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The multi-functional converb *-GAš* and related forms in Sayan Turkic

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The multi-functional converb in *-GAš* is a salient and defining feature of complex sentence and narrative structure of the Sayan Turkic. The range of functions associated with this converb element includes temporal interpretations of complex sentences, including anteriority (and simultaneity), and some situations in individual Sayan Turkic languages that appear to be pushing the *-GAš* form into the finite verbal system as an anterior TAM marker as well. Perhaps the most salient and common feature across the Sayan Turkic dialects is its propulsive function in advancing narrative discourse. In some of the taiga varieties of Sayan Turkic, further specialization is found, namely the grammaticalization of the element as a same-subject marker within a system of switch-reference, and another path in yet other Sayan Turkic varieties is found in a system of tail-to-head linkage. In some of the endangered Sayan Turkic lects, *-GAš* is replacing the *-p* converb in certain auxiliary verb constructions. Other functions include both causal and purposive formations expressed by forms using the *-GAš* converb. The paper concludes with case-marked forms of the *-GAš* converb and a comparison of the Sayan Turkic uses of *-GAš* with cognate forms in other Turkic languages.

Keywords: Sayan Turkic, converbs, same-subject, different-subject, tail-to-head linkage, narrative propulsion, temporal formations, case-marking

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1. Introduction

The Sayan Turkic languages (Schönig 1997, 1999) are a cluster of closely related Turkic lects found in a region roughly co-terminous with the Altai-Sayan mountain complex in a wide area in the Russian Federation ranging from Nizhneudinskij rajon of Irkutsk oblast' (Tofa) and nearby parts of Buryatia (Soyot) to a dense block covering the entirety of the Republic of Tuva (Central Tuvan, other peripheral Tuvan dialects of Tuva and Todzhu as well as Standard Tuvan), in nearby parts of northern Mongolia (Altai-Tsengel (Monchak) Tuvan, Dukhan and Tuhun) and in the extreme northern part of China (Jungar Tuvan). While sociolinguistically distinct, and exhibiting some considerable internal variation with respect to specific features and their quite diverse and different contact *milieux*, some of which are quite in-

tense—Tofa with Russian, Soyot with Buryat and Russian, Todzhu with Tuvan, Tsengel-Monchak, Dukhan and Tuhan with Mongolian, and Jungar Tuvan with Kazakh, Chinese and Mongolian—these various Sayan Turkic lects nevertheless share a number of features that distinguish them from other subgroups of Turkic varieties. One such feature is the pervasive use of the multi-functional converb in *-GAš* in its various allomorphic realizations, and derivatives thereof. To be sure, a cognate element is found in a number of other Turkic languages and groups, but these show either only a subset of the functions found in the Sayan Turkic varieties or even single functions associated with it, and the multifunctional use of *-GAš* can be considered one of the defining characteristics of the Sayan Turkic group.

In this study I discuss some of the most typical functions of the *-GAš* converb and various morphologically complex converb forms that are derived from this basic element across the different Sayan Turkic varieties. We first start with a basic overview of the functional domains in which this converb element is found in Sayan Turkic (1.1) and offer some background information on it and on converb formations as a whole in Turkic, and then turn to a brief presentation of the morphophonology of the converb in the Sayan Turkic varieties in 1.2. Section 2 examines temporal interpretations of complex sentences with this element, including anteriority and quasi-simultaneity, and section 3 discusses formations that appear to be pushing the *-GAš* form into the finite verbal system as an anterior TAM marker. Section 4 presents perhaps the most salient and common feature across the Sayan Turkic lects: its propulsive function in advancing narrative discourse. Section 5 discusses a further specialization: a functional opposition that has developed in various Sayan Turkic varieties and is suggestive of a grammaticalization of the element as a same-subject marker within a system of switch-reference. Section 6 discusses a related discourse function also found in a subset of Sayan Turkic lects that can be described as a system of tail-to-head linkage. Section 7 introduces examples of the replacement by *-GAš* of the *-p* converb in auxiliary verb constructions in certain endangered Sayan Turkic varieties. Section 8 examines causal functions and section 9 purposive functions of *-GAš*-marked forms. Section 10 examines case-marked forms of *-GAš*. Section 11 details how the functional characteristics of the *-GAš* converb in Sayan Turkic varieties differ from, or have analogs in, other Turkic languages where the element is found. Section 12 summarizes these findings.

1.1 On the functions of the converb *-GAš* in Sayan vs. other Turkic languages

Before launching into a discussion of what the functions of the multi-functional converb *-GAš* in Sayan Turkic languages are, some comments on the nature of converbs in Turkic languages as a whole need to be made to situate this element within the typology of Turkic converbs and converb formations. According to Johanson (1995: 313), converb segments (usually = clauses) are formally non-finite units constructionally subordinated syntactically to a base segment (a finite clause) provided with suffixed subjunctors (the converb). In terms of the referential domains of the

converb clause, Johanson distinguishes several levels of their distribution and use, relating to the relationship between the actants in the converb clause and the base clause, and the degree of integration of the two clauses. The converb clause can have a separate and individually expressed subject at “Level 1” of this formal-functional cline (Johanson 1995: 313). Level 2 (Johanson 1995: 314) requires both the converb clause and the base clause to have the same “first actant” (= subject). This in turn feeds fusion and monoclausality, either in lexicalized or conventionalized formations like Turkish *al-^vp gel-* [take-IP.CV come] ‘bring’¹ where little to no material is permitted between the two elements at Level 3 (Johanson 1995: 315), but where both parts clearly contribute lexical meaning to the resulting form, i.e., within a serialization-like structure. There are also ambiguous forms allowing for lexical and grammatical interpretations at Level 4, as in Kyrgyz (Johanson 1995: 315) *oqu-p tur-du* which can mean either [read-IP.CV stand-DI.PST] ‘he read and then stood up’ or mean [read-IP.CV STAND.AUX-DI.PST] ‘he kept reading’ (although these can most likely be distinguished intonationally). Such converb+base clause forms thus ultimately can become fully conventionalized with the base segment undergoing semantic bleaching and yielding postterminal and intraterminal TAM forms (Johanson 1995: 315) as grammaticalized auxiliary verb formations (Anderson 2004), and also encoding a range of voice/version (Anderson 2001) or orientation meanings.² Further, specific converb forms—especially ones based on *de-* ‘say’ but also on *bol-* ‘be’—can be grammaticalized as markers of cause or purpose as well (Johanson 1995).

According to Johanson (1995: 316), converbs bear no mood markers, no ordinary tense markers, and only a restricted set of aspect markers and seldom person/number markers for subjects.³ All of these are strictly speaking true of the *-GAŠ* converb in Sayan Turkic, which appears to largely be a canonical Level-2 converb. Functionally speaking Johanson (1995: 317) states that “converb markers...are, as a rule, strictly monofunctional”.⁴ Functional expansions or paths of development how-

1 Fully lexicalized and unverbated forms are also found, such as Xakas *ayıl-* < **a(lip) kil-* where the back vocalism of the first root wins out but Tuvan *ekel-* < **a(lip) kel-*, where it is rather the vocalism of the second root that determines the vocalism of the resulting word, while in both instances, the stem-final *-l* and the converb of the original first word in these lexicalized forms are elided.

2 Some of these grammaticalized constructions (i.e., typically from Level 4) indeed reflect serialized deictic motion formations in their origins (i.e., rather coming from Level 3).

3 But note that subject marking is possible with this in the cognate element in the Kyzyl sub-dialect of the Eastern dialect of Bashkir:

(i) Bashkir, Eastern dialect, Kyzyl sub-dialect (Maksjutova 1976: 279)

<i>al-gas-īm</i>	<i>eštē-mē-gēs-ēm</i>
take-GAŠ.CV-1	work-NEG-GAŠ.CV-1
‘I having taken, taking’	‘I having not worked, not working’

4 This is however definitely not true of the *-GAŠ* converb in Sayan Turkic, even with the normal paths of development that Johanson mentions (1971, 1975, 1988, 1990, 1991,

ever are found (Johanson 1995: 321) such as relative anteriority, adverbial “after” clauses coming to encode postterminality or terminality, and causal or purposive semantics. All such developments characterize the *-GAš* converb across the Sayan Turkic varieties. When non-modifying, converb clauses can encode events of equal narrative rank (Johanson 1995: 322),⁵ and thus one finds a mismatch between the structural relations, i.e., one of subordination, and the semantic relations, i.e., one of coordination of the predicated events. It is with this latter domain that the present study is largely concerned, as this is the most salient function of the *-GAš* converb in Sayan Turkic varieties.

Some converbs are unanalyzable, historically speaking, in terms of known etymological origins. While lacking in the runic Old Turkic sources, *-yač* (etc.) constitutes one of these so-called “group 1” (historically unanalyzable) type of converbs in Turkic like *-A/I/-y* and *-p* (Johanson 1995: 317).⁶ These converbs typically belong to the Level 2 functional distribution mentioned above, i.e., with first actant/subject coreference between the converb clause and the base clause. Johanson’s so-called “group 3” converbs consist of what otherwise appear to be prototypical participles that are marked by case and may permit marking of the subject of the converb clause; unsurprisingly these typically operate at functional Level 1, where first actant co-reference is not required (Johanson 1995: 318). Characteristically a given converb shows strong statistical tendencies towards one or the other preferred contexts, either with or without co-reference of actants. How this type of coreference of actants between converb clauses and base clauses is defined can vary in specific languages, as shown below, even within the cluster under investigation here, Sayan Turkic.

1993, 1995, 1996, 2005), as this element covers many informational domains including ones not enumerated in those studies.

- 5 While Johanson mentions that non-modifying converb clauses (Johanson 1995: 322) can be interpreted as foregrounded or new information, and *-GAš* in Tuvan and related varieties is described as a non-modifying terminal converb (Johanson 1995: 324), albeit one that vacillates between postterminal and terminal semantics, and between circumstantial and narratively equal events (Johanson 1995: 326), the use of *-GAš* in some Dukhan (Ragagnin 2011) texts to encode tail-to-head linkage shows that, at least in certain Sayan Turkic varieties, it does precisely the opposite, i.e., encodes backgrounded or old information, although such forms are indeed non-modifying in Johanson’s sense by being under the temporal, modal and illocutionary force of the base clause (Johanson 1995: 323). Both these and the terminal satellites conveyed for example by the *-ARGA.CV* in Todzhu mentioned below serve this same function, see below.
- 6 A similar converb form in *-yat* is found in Mongolic, which could suggest a copy phenomenon or borrowing scenario, but the directionality of this process is debatable, i.e., from Mongolic into Turkic or from Turkic into Mongolic. Of course, within the Altaic or Transeurasian theory, these could simply be considered to instantiate cognate reflexes of a Proto-Transeurasian (Proto-Altaic) converb form as well.

