEN	Genitive	PROG.I	Progressive
ATT	Attemptive	GER	Gerund	PRS.PRTCPL	Present Participle
AUX	Auxiliary	IMP	Imperative	PSB	Possibilitive
AUX.N	Auxiliary Noun	IMPERF	Imperfect(ive)	PST	Past
AVC	Aux. Vb Construction	INCH	Inchoative	REC.PST	Recent Past
BEN	Benefactive	ITER	Iterative	RECIP	Reciprocal
CAP	Capabilitive	LOC	Locative	SBEN	Self-Benefactive
CAUS	Causative	LVC	Lexical Vb Constr.	SS	Same Subject
CLOC	Cislocative	NARR	Narrative	SVC	Serial Verb Construction
CMPLT	Completive	NEG	Negative	TERM	Terminative
COMP	Complementizer	OBJ.VERS	Object Version	TLOC	Translocative
CON	Conditional	P/E	Prosecutive/Equative	UNACMPL	Unaccomplished
CV	Converb	P/F	Present/Future	UNEXP	Unexpected
DAT	DATIVE	PASS	Passive	1	First Person
DESID	Desiderative	PAST.I	Unmarked Past	2	Second Person
DISC	Discourse	PERF	Perfect	3	Third Person

References:

- Aalto, Pennti, G. Ramstedt and J. Granö. 1958. *Materialen zu den alttürkischen Inschriften der Mongolei*. JSFOu LX.
- Aikhenvald, Alexandra Y. 1998. Warekena. In D. Derbyshire and G. Pullum [eds.] *Handbook of Amazonian Languages* vol. 4. Berlin: Mouton de Gruyter.
- Amanzholov, A. S. 1969. *Glagol'noe upravlenie v jazyke drevnetjurkskix pamjatnikov*. Moscow: Nauka.
- Anderson, G. D. S. 1998. *Xakas*. Languages of the World/Materials 251. München: LINCOM-EUROPA.

- _____ 1999. Contributions of 'minor' language data to the typology of inflection in auxiliary verb constructions. In CLS 34 *The Panels*, 1-15.
- _____ 2000. Split Inflection in Auxiliary Verb Constructions. In N.M. Antrim et al (eds.) *WECOL 1999*.
- _____ 2001. Subject Version and Object Version in Tofa Auxiliary Verb Constructions. In *Turkic Languages 5/1*: 240-269.
- _____ in press-a. *Auxiliary Verb Constructions in Altai Sayan Turkic*. Wiesbaden: Harrassowitz Verlag.
- _____ in press-b. Cislocative and Translocative in Tofa Auxiliary Verb Constructions. To appear in *Ural-Altische Jahrbücher*. n.f. 17. 25pp.
- _____ 2003. Inflectional Type in Auxiliary Verb Constructions in Native American Languages. Presented at SSILA, Atlanta.
- Anderson, G. D. S. and K. D. Harrison 1999. *Tyvan*. Languages of the World/Materials 257. München: LINCOM-EUROPA.
- ASLEP Field Notes. Altai-Sayan Language and Ethnography Project. Supported by Volkswagen Stiftung.
- Axmetov, M. A. 1978. *Glagol v jazyke orxono-enisejskix pamjatnikov*. Saratov: ISGU.
- Aze, (F.) Richard 1973. Clause Patterns in Parengi-Gorum. In R. L. Trail (ed.) *Patterns in clause, sentence, and discourse in selected languages of India and Nepal 1*: 235-312. Katmandu: SIL/Tribhuvan University.
- Babuškin, G. F. 1960. O strukture pridatočnyx predloženíj v tuvinskom jazyke. In *Uchenye Zapiski TNIIJaLI VIII*: 127-38. Kyzyl: TNIIJaLI.
- _____ n.d. [1960?]. Morfoložičeskaja struktura xakasskix dialektov v sravnenii s dialektami Altajo-Sajanskoj grupy tjurkskix jazykov. Unpublished-ms. Abakan: XakNIIJaLI.
- Babushkin, F. G. and G. I. Donidze. 1966. Šorskiy jazyk. In *Jazyki narodov SSSR: Tjurkskie jazyki*. Moscow: Nauka.
- Bang, W. and A. von Gabain. 1929a. Türkische Turfan-Texte I. In SBAW 15: 241-268.
- _____ 1929b. Türkische Turfan-Texte II. In SBAW 22: 411-430.
- _____ 1930a. Türkische Turfan-Texte III. In SBAW 13: 183-211.