The functions of the *-GAš* converb in Sayan Turkic languages cover a somewhat wider range of functional domains than discussed by Johanson (1995) but they all form a logical network of extensions of the meanings discussed there. Narrative propulsion and anteriority are logically connected: X happens/happened and then Y. A further related nuance in this domain is the causal construction: because of X, then Y can/could happen. In some sense related to this, but with the inverse relation in the predicated event semantics between the two clauses—that is, one in which the relation of the event predicated by X, or the converb clause, is dictated by that of Y, the base clause—is what underlies the purposive marked clause; i.e., Y occurs, in order for X to occur. Such interpretations were sufficiently common in Sayan Turkic varieties to have lexicalized or grammaticalized certain constructional uses of the verb *de-* ‘say’ in this converb form, viz. *deeš/dääs/tääs/teeš*, etc., particularly with a verb in the aorist participle/intraterminal verbal noun form in *-Vr*, to become specialized as a purposive subordinator across the Sayan Turkic varieties (sometimes as a causal subordinator as well). In Central and Standard Tuvan *deeš* now permits nominal complements as well, and functions as a postposition. In its narrative propulsive function, the *-GAš* converb is typically a Level 2 element in Johanson’s (1995) typology, with a strong preference for first actant/subject continuity co-reference between the converb clause and the basic clause. As such it is not surprising that it has been reinterpreted as a same-subject marker in such Sayan Turkic lects as Todzhu and Tofan. A different but related functional specialization seems to have occurred in Dukhan where strings of such *-GAš*-marked forms chain into sets of sentences in chunks of discourse where each subsequent sentence chains a *-GAš* form of the verb and some attendant arguments—i.e., a non-finite converb clause that recapitulates the preceding sentence’s finite clause—in a pattern known in the typological literature as tail-to-head linkage. A specific further realization, instantiation or extension of this across many of the Sayan Turkic lects is the use of the *-GAš* form of the pronominal verb stem *inĵa-* or various derived forms thereof, e.g., *inĵa-n* or *inĵa-l*, and indeed case-marked forms of the *-GAš* forms of these too, to function as a kind of default narrative event chaining device, and often rendered in translations as ‘(doing) thus, (doing) so’, ‘it being so’, ‘therefore’, ‘thus’, etc. A further but different extension of the propulsive semantics of the *-GAš* converb is temporal anteriority of course, and in turn, this has enabled certain Sayan Turkic lects to permit sentences that have a predicate marked only by the *-GAš* form in an emergent, quasi-finite function, as a kind of anterior TAM marker. In addition to temporal anteriority, some varieties permit temporal simultaneity to be expressed by the *-GAš* form as well, more like *to Y (basic clause) while X-ing (converb clause)*.

Terminologically, the *-GAš* element is known in Tuvan linguistics as the “past converb form” (Isxakov & Pal’mbox 1961: 330). This is also what Rassadin (1978: 178) calls the same form in Tofa(lar), while Rassadin (2010: 25) calls this element the *converbum perfecti* in his analysis of Soyot. Mawkanuli (1999: 194) just calls it a converb and gives no other details about it in Jungar Tuvan. Ragagnin (2009: 234)

also refers to the element *-GAs* in Tuhan simply as a converb,⁷ while Ragagnin (2011: 141) defines the *-GAš* element in Dukhan as “a syndetic and non-modifying converb that refers to events of equal narrative value with the event of the head clause”, i.e., something approximating a semantically coordinative but syntactically subordinating element.

1.2 On the morphophonology of *-GAš*

As a velar initial element, in Sayan Turkic the converb *-GAš* undergoes some significant morphophonological alternations. First consider the initial consonant: After stems ending in voiceless consonants, archiphonemic *-G* is realized as a voiceless front or back velar/uvular stop in most of the Sayan Turkic varieties, e.g., as *q-* or *k-* *at-qaš* [throw-*GAš*.CV] or *čet-keš* [reach-*GAš*.CV]. After stems ending in nasals or liquids/rhotics, there is a voiced realization of the initial consonant, varying between front and back articulations based on the vocalism of the stem, and alternatively appearing as a voiced fricative (*ɣ*, sometimes phonetically *ʁ*) or a voiced stop (*g*, also sometimes phonetically a voiced uvular stop *ɣ*) *kel-geš* [come-*GAš*.CV], *al-yaš* [take-*GAš*.CV], with the default realizations across the various Sayan Turkic lects being *ɣ/ʁ* with back vocalism stems and *g* with front vocalism in such contexts; i.e., the fricative realizations are more common overall as a whole with back vowel stems, with individual variations attested in specific varieties.

After stems ending in short vowels, the velar is elided and a secondary long vowel produced, usually with unrounded low vowels, thus replacing high vowels in the stem, e.g., *čoru* > *čora-aš* < **čoru-yaš*, with */*uɣa*/ > [*aa*]. Sometimes, as in Tofan, a stem-final voiced velar will be elided but with no coalescence of the vowels, e.g. *čug-* ‘wash’ > *čuaš*. Other times there is degemination, e.g., *deg* > *degeš* with reduction of geminate /*gg*/ > [*g*] (Rassadin 1978: 179). Stems that end in long vowels take the voiced consonant-initial variants, as triple long vowels are not permitted in Sayan Turkic languages, as in Tuvan *xuvaa-yaš*, cf. *xuvaa-yan* ‘divided’ < *xuvaa+GAN* [divide-GAN.PST] (Anderson & Harrison 1999: 40). With a small number of short front vowel stems of the shape CV-, the resulting long vowel is not *-ee-* but rather *-ää-* in Tofan (Rassadin 1978: 179), e.g., *či-* ‘eat’ > *čääš* and *dä-* ‘say’ > *dääš*.

2. Temporal interpretations of *-GAš* clauses: Anteriority, simultaneity

A range of different temporal interpretations can be found with respect to the relationship of the event encoded in the *-GAš* marked converb clause to that of the base clause. Most typically this is a relationship of anteriority, where the converb clause event precedes the event of the base clause. Such interpretations are found

7 But she notes the unexpected change of final *-š* > *-s* in this form not shared by other Sayan Turkic varieties, nor indeed other words in Tuhan, where one finds the expected final *-š*.

across the Sayan Turkic lects, for example in Central Tuvan (1), Dukhan (2), Monchak or Altai-Tsengel Tuvan (3), Soyot (4), and Tofan (5)–(6).

- (1) Central Tuvan of Tuva (Voinov 2014: 153)
Bagay kadarčī meni öřše-ep kör-üñer... at+siv-ñar-nī
 lowly shepherd I:ACC show.mercy-IP.CV AUX.ATT/POL-2PL name-POSS2PL-ACC
dīñna-aš kayga-ar-īm at-tīg bol-du ñar.
 hear-GAŠ.CV amazed-INTRATERM.VN-POSS1SG name-ADJ be-DI.PST POL
 ‘Please (try to) forgive me, a lowly shepherd...(when) I heard your name, it was a name that amazed me.’
- (2) Dukhan (Ragagnin 2011: 140)
Po uləs-tar ĵora-aš gotə pa^ht-a pa-ar pis.
 this people-PL move-GAŠ.CV down sink-A.CV go-AOR 1PL
 ‘After these people have gone, we move downwards.’
- (3) Altai-Tsengel Tuvan (Aydemir 2009: 57)
Ĵariš do:z-ul-yaš ĵariš-ya ġir-gen bar amītan-nar
 bet end-PSV-GAŠ.CV bet-DAT enter-POSTTERM.VN all living-PL
ĵan-īp olur-arda ...
 return-IP.CV SIT.AUX-ARDA.CV
 ‘After the bet came to an end all the living beings who participated in the bet were returning home...’
- (4) Soyot (Rassadin 2010: 54)
Ĵala-aš kel-ğän.
 invite-GAŠ.CV come-GAN.PST
 ‘They invited him, and he came.’
- (5) Tofan (Field Notes)
...korñā-a-n tut-kaš am ĩnda čerle-j ber-gen ĩhi-jään.
 wife-POSS3-ACC take-GAŠ.CV now there live-A.CV AUX.INCH-GAN.PST two-COLL
 ‘...he took [her] as his wife and started to live there together with her.’
- (6) Tofan (Field Notes)
Čıl bol-yaš čaa bol-u ver-gen.
 year be-GAŠ.CV war be-A.CV AUX.INCH-GAN.PST
 ‘A year passed and the war started.’

In some instances the relationship between the converb clause and the base clause is one of immediate anteriority, such that there is very little elapsed time between the event of the converb clause and that of the base clause. This interpretation can also be found in a range of Sayan Turkic lects, such as Monchak/Altai-Tsengel Tuvan (7) and Soyot (8).

- (7) Altai-Tsengel Tuvan (Taube 2008: 119)
Taraq jaž-ï möndüre-eš xar-ya jüge düž-er-il?
 eye tear-POSS3 pour-GAŠ.CV snow-DAT why fall-AOR-3PRON.COP
 ‘Why do tears pour out and fall onto the snow?’
- (8) Soyot (Rassadin 2010: 54)
Čihälä-p⁸ kel-dır-gän bod-ın-dan aray burın
 go.directly.before-IP.CV arrive-CAUS-GAN.PST self-POSS3-ABL just front
eerän šäs-ı-ŋa eşir kel-ıp qon-yaš
 shaman’s.amulet directly.in.the.middle-POSS3-DAT eagle come-IP.CV land-GAŠ.CV
bod-ın-gıdı gö-ör bol-yan.
 self-POSS3-ALL see-AOR AUX.INCH-GAN.PST
 ‘Directly before her arrival, an eagle flew in and landed on the middle of the amulet and began looking at itself.’
- In yet other instances, the two actions are in a relationship of simultaneity. Such forms are found in such Sayan Turkic lects as Soyot (9)–(10) or Standard Tuvan (11)–(12).
- (9) Soyot (Rassadin 2010: 53)
Ašta-aš jımä-sın-den ji-p tur-ar bol-yan.
 hunger-GAŠ.CV thing-POSS3-ABL eat-IP.CV STAND.AUX-AOR BE.AUX-GAN.PST
 ‘Being hungry, he ate from that thing.’
- (10) Soyot (Rassadin 2010: 54)
Ät čet-käš čora-an.
 horse lead-GAŠ.CV move-GAN.PST
 ‘They set out, leading the horse on.’
- (11) Standard Tuvan of Tuva (Aydemir 2009: 55; Isxakov & Pal’mbax 1961: 332)
Čarāz-ı-n čiyla-aš it tot-pas.
 saliva-POSS3-ACC lick-GAŠ.CV dog satiated-NEG.AOR
 ‘A dog will not get full licking its spit.’
- (12) Standard Tuvan of Tuva (Aydemir 2009: 55; Isxakov & Pal’mbax 1961: 332)
Damıraq-tar čiıl-yaš xem bol-ur.
 source.stream-PL gather-GAŠ.CV river become-AOR
 ‘When streams gather together, they become a river.’