- _____ 1930b. Türkische Turfan-Texte IV. In SBAW 24: 432-450.
- _____ 1930c. Uigurische Studien. In *Ungarische Jahrbücher*. 10: 193-210.
- _____ 1931. Türkische Turfan-Texte V. In SBAW 14: 323-356.
- Bang, W., A. von Gabain and G. R. Rachmati. 1934. Türkische Turfan-Texte VI. In SBAW 10: 93-192.
- Baskakov, N. A. 1958. *Altajskij jazyk*. Moscow.
- _____ 1966. *Dialekt chernevykh tatar*. Moscow.
- _____ 1985. *Dialekt lebedinskikh tatar*. Moscow.
- Baskakov, N. A. (et al.) 1975. *Grammatika xakasskogo jazyka*. Moscow: Nauka.
- Batmanov, I. A. 1971. *Talasskie pamjatniki drevnetjurkskoj pis'mennosti*. Frunze.
- Batmanov, I. A. and A. Ch. Kunaa 1963-1965. *Pamjatniki drevnetjurkskoj pis'mennosti Tuvy I-III*. Kyzyl: Tuvknizdat.
- Bergel'son, M. A. and A. A. Kibrik. 1987a-b. Sistema pereklučenija referentsii v tuvinskom jazyke. In *Sovetskaja Tjurkologija #2*, 16-32 (=1987a); #4, 30-45 (=1987b).
- Borgojakov, M. I. 1976b. Perexod nekotoryx sintaktičeskix konstrukcii v pridatočnoe predloženie v sovremennom xakasskom jazyke. In *Sibirskij tjurkologičeskij sbornik*, pp. 87-94. Novosibirsk: AN SSSR SO IIFF.
- Borgojakova, T. 1984. Vremennye polipredikativnye konstrukcii v xakasskom jazyke. In *Voprosy xakasskogo literaturnogo jazyka*. Abakan.
- Brockelmann, C. 1954. *Osttürkische Grammatik der islamischen Litteratursprachen Mittelasiens*. Leiden.
- Castrén, M. A. 1857. *Versuch einer koibalischen und karagassischen Sprachlehre*. (A. Schiefner ed.) St. Petersburg (XXX pp. (XXI + 210 total).
- Cheremisina, M. N. et al. 1984. *Predikativnoe sklonenie pričastij v altajskix jazykax*. Novosibirsk: Nauka.
- _____ 1995. Osnovnye tipy analitičeskix konstrukcii skazuemogo v tjurkskix jazykax južnoj Sibiri. In M. N. Čeremisina [ed.] *Jazyki korennyx narodov Sibiri*, Novosibirsk: RAN.
- Clauson, Gerard. 1972. *An Etymological Dictionary of pre-Thirteenth Century Turkish*. Oxford: Clarendon Press.
- von le Coq, Albert. 1910/1911. Chaustuanift, ein Sündenbekenntnis der manichäischen Auditores. In *ABAW 1910/1911*.

- _____ 1911. Dr. Stein's Turkish Khuastuanift from Tunhuang, being a Confession-prayer of the Manichaeans. In *Journal of the Royal Asiatic Society* 1911: 277-314.
- _____ 1912. Türkische Manichaica aus Chotscho I. ABAW 1911, Anhang.
- _____ 1919. Türkische Manichaica aus Chotscho II. ABAW 1919, 3.
- _____ 1922. Türkische Manichaica aus Chotscho III. ABAW 1922, 2.
- Craig, Collette. 1977. *The Structure of Jacaltec*. Austin: UT Press.
- Doerfer, Gerhard. 1988. *Grammatik des Chaladsch*. Wiesbaden: Otto Harrassowitz.
- Dul'zon, A. P. 1960. Lično-vremennye formy čulymsko-tjurkskogo glagola. In *Učenyje Zapiski VII*. Abakan: XakNIJALI. 101-145.
- Dyrenkova, N. P. 1940. *Grammatika ojratskogo jazyka*. Leningrad: Akademija Nauk SSSR.
- _____ 1941 *Grammatika shorskogo jazyka*. Moscow-Leningrad.
- Erdal, Marcel. 1991. *Old Turkic Word Formation. I-II*. Wiesbaden: Harrassowitz Verlag.
- Erimer, K. 1969. *Eski türkçe göktürk ve uygur yazi dili*. Ankara.
- von Gabain, Annemarie. 1941 [1974]. *Alttürkische Grammatik*. Wiesbaden: Harrassowitz. Dritte Auflage.
- _____ 1954. Türkische Turfan-Texte VIII. In ADAW 1952, 7.