8 The so-called pharyngealized (phonetically low pitch) vowels in Sayan Turkic are represented here as in Anderson & Harrison (1999) by *ı*, *ù*, *à*, etc.

This simultaneity is sometimes best rendered in translation by an adverbially subordinate temporal clause headed by “while” in English translations. This function of *-GAš* can be found in Central Tuvan (13).

- (13) Central Tuvan of Tuva (Anderson & Harrison 1999: 58)
Kizil čor-up or-gaš oruk-ka xoy-nu kör-dü-m.
 Kyzyl go-IP.CV AUX-GAŠ.CV road-DAT sheep-ACC see-DI.PST-1
 ‘While going to Kyzyl, I saw a sheep in the road.’

3. Finite functions of *-GAš*?

The notion of anteriority may be at the heart of what appears to be finite uses of *-GAš* converb forms in various Sayan Turkic lects, where no other verb appears. Thus it seems that in a small number of instances, there appears to be an incipient grammaticalization of this element, in such forms, into an anterior TAM marker. Such quasi-finite uses of *-GAš* forms can be found in Monchak or Altai-Tsengel Tuvan (14), or in Standard Tuvan (15).

- (14) Altai-Tsengel Tuvan (Taube 2008: 198)
Seziktig serviŋne-eš ĵärlïy sïrvaŋna-aš.
 suspicious look.here.and.there-GAŠ.CV mangy wag.tail-GAŠ.CV
 ‘The suspicious one looks here and there, the mangy one wags its tail.’
- (15) Standard Tuvan (Delger-Ool 1960: 122)
Biče-m-de sayazanakta-p čora-an
 childhood-POSS1SG-LOC play-IP.CV AUX.DUR-POSTTERM.VN
čer-ler-im-ni kör-geš.
 place-PL-POSS1SG-ACC see-<GAŠ.CV=ANT>
 ‘I saw places where I used to play in my childhood.’

It is possible that there is at least one instance of this in Dukhan, based on the following example (16):

- (16) Dukhan (Ragagnin 2011: 195–196)
Höngen gïl-ärda e^hxe-le-eš-təŋ suy i^hsə-t-keš
 höngen.bread make-ARDA.CV begin-V.DER-GAŠ.CV-GEN water hot-CAUS-GAŠ.CV
tus gut-kaš.
 salt put(.in)-GAŠ.CV
 ‘To make *höngen* bread, first of all one heats up water and puts salt in.’

4. Narrative propulsion

Far and away the most common function of the *-GAš* converb across the various Sayan Turkic lects is as a propulsive narrative device used to advance the events of a plot line or a conversation. In such a function, it is found statistically overwhelm-

ingly in same-subject contexts, thus it canonically instantiates a Level-2 converb in Johanson's (1995) typology. These forms therefore show a mismatch in the morpho-syntax and semantic relations between the converb clause and the base clause: semantically they are coordinate, but syntactically subordinate.

This narrative propulsion use of the converb *-GAš* occurs with a wide range of inflectional forms of verbs in the base clauses, including imperatives (17), for example, in Central Tuvan.

- (17) Central Tuvan of Tuva (Voinov 2014: 138)

Ol nom-nu a-p al-gaš olur=am.
that book-ACC take-IP.CV SBEN-GAŠ.CV sit=POL
'Please take that book and sit down!'

It very frequently occurs in past forms, as in Altai-Tsengel Tuvan (18), Soyot (19), Dukhan (20) or Jungar Tuvan (21):

- (18) Altai-Tsengel Tuvan (Taube 2008: 150)

Bay-niŋ baylı-ı-n gör-geš Balyınaq ıziq-ba-an.
rich-GEN wealth-POSS3-ACC see-GAŠ.CV Balginaq fall-NEG-GAN.PST
'Balginaq saw the wealth of the rich and did not fall down.'

- (19) Soyot (Rassadin 2010: 54)

Šej dül-gäš jime tavaqta-aš sal-ıp
tea put.to.boil-GAŠ.CV thing pour.into.bowl.as.meal-GAŠ.CV put-IP.CV
ber-gän.
BEN-GAN.PST
'They set tea to boil, laid out something to eat.'

- (20) Dukhan (Ragagnin 2011: 107)

On jetä gar je^ht-keš gesä-l-ə ün-gen.
17 snow reach-GAŠ.CV wander-MED-A.CV exit-GAN.PST
'I reached 17 and started wandering around.'

- (21) Jungar Tuvan (Mawkanuli 2005: 115: 1)

Onu al-gaš žor-up olur-up xanas-ka bar-gaš bis-tiŋ
3.ACC take-GAŠ.CV move-IP.CV SIT.AUX-IP.CV Kanas-DAT go-GAŠ.CV we-GEN
xuda-bis bol-ur giži-niŋ urug-lar-ı-niŋ žada-a-ŋga
in-law-POSS1PL be-INTRATERM.VN person-GEN girl-PL-POSS3-GEN dorm-POSS3-DAT
bar-dı-m.
go-DI.PST-1SG
'After I took it (the letter) I set off and went towards Kanas and I went to the dormitory of the girls whose father is one of our in-laws.'

So too does it occur with non-past marked forms with present tense interpretations, e.g., in Altai-Tsengel Tuvan (22), Dukhan (23) or Soyot (24).

- (22) Altai-Tsengel Tuvan (Aydemir 2009: 57)

Γagy-īm gel-geš šīda-vayn duru men.
 laughter-POSS1SG come-GAŠ.CV CAP-NEG.CV STAND.AUX 1SG
 ‘When I start laughing I can’t stop.’

- (23) Dukhan (Ragagnin 2011: 118, 74)

Am po tayga-nəŋ urəŋ-lar-ə pol-sa on üš nasən-dan
 now this taiga-GEN child-PL-POSS3 become-COND 13 age-ABL
gar-lī-īn-dan e^hxe-le-eš aŋ-nə öören-əp
 snow-ADJ.DER-POSS3-ABL begin-V.DER-GAŠ.CV hunt-ACC learn-IP.CV
e^hxe-le-er.
 begin-V.DER-AOR
 ‘Well, as for the children of this taiga, they start to learn hunting from the age, from the age of thirteen.’

- (24) Soyot (Rassadin 2010: 55, 117)

Ol-güdi gīr-gäš olīr-īp turī
 that-ALL enter-GAŠ.CV sit-IP.CV STAND.AUX[:AOR]
 ‘He goes into it and sits down.’

This also includes so-called narrative present forms, which have non-past marking but logically speaking must be interpreted as past events, as in the following examples from a Dukhan text (25)–(26).

- (25) Dukhan (Ragagnin 2011: 113, 6)

Pil-əp ga-aβət-kaš iŋgay jō-y pa-ar.
 know-IP.CV throw-PRF-GAŠ.CV further move-A.CV go-AOR
 ‘He notices it and moves away.’

- (26) Dukhan (Ragagnin 2011: 113, 50)

Hāāg-ə-n sal-aβət-kaš jīnger-te-n-əp pa^ht-a pa-ar.
 willow-POSS3-ACC leave-PRF-GAŠ.CV tumble-V.DER-MED-GAŠ.CV sink-A.CV go-AOR
 ‘He lets go of his willow-twigs and goes tumbling down.’

The *-GAš* form of the converb also occurs in formations of this type, quite typically with non-past forms with future interpretations in Altai-Tsengel Tuvan (27), Todzhu (28), Dukhan (29) or Tuvan (30).

- (27) Altai-Tsengel Tuvan (Taube 2008: 126)
Ĵávaazaq-ti azıra-aš ĵal-ĩ-n ĵüge gez-er=il?
 two.year.old-ACC strip-GAŠ.CV mane-POSS3-ACC why cut-AOR=3PRON.COP
 ‘After one has shorn the two-year-old, why will one cut the mane?’
- (28) Todzhu (Bergelson & Kibrik 1995: 376)
Ava-m inek-ti saap-kaš čan-ĩp kel-ir.
 mother-POSS1SG cow-ACC milk-GAŠ.CV return-IP.CV CLOC-AOR
 ‘My mother will milk the cow and return home.’
- (29) Dukhan (Ragagnin 2011: 113, 46)
Irey-əβas üš hon-gaš ñan-əp ge-er.
 old.man-POSS1PL three spend.night-GAŠ.CV return-IP.CV come-AOR
 ‘Our old man will be back in three days.’
- (30) Tuvan (Ragagnin 2009: 234)
Hi hon-gas gel-ir.
 two spend.night-GAŠ.CV come-AOR
 ‘(S)he will come in two days.’

Long strings of semantically coordinated events can be marked by this conjunctive or narratively propulsive converb in *-GAš* in the Sayan Turkic varieties. One such example can be seen in the following sentence from Jungar Tuvan (31).⁹

- (31) Jungar Tuvan (Geng Shimin 2000: 52, 43)
Qayay ö-ön-gä ĵügür-üp gel-geš bičii ool-dar-ĩ-n
 sow house-POSS3-DAT run-IP.CV CLOC-GAŠ.CV small son-PL-POSS3-ACC
balyaş-tan dur-γuz-up al-yaš süit iš-tir[i]-geš
 mud-ABL stand-CAUS-IP.CV SBEN-GAŠ.CV milk drink-CAUS-GAŠ.CV
ö-ön-gä giir-geš ool-dar-ĩ-n sawın
 house-POSS3-DAT enter:CAUS-GAŠ.CV son-PL-POSS3-ACC hay
döžä-än-gä ĵit-qır-yaš eji-i-n bižix dekpilä-äš bod-u
 bed-POSS3-DAT lie-CAUS-GAŠ.CV door-POSS3-ACC firmly lock-GAŠ.CV self-POSS3
ool-dar-ĩ-nıñ qıdı-ın-ya ĵid-a (w)al-dı.
 son-PL-POSS3-GEN side-POSS3-DAT lie-A.CV TAKE.AUX-DI.PST
 ‘The sow ran to her house, took up her little sons from the mud and nursed them, then entered the house, let the children lie on the dried hay, firmly locked the door, then lay down at the side of her children.’

Such syndetic or conjunctive converbs are perfect for narrative event chaining. In other Turkic languages that do not make use of the *-GAš* converb as do the Sayan

9 Of course, such strings are indeed also reminiscent of same-subject formations in Tofan and Todzhu; see 5.1 below. Jungar Tuvan likely instantiates this pattern here also.

Turkic varieties, such strings are typically marked by forms with the *-p* converb, as in the following examples from Kyrgyz (32) and Middle Chulym (33).

- (32) Kyrgyz (Imart 1981: 600; Johanson 1995: 329)

Men erteŋ menen tur-up zaryadka žasa-p kiyin-ip
 I morning INS stand-IP.CV gymnastics do-IP.CV dress:RFLXV-IP.CV
žu:n-up čay išip mektep-ke bar-a-žat-a-m.
 wash:RFLXV-IP.CV tea drink-IP.CV school-DAT go-A.CV-LIE.AUX-PRS-1SG
 'In the morning I get up, exercise, dress and wash myself, eat breakfast (lit. drink tea) and go to school.'

- (33) Middle Chulym (Field Notes)

Mān pir kanza tarta-p anzondin pičay a-p
 I one pipe pull-IP.CV then knife take-IP.CV
anī soyu-p eed-i-n käme-zi-m-ge¹⁰ sa-p
 3.ACC skin-IP.CV meat-POSS3-ACC boat-POSS3-POSS1SG-DAT put-IP.CV
äp-ke čan pa-ya-m.
 house-DAT return AUX.TLOC-GAN.PST-1SG
 'I smoked one pipe (of tobacco), then I took out my knife, skinned it, put its meat in my boat, and returned home.'

5. Switch-reference

Given this predilection to conjunctive chaining in a narratively propulsive manner, and that the overwhelming majority of such forms share the subject or first actant between the converb marked clause(s) and the base clause, it is not too difficult to imagine how certain Sayan Turkic lects have conventionalized this as encoding same-subject in a switch-reference system. This appears to be the case in both Tofan and in Todzhu (Bergelson & Kibrik 1987a, 1987b, 1995), two of the taiga lects of Sayan Turkic. Other Sayan Turkic lects show this as well, especially Soyot, Jungar Tuvan and, to a certain extent, Central Tuvan, but not literary Standard Tuvan.

Switch-reference is a formal mechanism used for tracking subject continuity or discontinuity within complex sentences employed in numerous languages around the globe. There are generally speaking two basic categories which may (or may not) both receive formal marking within a given language, namely same-subject marking and different-subject marking; other, finer gradations within same- or different-subject marking or more restricted systems are also found. The former construction marks subject continuity across components of a complex sentence, while the latter conversely marks subject discontinuity. First identified by Jacobsen (1967), switch-

10 As a critically endangered language, Middle Chulym is showing signs of language attrition such as overgeneralization of third singular possessive markers (or possible full re-grammaticalization of these as definite markers) even in forms also taking other personal possessive marking such as this one.

reference can now be said, contra Haiman (1983), not to be especially exotic or unusual. Most noteworthy in the present context is the pioneering work on the switch-reference system in Todzhu in Bergelson & Kibrik (1987a/b, 1995). Other studies on switch-reference generally or in specific languages include non-exhaustively, MacKenzie (2007, 2010), Nichols (2000), Stirling (1993), Rising (1992), Roberts (1988, 1997), Tsujimura (1987), Finer (1985), and Munro (1979). In fact, representative languages with formal switch-reference systems may be found in all corners of the earth, for example in the Trans-New Guinea languages Kewa (34) or Usan (35), the Nilotic language Lango (36), the Muskogean languages Koasati (37) and Chickasaw (38), and in Gtaʔ, an Austroasiatic language belonging to the Munda family spoken in eastern India; see (39). The actual formal means of realizing these functional categories, of course, vary significantly from language to language.

- (34) i. Kewa [Engan; Papua New Guinea] ii. Kewa (Foley 1986: 184–185)
Nipú réke-na áгаа lá-ma. *Nipú réke-na áгаа lá-a.*
 he stand-3.DS talk say-1PL.NR.PST he stand-3.DS talk say-3.NR.PST
 ‘He stood up and we talked.’ ‘He_i stood up and he_j talked.’
- (35) i. Usan [Crosilles; Papua New Guinea] ii. Usan (Haiman & Munro 1983: viii)
Ye nam su-ab isomei. *Ye nam su-ine isorei*
 I tree cut-SS I.went.down I tree cut-DS it.went.down
 ‘I cut the tree and went down.’ ‘I cut the tree and it went down.’
- (36) i. Lango [Nilotic; Uganda]
Rwòt ò-pòy-ò ní è-cég-ò dɔlgòlá.
 king 3-remember-PRF COMP 3SS-close-PRF door
 ‘The king_i remembered that he_j closed the door.’
 ii. Lango (Noonan 1992: 199)
Rwòt ò-pòy-ò ní ò-cég-ò dɔ̀gòlá.
 king 3-remember-PRF COMP 3-close-PRF door
 ‘The king_i remembered that s/he_j closed the door.’
- (37) i. Koasati [Muskogean; USA] (Kimball 1991: 523)
Athómma-k yomáhli-n calakkí ho-ká:ha-áhco-k
 Indian-SUBJ go.about.PL-DS cherokee DISTR-say-HAB-IV.PST
 ‘They called the wandering Indians Cherokees.’
 ii. Koasati (Kimball 1991: 91)
Okí-n askáhka-k skalapist-ók anahka-áhci.
 water-OBJ exit.PL-SS mosquito-SUBJ become-PROG
 ‘They come out of the water and turn into mosquitoes.’

- (38) Chickasaw [Muskogean; USA] (Munro 1983: 223)
 i. *hi-ha-cha talowa.* ii. *hi-ha-na talowa.*
 dance-SS.CONJ sing dance-DS.CONJ sing
 'He_i danced and (he_i) sang.' 'He_i danced and he_j sang.'
- (39) i. Gta? [Munda, Austroasiatic; India] (Mahapatra & Zide, no date)
Hɽiŋ oʔɽi=mwa sgwa we-la ɖokra gweʔ=we-ge
 later.on how.much=year like go-DS old.man die=AUX-PST
 'Later on, after like several years passed, the man died.'
 ii. Gta? (Mahapatra & Zide, no date)
ŋku gnag-hwaʔ toʔ-ce ga-ge.
 tiger door-rope open-SS enter-PST
 'The tiger opened the door(-rope) and entered.'

Most languages which have been identified as possessing formal switch-reference systems have basic SOV clausal constituent order; this is not universally the case however.¹¹ In such switch-reference systems, typically the last verb in a series of verb phrases or clauses bears full inflection, the others bearing some formal indication that the verb has either the same subject or a different subject than the one verb in the sentence that bears full inflection (the fully finite verb).¹² Frequently, same-subject constructions lack the redundant marking of subject; in the instance of 'different-subject' marking, the verb may bear a marker of its own subject, in addition to a morphological 'different-subject' marker.

The languages of the world can be categorized into four broad groups with respect to switch-reference marking (40).¹³ Sayan Turkic varieties belong to Type A, where both same-subject and different-subject receive formal indexing.

(40) Formal Switch-reference Systems

	Same-Subject	Different-Subject
A)	+	+
B)	+	–
C)	–	+
D)	–	–

11 For example the Lango example in (36) above, in which the basic clause structure is VSO.

12 In VSO languages, naturally, it is the first verb that bears full finite inflection, and all following verbs that operate within the switch-reference system bear an indication of subject (dis)continuity. That is, in these forms one sees the mirror image or inverse pattern of what is typically found in SOV languages. Note that in Lango, only same-subject receives formal marking; so more properly only subject continuity is formally marked in Lango.

13 Actually more, if one includes languages that use unbound particles as switch-reference markers.

Category (A) Languages with a morphological opposition of same-subject vs. different-subject: Koasati (Muskogean); Gta? (Munda, Austroasiatic); Tofan, Todzhu (Turkic)

Category (B) Languages with only same-subject morphologically marked: Lango (Nilotic)

Category (C) Languages with only different-subject morphologically marked: Chalcatongo Mixtec (Mixtecan); Tairora (Papuan)

Category (D) Languages lacking a formal switch-reference system: Khasi (Austroasiatic), Nkore-Kiga (Niger-Congo)

Note that the morphological elements that are used as same-subject and different-subject markers in a given individual language may have other functions, or overlap with other sub-systems of clause-combining in that language. In particular, elements functioning as different-subject markers in narrative genres not infrequently function as markers of conditional, or causally or temporally subordinate clauses in conversational genres. This is important as it provides internal pressure that is potentially in part responsible for the loss or breakdown of a switch-reference system.

As mentioned above, Todzhu and Tofan belong to the group of languages that formally mark both same-subject (5.1) and different-subject (5.2). Each of these subsystems is presented in turn below.

5.1 Same-subject marking

The *-GAš* converb occurs on non-finite verbs in Todzhu that are narratively equal events strung together in contexts of subject or first actant co-reference between the syntactically subordinate converb clause and the finite base clause, as in the following sentence (41).

(41) Todzhu (Bergelson & Kibrik 1995: 376)

Ava-m inek-ti saap-kaš čan-ïp kel-ir.
 mother-POSS1SG cow-ACC milk-GAš.CV return-IP.CV AUX.CLOC-AOR
 ‘My mother will milk the cow and return home.’

Note that this is a condition on co-reference between the *grammatical* subjects of the two clauses, with one notable exception (see 5.2 below). Thus, because passive subject is a grammatical subject, when active and passive clauses are conjunctively strung together in this manner, the same-subject marker appears, regardless of whether the passive or active sentence is linearly first (42)–(43) as long as the two grammatical subjects are co-referential in the complex sentence.