- _____ 1959. Das Alttürkische. In J. Deny et al. [eds.] *Philologicae Turcicae Fundamenta I*, 21-45. Wiesbaden: Harrassowitz Verlag.
- von Gabain, A and W. Winter. 1958. Türkische Turfan-Texte IX. In ADAW 1956, 2.
- Johanson, Lars. 1971. *Aspekt im Türkischen. Vorstudien zu einer Beschreibung des Türkeitürkischen Aspektsystems*. Studia Turcica Uppsaliensia 1. Lund: Berlingska Boktryckeriet.
- _____ 1976. Zum Präsens der nordwestlichen und mittelasiatischen Türkssprachen. In *Acta Orientalia* 37: 57-74.
- _____ 1995. Mehrdeutigkeit in der türkischen Verbalkomposition. In M. Erdal and S. Tezcan [eds.] *Beläk Bitig. Sprachstudien für Gerhard Doerfer zum 75. Geburtstag*. (Turcologica 23.) Wiesbaden: Harrassowitz. 81-101.
- Juldashev, A. A. 1965. Analitičeskie formy glagola v tjurkskix jazykax. Moscow: Nauka.
- _____ 1977. Sootnošenie deepričastnyx i ličnyx form glagola v tjurkskix jazykax. Moscow: Nauka.
- Karpov, V. G. 1984. Tipologičeskie sdvigi v xakasskom jazyke. In *Voprosy xakasskogo literaturnogo jazyka*. Abakan.
- Kondrat'ev, V. G. 1970. *Očerki grammatiki drevnetjurkskogo jazyka*. Leningrad.
- _____ 1981. *Grammatičeskij stroj jazyka pamjtanikov drevnetjurskoj pis'mennosti VIII-XI vv*. Leningrad: Izdat. Leningradskogo universiteta.
- Kononov, A. N. 1980. *Grammatika jazyka tjurkskix runičeskix pamjtanikov VII-IX vv*. Leningrad.
- Korkina, E. I. et al. 1982. *Grammatika sovremennogo jakutskogo literaturnogo jazyka*. Moscow: Nauka.
- Kormushin, I. V. 1997. Tjurkskie enisejskie epitafii. Teksty i issledovanija. Moscow.
- Kunaa, A. Ch. 1970. *Prostoe predloženie sovremennogo tuvinskogo jazyka*. Kyzyl: Tuvknizdat.
- Letjagina, N. I. 1989. Vyraženie količestvennyx otnošenij v tuvinskom jazyke (vzaimodejstvie jazykovyx sredstv raznyx urovnej). In *Grammatičeskie issledovanija po otдел'nym altajskim jazykam*, pp. 59-92. Leningrad: Nauka.
- Malov, S. E. 1951. Pamjatniki drevnetjurskoj pis'mennosti. Teksty i issledovanija. Moscow-Leningrad.
- _____ 1952. Enisejskaja pis'mennost' tjurkov. Moscow-Leningrad.
- _____ 1959. Pamjatniki drevnetjurskoj pis'mennosti Mongolii i Kirgizii. Moscow-Leningrad.
- Menges, K. H. 1958. Die süd-sibirischen Türk-Sprachen, III: Die Tuba-Sprachen Sojon und Karayas. Zur Charakteristik einer einzelnen süd-sibirischen Gruppe. In *Central Asiatic Journal* IV, pp. 90-129.
- _____ 1959. Das Sojonische und Karagassische *PhTF* I pp. 640-70.
- _____ 1968 [1995]. *The Turkic Languages and Peoples. An Introduction to Turkic Studies*. Wiesbaden: Harrassowitz Verlag. Revised 2nd edition.
- Müller, F. W. K. 1908. Uigurica. In ABAW 1908/2.
- _____ 1910/1911. Uigurica II. In ABAW 1910/3.
- _____ 1920/1922. Uigurica III. In ABAW 1920/2.
- _____ 1931. Uigurica IV. In SBAW 24: 675-727.
- Nadžip, E. N. 1971. *Modern Uigur*. Moscow: Nauka.
- Nasilov, V. M. 1960. *Jazyk orxono-enisejskix pamjtanikov*. Moscow: Izdat. vostoc'noj literatury.
- _____ 1963. *Drevneujgurskiskij jazyk*. Moscow: Nauka.
- Orkun, H. N. 1936-40. *Eski türk yazitlari*. Istanbul.
- Patachakova, D. F. 1984. Deepričastnye formy v xakasskom jazyke. In *Voprosy*

- xakasskogo literaturnogo jazyka*. Abakan.