(42) Todzhu (Bergelson & Kibrik 1995: 382)

Ool ava-zïn-ga čug-dur-up al-gaš
 Boy mother-POSS3-DAT wash-<CAUS=PSV>-IP.CV AUX.SBEN-GAš.CV
oyna-p čoru-ur.
 play-IP.CV move-AOR
 ‘After the boy gets washed by his mother, he will go out to play.’

- (43) Todzhu (Bergelson & Kibrik 1995: 382)
Kara-Ool_i akī-zīn-ga_j užuraž-ī ber-geš ol_i aṇaa_j
 Kara-Ool brother-POSS3-DAT meet-A.CV AUX.TLOC-GAŠ.CV 3PRON 3PRON:DAT
ette-d-ir.
 beat-<CAUS=PSV>-AOR
 ‘When Kara-Ool_i meets his older brother_j, he_i will get beaten by him_j.’

Tofan shows basically an identical system for encoding subject co-reference in strings of this sort. -*GAš* is used on non-final verbs, with finite marking on only the final verb in the string (44)–(48).

- (44) Tofan (Field Notes)
Ol kīs kort-kaš sun-u-gen.
 that girl be.scared-GAŠ.CV run-PRF-GAN.PST
 ‘The girl got scared and started running.’
- (45) Tofan (Field Notes)
Oṇ kel-geš mana-v olur
 s/he come-GAŠ.CV wait-IP.CV SIT.AUX.PROG
 ‘He will come and wait.’
- (46) Tofan (Field Notes)
Murgula-aš aṇna-an men.
 blow.murgu-GAŠ.CV hunt-GAN.PST 1SG
 ‘I blew the *murgu* (birch bark hunting horn) and hunted.’
- (47) Tofan (Field Notes)
Oṇ xūn san epte turadi tur-gaš škool(a)-ya [bar-gaš] išten-dir.
 s/he day every early morning get.up-GAŠ.CV school-DAT [go-GAŠ.CV] work-NARR
 ‘Every day she gets up early, goes to school and works.’
- (48) Tofan (Field Notes)
Keṇe arig-da xem xiyi-n-da tur-gaš aza ble
 Evening forest-LOC river edge-POSS3-LOC stand-GAŠ.CV devil with
kooš ble sootaj-īp tur-ar bol-gan.
 evil.spirit with converse-IP.CV STAND.AUX.PROG-AOR BE.AUX-GAN.PST
 ‘In the evening he would stand by a river edge and converse with devils and evil spirits.’

Long strings of same-subject marked verbs may appear in a single sentence, followed by a single finite verb in Tofan, as in example (49).

(49) Tofan (Field Notes)

Ol kiši čüme-si-n bööl-geš boo-si-n al-gaš
 that person thing-POSS3-ACC gather-GAŠ.CV gun-POSS3-ACC take-GAŠ.CV
čid-i-n čari-siη-ga bag-la kat-kaš čiškīn al-gaš
 dog-POSS3-ACC reindeer-POSS3-DAT rope-INS tie-GAŠ.CV food take-GAŠ.CV
talīy-gan.

leave-GAN.PST

‘That person gathered up his things, took his gun ...tied his dog to his reindeer with rope, took food, and left.’

In certain peoples’ speech, the verb bearing the same-subject marker appears in a doubled or reduplicated form, as in (50)–(51). This appears to be used in forms where the action described by the verb is of long duration, thus reflecting an iconic use of reduplication in such formations.

(50) Tofan (Field Notes)

Oy-da ol čerlä-äš čerlä-äš ühe-y ver-gen.
 spring-LOC that live-GAŠ.CV live-GAŠ.CV fly-A.CV AUX.TLOC-GAN.PST
 ‘He was living by that spring (for some time) and flew away.’

(51) Tofan (Field Notes)

Am oη iyla-aš iyla-aš oη toož ühe-y ver-di
 now he cry-GAŠ.CV cry-GAŠ.CV he also fly-A.CV AUX.TLOC-REC.PST
 ‘Then he cried and cried and also flew away.’

Other Sayan Turkic varieties show similar tendencies for the use of *-GAš* as a same-subject marker, e.g., in Central Tuvan (52)–(53).

(52) Central Tuvan (Anderson & Harrison 1999: 85)

Öörenikči čoruk-če kör-geš xarīla-an
 student drawing-ALL look-GAŠ.CV answer-GAN.PST
 ‘The student looked at the drawing and answered.’

(53) Central Tuvan (Anderson & Harrison 1999: 85)

Nom-nu nomca-aš ol kiži-niη čurttalga-zī-n
 book-ACC read-GAŠ.CV that person-GEN life-POSS3-ACC
šuptu-zu-n bil-ip al-dī-m.
 all-POSS3-ACC know-IP.CV AUX.SUBJ.VERS-REC.PST-1SG
 ‘I read the book and found out everything about his life.’

Perhaps unsurprisingly, given the similarity between Soyot and Tofan, the texts in Rassadin (2010) suggest that the critically endangered Sayan Turkic variety Soyot makes/made use of this narrative device as well.

- (54) Soyot (Rassadin 2010: 53)
Ašta-aš suysa-aš pišä-ä bılä kəs-ıp kör-gän.
 hunger-GAŠ.CV thirsty-GAŠ.CV knife-POSS3 INS cut-IP.CV AUX.ATT-GAN.PST
 ‘He was hungry and thirsty and tried to cut it with his knife.’
- (55) Soyot (Rassadin 2010: 54)
Kır-ıp kel-gäš biyä ayaq-qa šäy-ın iş-käš
 enter-IP.CV AUX.CLOC-GAŠ.CV DEM cup-DAT tea-POSS3-ACC drink-GAŠ.CV
ışt-ım aarı-y ber-dı dep
 stomach-POSS1SG be.ill-A.CV AUX.INCH-DI.PST say-IP.CV
 ‘Returning, he drank his tea (that had been poured out) into that cup and said “my stomach was hurting”.’
- (56) Soyot (Rassadin 2010: 55)
Ol-güdi gir-gäš olır-ıp turı
 that-ALL enter-GAŠ.CV sit-IP.CV STAND.AUX.PRS[:AOR]
 ‘He goes into it and sits down.’
- (57) Soyot (Rassadin 2010: 54)
Şey dül-gäš jıme tavaqta-aš sal-ıp
 tea put.to.boil-GAŠ.CV thing pour.into.bowl.as.meal-GAŠ.CV put-IP.CV
ber-gän.
 AUX.BEN-GAN.PST
 ‘They set tea to boil, laid out something to eat.’
- Jungar Tuvan (58)–(59, the latter repeating 21) also reveals strings of semantically coordinate but syntactically subordinate clauses in narratives using -GAŠ on non-final clauses under conditions of subject co-reference, albeit not as frequently as in Tofan or Todzhu.
- (58) Jungar Tuvan (Geng Shimin 2000: 49)
Ooŋ so-on-da uruy dalaš-payın olur-yaš ada-zın-ya
 PRON3:GEN after-POSS3-LOC daughter hurry-NEG.CV SIT.AUX-GAŠ.CV father-POSS3-DAT
ayt-ıptur.
 say-PST.NARR
 ‘Then the daughter, having no hurry, said to her father.’
- (59) Jungar Tuvan (Mawkanuli 2005: 115: 1)
Onu al-gaš žor-up olur-up xanas-ka bar-gaš bis-tiŋ
 PRON3.ACC take-GAŠ.CV move-IP.CV SIT.AUX-IP.CV Kanas-DAT go-GAŠ.CV we-GEN
xuda-bis bol-ur giži-niŋ urug-lar-ı-niŋ žada-a-ŋga
 in-law-POSS.1PL be-INTRATERM.VN person-GEN girl-PL-POSS3-GEN dorm-POSS3-DAT

bar-dī-m.

go-DI.PST-1

‘After I took it (the letter) I set off and went towards Kanas, and I went to the dormitory of the girls whose father is one of our in-laws.’

Other Sayan Turkic lects show *-GAš* in a same-subject role as well, stringing together semantically coordinate narratively equal events, but ones marked as syntactically subordinate. Examples of this sort can be found in both Monchak/Altai-Tsengel Tuvan (60) and in Dukhan (61).

- (60) Altai-Tsengel Tuvan (Aydemir 2009: 54)

Ād-ī-n sood-yaš döžek yaɣdīr-yaš udu-du.
horse-POSS3-ACC tie.up.to.rest-GAš.CV bed prepare-GAš.CV sleep-DI.PST
‘He tied up his horse to rest and made himself a bed, and then he fell asleep.’

- (61) Dukhan (Ragagnin 2011: 140–141)

E^hrten iβa-nə iŋ-kaš o^ht-kar-əp jorə-y geje
morning reindeer-ACC send-GAš.CV grass-V.DER-IP.CV move-A.CV evening
akkel-geš pay-la-ar.
bring-GAš.CV tie-V.DER-AOR
‘One sets free the reindeer, and takes them out to pasture, and the one brings them back in the evening, and ties them up again.’

5.2 Different-subject marking

As stated above, it is not necessary to have a formal contrast between same-subject vs. different-subject in the typology of switch-reference, but Sayan Turkic languages nevertheless show a significant statistical skewing of a particular formation used in a different-subject context as well to express narratively equal events, that *does* appear to formally contrast as a different-subject marker with the same-subject marking in *-GAš*. In Todzhu, different-subject is marked by a *dative* form of the non-past participle or intraterminal verbal noun, i.e., *-Vr-GA*. In third-person forms, no subject index is found in Todzhu, but with first- and second-person subjects, the possessive inflectional series typically appears between the participle or nominalizer and the case index to encode the person and number features of that clause’s subject.

- (62) Todzhu (Bergelson & Kibrik 1995: 376)

Ava-m inek-ti saap-t-arga Kara-Kīs čan-īp
mother-POSS1SG cow-ACC milk-PRF-ARGA.CV Kara-Kīs return-IP.CV
kel-ir.
AUX.CLOC-AOR
‘My mother will milk the cow and Kara-Kīs will return home.’

- (63) Todzhu (Bergelson & Kibrik 1987b: 33–34; Anderson & Harrison 1999: 86)
Koža aal-ga ba-ar/im/ga,
 next village-DAT go-ARGA.CV/POSS1SG/ (=DS),
kiži čok bo-orga
 person NEG.COP BE.AUX-ARGA.CV
udu-vayn=daa čan-ip-kan men.
 sleep-NEG.CV=EMPH return-PRF-GAN.PST 1SG
 ‘I went to the next village, no one was there, so I returned home without spending the night.’

Like the same-subject form, this construction is triggered when the *grammatical* subjects between the converb clause and the base clause are not co-referential. Thus, if the matrix *subject* is coreferent with the converb clause *object* in Todzhu, different-subject marking is found.

- (64) Todzhu (Bergelson & Kibrik 1995: 379)
Ool xana-nĩ dozula-arga ol čaraš apar-gan.
 boy wall-ACC paint-ARGA.CV PRON3 beautiful become-GAN.PST
 ‘The boy painted the wall and it became beautiful.’

The reverse holds true as well, when the matrix clause object is co-referent with the converb clause subject, then different-subject marking is found.

- (65) Todzhu (Bergelson & Kibrik 1995: 379)
Xooray čoru-y ba-ar/im/ga ava-m
 town go-A.CV AUX.TLOC-ARGA.CV/POSS1SG/ mother-POSS1SG
men-i kōr-beyn bar-dĩ.
 PRON1SG-ACC see-NEG.CV AUX-DI.PST
 ‘I went to town and my mother did not see me.’

In Todzhu, so-called ‘dative subjects’ likewise do not count as grammatical subjects for this distribution either, and one therefore finds different-subject marking in such contexts. Thus, even when the actants are indeed *co-referential*, if they are not the *grammatical* subjects in the two clauses concerned, different-subject marking is required (66).

- (66) Todzhu (Bergelson & Kibrik 1995: 381)
*Kara-Ool udu-y beerge/<*ber-geš> aŋaa sook bol-ur.*
 Kara-Ool sleep-A.CV AUX.INCH:ARGA.CV /<AUX-GAŠ.CV> PRON3:DAT cold be-AOR
 ‘If Kara-Ool falls asleep, he will be cold.’

Like *-GAš* forms in same-subject constructions, some different (grammatical) subject constructions can have additional quasi-conditional interpretations in Todzhu as well (67).

- (67) Todzhu (Bergelson & Kibrik 1995: 381)

*Kara-Ool-ga sook boorga <*bol-gaš> ol igla-y beer.*
 Kara-Ool-DAT cold be:ARGA.CV/<be-GAš.CV> 3PRON cry-A.CV AUX.INCH:AOR
 'If Kara-Ool gets cold, he will (start to) cry.'

In Tofan the formal details are slightly different. Here it is typically the *locative* form of the non-past participle or intraterminal verbal noun that is the preferred form in clear different-subject contexts, i.e., *-Arda*. Note that also unlike Todzhu, third person subject may optionally be encoded through the possessive inflectional series in Tofan; compare (68) and (69).

- (68) Tofan (Field Notes)

Čil ert-e vā-är/in/de čaa bol-u ver-gen
 year pass-A.CV AUX.ARDA.CV/POSS3/ war be-A.CV AUX.INCH-GAN.PST
 'A year passed and the war started.'

- (69) Tofan (Field Notes)

Altı hün ert-e vā-ärde toy bol-gan.
 six day pass-A.CV AUX.PFV-ARDA.CV wedding be-GAN.PST
 'Six days passed, and there was a wedding.'

Dative-marked forms of verbal nouns/participles also are skewed significantly to the different-subject context in Tofan, but in such instances the semantic relation between the two clauses is more of temporal adverbial subordination rather than semantic coordination. In other words, dative forms here appear to be both semantically and syntactically subordinate or dependent, whereas the locative-marked ones are semantically coordinate but syntactically subordinate.¹⁴

14 As a whole, Siberian Turkic languages show variation between dative- and locative-marked non-finite structures and indeed between semantically coordinate vs. subordinate interpretations of the syntactically subordinate forms in question, at least translationally. In other words, either coordinate-anterior or adverbial temporally subordinate interpretations are possible in many instances of dative- or locative- marked participle or converb clauses, albeit generally used within different-subject contexts, i.e., ones that lack subject coreference between the component clauses. So examples (ii) and (iii) could just as easily be translated into English with a syntactically subordinate clause (marked by the locative form of the past or non-past participle) headed by an adverbial subordinator "when" and lacking the conjunction at the beginning of the second finite clause; i.e., (ii) could just as felicitously be translated as 'when he got a little closer, his face became visible', etc.

(ii) Khakas (Anderson 1998: 78)

sala čayınna-anda sūray+čüz-ı körin-ıbıs-ken
 a.little come.near-GANDA.CV face-3 be.visible-PRF-GAN.PST
 'He got a little closer, and his face became visible.'

- (70) Tofan (Rassadin 1978: 39)
Čas bol-ī bā-ärge dajgalee-y bā-är.
 spring be-A.CV AUX.INCH-ARGA.CV nomadize.in.taiga-A.CV AUX.INCH-AOR
 ‘When the spring starts, the nomadizing will begin anew.’
- (71) Tofan (Rassadin 1978: 39)
Ol buruḡuu üd-ün-den kö-ör/übüs/ke
 that first hole-POSS3-ABL see-ARGA.CV/1PL/
čü=te közü-l-bes bol-gan.
 what=EMPH be.visible-NEG.AOR BE.AUX-GAN.PST
 ‘When we looked in that first hole, nothing was visible.’
- (72) Tofan (Rassadin 1971: 242)
Kel-ir-ge dilyi ēētīr-adīrī, čü-nü dile-p
 come-ARGA.CV fox ask-NARR/HAB what-ACC search-IP.CV
čoru sler.
 AUX.PROG 2PL
 ‘When they came, the fox asked “What are you searching for?”’

In Central Tuvan, one sometimes finds converbs that are etymologically locative-marked forms of the past participle or (post)terminal verbal noun (*-GAn-dA*) functioning in semantically coordinate structures as well, i.e., as a kind of different-subject marker.

- (iii) Altai-kizhi [S. Altai] (Baskakov 1958: 77)
Ene-si kol=lo ber-erde, uul-ī
 mother-POSS3 hand EMPH give-ARDA.CV son-POSS3
kol-ün d’apas-īp kattap sura-dī ada-m kayda?
 hand-3.ACC squeeze-IP.CV again ask-DI.PST father-POSS1SG where
 ‘The mother offered her hand, and the son squeezed her hand and again asked “Where’s father?”’

In (iv) and (v) we see examples of the unaccomplished form in *-GALAG-* marked by the locative in Shor but dative in Middle Chulym, but with an identical meaning.

- (iv) Shor (Efremov 1984: 69)
Orta čol-ga čet-keleg-im-de, nagbur čibre-p šik-tī.
 middle road-DATreach-UNACMPL-POSS1SG-LOC rain drop-IP.CV AUX.INCH-DI.PST
 ‘I hadn’t yet reached the middle of the road, and the rain began to fall.’
- (v) Middle Chulym (Dul’zon 1960: 121)
Olar orta jol-ga čet-kelek-ke suy ča-ap
 they middle road-DAT reach-UNACMPL-DAT water precipitate-IP.CV
pa-yan
 AUX.INCH-GAN.PST
 ‘They hadn’t yet reached the middle of the road and it started to rain.’

- (73) Central Tuvan (Anderson & Harrison 1999: 86)

Xün ün-gen-de, čer čira-an
 sun come.out-GANDA.CV land grow.light-GAN.PST
 ‘The sun came out and the land grew light.’

The locative of the *-Vr* form in Tofan (*-Vr-da*) however, clearly stands in explicit contrast with the *-GAš* form. Compare the sentences (74) and (75) in this regard. In (74) there is no subject co-reference between the two clauses, and the different-subject construction (in *-Vr-da*) is found, while in (75), subject co-reference is maintained, and the same-subject formation (in *-GAš*) is rather required.

- (74) Tofan (Field Notes)

*Oŋ tur-ar/in/da (*tur-gaš) bis olık taley-gan.*
 s/he stand-ARDA.CV/POSS3/ we immediately leave-GAN.PST
 ‘He stood up and we immediately left.’

- (75) Tofan (Field Notes)

*Tur-gaš (*tur-ar/(in)/da) olık taliy-gan.*
 stand-GAŠ.CV immediately leave-GAN.PST
 ‘He stood up and immediately left.’

In certain sentences, both different-subject and same-subject marked forms may be found in the same sentence in Tofan in (76). The (unstated) subject of the first two clauses is Fox, but Bear is the subject of the third clause in the sentence. Therefore the first verb is marked with the same-subject suffix, as its subject is the same as that of the following clause, while the second clause bears the verbal noun plus case marking indicating the different-subject construction, as the following clause has Bear as its subject. The third clause, being the last clause of the sentence, receives full finite marking.

- (76) Tofan (Rassadin 1971: 241–242)

Iz-in-še dü`h`üp bar-gaš haya hōe-n-da
 track-POSS3-PROL lower-IP.CV AUX.TLOC-GAŠ.CV rock foot-POSS3-LOC
kō-örde iresaŋ öl-ü ver-gen čī`tīrī.
 see-ARDA.CV (= DS) bear die-A.CV AUX.PFV-GAN.PST lie.PROG.PRS
 ‘(Fox) went along Bear’s tracks and saw: Bear was lying there dead at the foot of the mountain.’

Examples of same- and different-subject marking in the same sentence can be found in other Sayan Turkic lects as well. For example in (77) from Central Tuvan, the subject of the first two clauses is the same (“you”), so the first verb is marked by *-GAš*, but the subject of the third clause has shifted (to “I”) and this triggers the different-subject marking on the second clause.

- (77) Central Tuvan of Tuva (Voinov 2014: 158)

Öglen-ip al-gaş aalda-p keer/iŋer/ge
 marry-IP.CV AUX.SUBJ.VERS-GAŠ.CV visit-IP.CV AUX.CLOC:ARGA.CV/2PL/
be-er men šive.
 give-AOR 1SG MITIG
 ‘When you get married and come for a visit, I will give (it to you).’

In the following sentence the reverse holds: the subject of the first clause is not co-referential with that of the second or third, and as a result, different-subject marking appears on the verb of the first clause, and same-subject marking on that of the second.

- (78) Central Tuvan (Voinov 2014: 154)

Ava-zuu ün-e be-erge Dolaana ün-ü-n
 mother-POSS3 go.out-A.CV AUX.TLOC-ARGA.CV Dolaana voice-POSS3-ACC
öskert-ip al-gaş baštaktan-gula-an.
 change-IP.CV AUX.SBEN-GAŠ.CV joke-INCH-GAN.PST
 ‘When her mother went out, Dolaana changed her voice and began joking.’