- Pritsak, O. 1959. Das Abakan-türkische (Chakassische). In *Philologiae Turcicae Fundamenta I*, edited by J. Deny et al. Wiesbaden.
- _____. 1963. Das Alttürkische. In *Handbuch der Orientalistik Bd. 5*. Leiden/Köln.
- Radloff, W. 1900-1910. *Das Kudtku Bilig des Jusuf Chasshadschib aus Bälasagun*, II. St. Petersburg.
- _____. 1910. *Ṭiṣastvustik*, ein in türkischer Sprache bearbeitetes buddhistisches Sūtra. In *Bibliotheca Buddhica XII*. St. Petersburg.
- _____. 1928. *Uighurische Sprachdenkmäler*. Materialien nach dem Tode des Verfassers mit Ergänzungen herausgegeben von S. Malov. Leningrad.
- Radloff, W and S. E. Malov. 1913/1917. *Suvarṇaprabāsa* (uig. Redaktion). In *Bibliotheca Buddhica XVII*. St. Petersburg.
- Rassadin, V. I. 1978. *Morfologija tofalarskogo jazyka v sravnitel'noj osveščanii*. Moscow: Nauka.
- _____. 1997. Tofalarskij jazyk. In *Jazyki Mira: Tjurkskie jazyki*, pp. 371-82
- Shcherbak, A. M. 1961. *Grammatičeskij očerk jazyka tjurkskix tekstov X-XIII vv. iz Vostočnogo Turkestana*. Moscow-Leningrad.
- _____. 1981. *Očerki po sravnitel'noj morfologii tjurkskix jazykov*. Glagol. Leningrad: Nauka.
- Schönig, Claus. 1984. *Hilfsverben im Tatarischen*. Wiesbaden: Franz Steiner Verlag.
- Shamina, L. A. 1993. Složnye predloženiya v tuvinskom jazyke, vyražajuščie otnošenija oboslovennosti meždu sobytijami. In *Voprosy tuvinskogo jazykoznanija*, pp. 63-75. Kyzyl: TNIIIJaLI.
- _____. 1995. Analitičeskie konstrukcii modal'no-infinitivnogo tipa v tuvinskom jazyke. In Čeremisina ed., pp. 52-67.
- Shervashidze, I. N. 1986. *Formy glagola v jazyke tjurkskix runičeskix nadpisej*. Tbilisi: Mecniereba.
- Skvorcov, M. I. 1985. *Čávašla-Virāšla Slovar' Čuvaško-Russkij slovar'*. Moscow: Russkij jazyk.
- Subrakova, O. V. 1984. Soyuznyj tip svjazi v složnopodčinennyx predloženiij. In *Voprosy xakasskogo literaturnogo jazyka*. Abakan.
- Tekin, Talat. 1968. *A Grammar of Orkhon Turkic*. Uralic and Altaic Series no. 69. Bloomington: IU Press.
- _____. 1993. *Irk Bitig: The Book of Omens*. Wiesbaden: Harrassowitz Verlag.
- _____. 1995. Some remarks on the Tunyukuk Inscription. In M. Erdal and S. Tezcan [eds.] *Beläk Bitig*. Sprachstudien für Gerhard Doerfer zum 75. Geburtstag, pp. 209-222. Wiesbaden: Harrassowitz Verlag.
- _____. 1997. The First Altinköl inscription. In *Turkic Languages* 1/2 210-226.
- _____. 1998. The second Altinköl inscription. In *Türk Dilleri Arastirmalari* 8, 5-14. Ankara.
- _____. 2000. *Orhon Türkçesi Grameri*. Türk Dilleri Arastirmalari 9. Ankara.
- Ubrjatova, E. A. and F. A. Litvin eds. 1986. *Strukturnye tipy sintetičeskix polipredikativnyx konstrukcij v jazykax raznyx sistem*. Novosibirsk: Nauka.
- Vasil'ev, D. D. 1983. *Korpus tjurkskix runičeskix pamjatnikov bassejna Yeniseja*. Leningrad: Nauka LO.
- Vasil'ev D. D. and S. G. Kljaštornyj. Runičeskaja nadpis' Jir-Sajyr. In *Sovetskaja Tjurkologija* 1973/2.
- Werner, Heinrich K. 1997. *Die ketische Sprache*. Wiesbaden: Harrassowitz.
- Zhukova, A. N. 1980. *Jazyk palanskikh korjakov*. Leningrad: Nauka LO.