The following Soyot sentence shows a pattern consistent with the last Central Tuvan example: only the set of same-subject-marked, semantically coordinate sentences following the initial subject co-reference shift between the first and second clauses entails a string of four -GAŠ-marked clauses, as they all have the same-subject as that of the finite verb in the final/base clause.

- (79) Soyot (Rassadin 2010: 54)

Bijä kiši gör-ip olir-ar-ya jaahay jaahay ñaš čon-yaš
 DEM man see-IP.CV sit-ARGA.CV beautiful beautiful tree hew/carve-GAŠ.CV
qaasta-aš čime bilä jimä-äš bürhan murn-i-ŋa
 decorate-GAŠ.CV thing INS decorate-GAŠ.CV Buddha front-POSS3-DAT
sal-yaš nomna-an olirī.
 put-GAŠ.CV read-GAN.PST sit:AOR
 ‘This person_i sees, he_j has carved a very beautiful tree decorated with his pattern, decorated with things that had been put before Buddha, and he_j is sitting and reading a book.’

While not common in Jungar Tuvan narratives published to date, one does find a system reminiscent of Tofan in the following sentence, as the subject co-reference shift seems to be indicated by a locative marked form, not a dative one. So the subject of the first two clauses is ‘I’ (the narrator) while that of the third is his interlocutor. This triggers same-subject marking on the first verb but different-subject marking on the second.

- (80) Jungar Tuvan (Mawkanuli 2005: 119–120: 19)

Ooŋ gǎdǐ-iŋ-ga žid-ip al-gaš sen žiŋxua-nǐ
 PRON3.GEN side-POSS3-DAT lie.down-IP.CV AUX.SBEN-GAŠ.CV you žinghua-ACC
bil-er-sen be de-er/im/de žok di-di.
 know-AOR-2SG Q say-ARDA.CV/POSS1SG-/ no say-DI.PST
 ‘I lay down next to her and asked her “do you know Zhinghua?” and she said “No”.’

While in these examples subject coreference typically reflects consideration of a co-referential grammatical subject, there is one set of examples where, while grammatical subject co-reference is not strictly speaking maintained, either same-subject or different-subject marking is permitted. This is when there is a possessive relationship between the subjects of the two clauses. In some fixed idiomatic expressions that take genitive-possessive forms syntactically, but referentially indicate the subject, both options are grammatical, as in the following sentences from Todzhu. Again this is regardless of whether the possessed noun in question occurs in the converb clause (81) or the base clause (82).

- (81) Todzhu (Bergelson & Kibrik 1995: 383)

Ool-duŋ xöŋn-ü baksıra-y be-erge /baskıra-aš
 boy-GEN mood-POSS3 get.spoiled-A.CV AUX.INCH-ARGA.CV /get.spoiled-GAŠ.CV
čan-ıp kel-di.
 return-IP.CV AUX.CLOC-DI.PST
 ‘The boy became sick and returned home.’

- (82) Todzhu (Bergelson & Kibrik 1995: 382)

Kara-Ool čemnen-ip aar-ga/ al-gaš
 Kara-Ool eat:RFLXV-IP.CV AUX.SBEN-ARGA.CV/ AUX.SBEN-GAŠ.CV
xöŋn-ü bulgan-ı ber-gen.
 mood-POSS3 break.away-A.CV AUX-GAN.PST
 ‘when Kara-Ool had eaten he felt sick’

In forms with a culturally salient co-identification of referents, for example, someone and their horse, this same observation holds true, and either same-subject or different-subject marked forms are considered grammatical, as in the following examples from Tuvan.

- (83) Tuvan (Bergelson & Kibrik 1995: 383)

Ād-īm aar-ı-y be-erge/ aara-aš oon
 horse-POSS1SG sick-A.CV AUX.INCH-ARGA.CV/ sick-GAŠ.CV PRON3.ABL
aŋay čoru-p šida-va-dǐ-m.
 further move-IP.CV CAP-NEG-DI.PST-1SG
 ‘My horse got sick and I could not ride further from there.’

- (84) Tuvan (Aydemir 2009: 54; Šamina 1987: 91)

Ād-īm čit-keš čaday qal-dī-m ād-īm
 horse-POSS1SG disappear-GAŠ.CV on.foot remain-DEF.PST-1SG horse-POSS1SG
öl-geš čaday qal-dī-m.
 die-GAŠ.CV on.foot remain-DEF.PST-1SG
 ‘After my horse disappeared, I was left on foot’ ‘after my horse died, I was left on foot.’

6. Tail-to-head linkage

Another way in which *-GAš* appears to have been conventionalized in various Sayan Turkic lects is to set off chunks of discourse embedded within a system known as tail-to-head linkage, uniting strings of narratively sequential sequences in a discourse chunk, i.e., across finite-marked sentences, not within them, as occurs with switch-reference.

Tail-to-head linkage is a characteristic feature of narrative event chaining in a number of languages of the world outside of Europe, in particular in Papua New Guinea (de Vries 2005), but also in South America (Guillaume 2011), for example the Bolivian language Cavineña of the Tacanan family. Tail-to-head linkage is a way of stringing backgrounded events and prefacing new information or foregrounded events (Guillaume 2011: 119), and often involves copying of arguments as well as predicates, though the latter form typically is stripped of most TAM marking (but does allow some aspectual marking as in Sayan Turkic). These formations are typically embedded within switch-reference systems as well. Tail-to-head-linkage is useful in narratives to end one event and draw attention to the next (Guillaume 2011: 112). It consists of a copy of the finite form of the preceding sentence in a non-finite form at the beginning of a following sentence (85–86).

- (85) Cavineña [Tacanan; Bolivia] (Guillaume 2011: 110)

Tume jara-bute-kware ike
 then lie-GO_DOWN-REM.PST 1SG
 ‘...then I lay down (on my raft)’

- (86) Cavineña (Guillaume 2011: 110)

Jara-bute-tsu betsa-kware.
 lie-GO_DOWN-SS swim-REM.PST
 ‘Having lain down on my raft, I swam.’

In Stirling’s (1993) conceptualization, this tail-to-head linkage recapitulation can serve to “allow the switch-reference marking to be carried over from one sentence to the next” (Stirling 1993: 220-1), as switch-reference *per se* is to track co-reference across semantically coordinate but syntactically subordinate clauses *within* a complex sentence. Such tail-to-head linkage formations typically serve to advance plot lines in the narrative events (Payne 1992).

Like Sayan Turkic, there are no coordinate clauses *per se* formally speaking, only semantically coordinate but syntactically subordinate ones in Cavineña. The different-subject forms of Cavineña, again like Sayan Turkic, often involve temporal sequencing or simultaneity (Guillaume 2011: 117), and are often translationally best rendered in English by an adverbial subordinate clause headed by ‘when’ or ‘while’ (Guillaume 2011: 121).

Within Sayan Turkic one finds instances of this particular type of narrative sequencing, known as tail-to-head linkage, in at least some of the texts published in both Jungar Tuvan (Geng Shimin 2000, Mawkanuli 2005) and in Dukhan (Ragagnin 2011). As mentioned above, these consist of the finite verb (and some of its arguments) that occurs at the end of its own sentence being recapitulated in the *-GAš* form at the start of the immediately following sentence.

Dukhan makes use of the tail-to-head linkage device in some of the texts in Ragagnin (2011). Take as an example the following three sets of tail-to-head linked narrative strings from the same text in Ragagnin (2011). This sequence is numbered sentences 20-22 in Ragagnin’s original

(87) Dukhan (Ragagnin 2011: 234)

- (20)...*tilgə-jək ool tay gür-ə-n o^hrta ot ot-a-βəd-ar.*
fox-DIM son mountain limit-POSS3-ACC middle fire fire-V.DER-PRF-AOR
- (21) *Petək tay gür-ə-n o^hrta ot ot(t)a-aš ja*
high mountain limit-POSS3-ACC middle fire fire-V.DER-GAŠ.CV yeah
aǰa-m siler po o^hrta jīt-ar siler de-p ol irey
father-POSS1SG you.PL this middle lie-AOR 2PL say-IP.CV that bear
hayrəhan aǰa-sə-n jīt-kər-ək wa-aš ot
merciful father-POSS3-ACC lie-CAUS-GAŠ.CV throw-GAŠ.CV fire
ot-a-βəd-ar jime.
fire-V.DER-COMP-INTRATERM.VN thing
- (22) *Tilgə-jək ool uləy ot ot-a-βət-kaš....*
fox-DIM son big fire fire.V.DER-PRF-GAŠ.CV
- ‘...the little fox makes a fire in the middle of the ridge. After setting a fire in the middle of the high mountain range, he says, “yes my bear, please lie down in this place”, and he had that bear (father of his) lie down and he made a fire, having made a big fire...’

In the above set (87), five words in a row including the finite predicate are copied from sentence 20 into the start of sentence 21, the last mentioned word transformed into the non-finite *-GAš* form that typifies this narrative device. Similarly the predicative head in sentence 21 (“set a fire”) is copied in the *-GAš* form at the start of sentence 22.

In the following set (88), representing sentences 26–27 in Ragagnin’s original, a three-word predicative sequence from the end of sentence 26 is copied in the *-GAš* form at the start of sentence 27.¹⁵

(88) Dukhan (Ragagnin 2011: 234–235)

- (26) ... *šala iṅgay pol-ər/ən/da oh irey hayrəhan petək*
 bit further become-ARDA.CV-POSS3 ITJ bear merciful high
tayga-dan juy-l-əp pa^ht-a pa-ar jime.)
 taiga-ABL roll-V.DER-IP.CV sink-A.CV AUX.TLOC-INTRATERM.VN thing
 (27) *Juy-l-əp pa^ht-a par-yaš sösken-den i^hsər-əp*
 roll-V.DER-IP.CV sink-A.CV AUX.TLOC-GAš.CV twig-ABL bite-IP.CV
a-ar.
 AUX.SBEN-AOR

‘He took himself a little further over there, oh, the bear goes rolling down from the high taiga. He rolls down, and he grabs onto a little branch with his teeth.’

The following set of three sentences shows a similar sequencing (representing sentences 30–32 in the original), with the finite verb of sentence 30, *te-er* ‘says’, immediately followed by the *-GAš* form of the same (*te-eš*) at the head of sentence 31, and the finite verb complex of sentence 31 *jinger-te-n-əp pa^ht-a pa-ar* in turn is also copied in a (genitive-marked form of the) *-GAš* converb at the start of sentence 32; see example (89).

(89) Dukhan (Ragagnin 2011: 235)

- (30) *Meen aja-m pol-sa ah te-er josə-ləy.*
 I:GEN father-POSS1SG become-COND ITJ say-INTRATERM.VN rule-N.DER
Meen aja-m emes tirə te-eš irej hayrəhan ah te-er
 I:GEN father-POSS1SG NEG.COP PTC say-GAš.CV bear merciful ITJ say-AOR
 (31) *te-eš hāāg-ə-n sal-əβət-kaš jinger-te-n-əp*
 say-GAš.CV willow-POSS3-ACC leave-PRF-GAš.CV tumble-V.DER-MED-IP.CV
pa^ht-a pa-ar.
 sink-A.CV AUX.TLOC-AOR
 (32) *Jinger-te-n-əp pa^ht-a par-yaš-təŋ*
 tumble-V.DER-MED-IP.CV sink-A.CV AUX.TLOC-GAš.CV-GEN
am in-aarə öl-ü pe-er.
 now that-ADV.DER die-A.CV AUX.PRF-AOR

‘If it was my bear father, he should say “ah”, after that, after the little fox said “he is

¹⁵ Note that as both Sentences 21 and 26 show, sometimes the predicative heads in Sayan Turkic languages are formally participles modifying a (nearly) semantically empty copular noun, in both of these examples *jime* ‘thing’. Nevertheless the semantically full predicative elements (lexical and functional) are copied into the following sentence in the *-GAš* form, so this is a peculiarly Sayan Turkic manifestation of the tail-to-head linkage structure.

surely not my bear, the bear says “ah”. After saying it, he just lets go of his willow twig and goes tumbling down. After he goes tumbling down, well he dies there.’

There are actually more tail-to-head linked strings in this discourse chunk, which is the climax of the narration, but these use case-marked forms of the converb (as the last such instance in (89) above is) and are further exemplified below in section 10.

The following two sentences also show this kind of recapitulation of action or tail-to-head linkage that is characteristic of Jungar Tuvan narrative texts.

- (90) Jungar Tuvan (Geng Shimin 2000: 49, lines 6–7)

Onu diŋna-aš aštīyaq uyan osqun-up qory-up
 PRON3.ACC hear-GAŠ.CV old.man wisdom lose-IP.CV fear-IP.CV
ö-ön-gä ge-eptur gel-gäš uru-un-ya xan-niŋ
 house-POSS3-DAT come-PST.NARR come-GAŠ.CV daughter-POSS3-DAT khan-GEN
duž(a)-an jarl-ï-in tözin ayt-iptir.
 deliver-POSTTERM.VN order-POSS3-ACC all say-NARR
 ‘After hearing this, the old man lost his wisdom and being very afraid returned home.
 After he returned home, he told all the khan’s delivered orders to his daughter.’

In this instance, the finite verb of the first sentence is followed immediately by a non-finite *-GAš* marked form of the same verb. While stylistically odd in English, it appears to be a commonly used device to string together events in narration in this Sayan Turkic variety.

Note that tail-to-head linkage can also be done with the use of a “generic verb linkage” (de Vries 2005: 376–367) or a “summary-head linkage” (Thompson et al 2007: 274), i.e., “do this/that/so”, a patterning that precisely brings to mind the textual frequency of the use of *-GAš* forms based on the pronominal verb root *inja* in Sayan Turkic varieties. This is a highly salient feature of Sayan Turkic narrative structure. Several different forms are attested across the various Sayan Turkic lects enumerated below.

As Ragagnin notes for Dukhan (2011: 141–142), *-GAš* forms of the pronominal verbs “do.like.this”, “do.like.that” are commonly used as adverbials in all the Sayan Turkic varieties, whether steppe or taiga varieties, usually in meanings like “thus”, “as such”, “so”, “therefore” or “in such a manner”. This comes in a number of various forms across different Sayan Turkic varieties: One such is the *-GAš* form of the basic stem, i.e., *injaaš*. This variety is found in Dukhan (91) and Soyot (92)–(93):

- (91) Dukhan (Ragagnin 2011: 235)

in-ja-aš tilgə-jek ool amər sajhanjarya-y pe-er.
 that-V.DER-GAŠ.CV fox-DIM son easy nice be.happy-A.CV AUX.INCH-AOR
 ‘So the little fox is at ease and feels good.’

- (92) Soyot (Rassadin 2010: 53)
ĩňja-aš ol čimšä-y ber-gän.
 do.thus-GAŠ.CV he move.about-A.CV AUX.INCH-GAN.PST
 ‘Then he began moving about.’

- (93) Soyot (Rassadin 2010: 56)
ĩňja-aš bïr čèšä ay=la èrt-kän.
 do.thus-GAŠ.CV one some month=EMPH pass-GAN.PST
 ‘So several months passed.’

With the middle-reflexive stem derivative *-n-*, in the form *ĩňjangaš/ĩňjaňyaš*, etc., this clause linker is also found in both Dukhan (94), and Soyot (95), and with elision of the velar in Tofan as well (but triggering place assimilation of the nasal prior to being elided), appearing as *ĩňja:ňaš* (96).

- (94) Dukhan (Ragagnin 2011: 142)
Ĩn-ja-n-gaš gō^hhⁱ-er pol-yan.
 that-V.DER-MED-GAŠ.CV nomadize-INTRATERM.VN become-GAN.PST
 ‘So the time came to move.’

- (95) Soyot (Rassadin 2010: 54)
Ĩňjaň-yaš bod-ĩ-niň em-in-den iš-käš
 do.thus:RFLXV-GAŠ.CV self-POSS3-GEN medicine-POSS3-ABL drink-GAŠ.CV
ekkïre bol-yaš.
 healthy become-GAŠ.CV
 ‘Then having drunk his own medicine, he became healthy.’

- (96) Tofan (Rassadin 1971: 242)
Ĩn-ja:ňaš dilyi ɛet-tïr-adirï iresaň-dan.
 do.thus:RFLXV-GAŠ.CV fox ask-CAUS-NARR bear-ABL
 ‘Thus he asked Bear.’

Dukhan also uses a form of this same construction together with the emphatic clitic *=la* as in the following example (97).

- (97) Dukhan (Ragagnin 2011: 108)
On üš gar-ləy-dan so-on-da ol örye tiň
 13 snow-N.DER-ABL after-POSS3-LOC that ground.squirrel squirrel
ĩn-dəy pičče jime a^ht-əp ĩn-ja-n-yaš=la ekkə
 that-ADJ.DER small thing shoot-IP.CV that-V.DER-MED-GAŠ.CV =EMPH good
a^ht-ar pol-əp gir-er.
 shoot-INTRATERM.VN become-IP.CV ENTER.AUX-AOR
 ‘After becoming 13 years old, they shoot small things like ground squirrels and sables and gradually start to become good shooters.’

Case-marked forms of this same connective element based on the pronominal verb stems are found in both Dukhan and Jungar Tuvan. These are exemplified in section 10 below.

7. *-GAš* replacing the *-p* converb in auxiliary verb constructions

In a few instances in certain critically endangered varieties of Sayan Turkic, like Soyot or Tofan, the *-GAš* forms appear to be replacing what from a standard Turkological perspective one would expect to be a *-p* converb form, namely on the lexical verb in a complex predicate or auxiliary verb construction. These represent a later stage of development than the Level 2 that typically characterizes this converb in Johanson's (1995) typology.

In Soyot, this replacement occurs commonly in a large complex predicate of the shape Verb-*GAš* *tur-ar bol-yan* (98)–(100), which appears synchronically to represent a grammaticalized whole in this language.

(98) Soyot (Rassadin 2010: 53)

Mal-ivīs emii šibiškilä-äš tur-ar bol-yan.
cattle-1PL udder-POSS3 covered.in.boils-GAš.CV STAND.AUX-AOR BE.AUX-GAN.PST
'The udders of our cattle became covered in boils.'

(99) Soyot (Rassadin 2010: 53)

ǰü-dän ǰü bol-yaš tur-ar bol-yan?
what-ABL what be-GAš.CV STAND.AUX-AOR BE.AUX-GAN.PST
'Why did this happen?'

(100) Soyot (Rassadin 2010: 53)

Mal-ivīs kenät turıda čöša-aš tur-ar bol-yan.
cattle-POSS1PL suddenly stand:ARDA.CV startle-GAš.CV STAND.AUX-AOR BE.AUX-GAN.PST
'Our cattle were just standing there and suddenly startled.'

In other instances in Soyot *-GAš* is clearly replacing what would be expected to be, and indeed is otherwise attested in other examples in the language as, the *-p* converb form, e.g., before the auxiliary *turĩ*; compare (101) and (102).

(101) Soyot (Rassadin 2010: 53)

Kenät čöš=ip algir-yaš turĩ.
suddenly shake.in.fear-IP.CV cry.out-GAš.CV STAND.AUX:AOR
'That one suddenly shook from fear and cried out.'

- (102) Soyot (Rassadin 2010: 54)

Dàhìy čoo-yaš kel-ìp turì.
 again approach-GAŠ.CV AUX.CLOC-IP.CV STAND.AUX:AOR
 ‘Again he approached.’

In Tofan, there are also clear forms where the *-GAš* converb is replacing the *-p* converb in auxiliary verb constructions or complex predicate structures (Anderson 2001, 2004).

- (103) Tofan (Anderson 2001: 250)

Dilyi oluk bar-ìp brää üšpül tüt-kaš al-yan.
 fox right.away go-IP.CV one hazel.grouse catch-GAŠ.CV AUX.SUBJ.VERS-GAN.PST
 ‘The fox went and right away caught himself a hazel grouse.’

- (104) Tofan (Anderson 2001: 249)

Sen boojalaš-kaš al-ìbüt-ti-ŋ.
 2SG bet:RCP-GAŠ.CV AUX.SUBJ.VERS-PRF-DI.PST-2
 ‘You have won yourself our bet.’

As pointed out by an anonymous reviewer, Mongolian shows similar instances of the potentially cognate form in *-AAd* replacing the expected converb in *-J* in auxiliary verb constructions. Also, as pointed about by a second anonymous reviewer, the negative forms of the all the basic converb forms (*-p*, *-A/j*, and *-GAš*) share the same negative form and thus are impossible to distinguish in the negative, thereby providing internal pressure for them to be reinterpreted as each other or confused for each other.

8. Causal functions

Causal functions of *-GAš* marked clauses are not the most common or typical of the many functions that this element encodes when relating the events of the converb clause to the base clause, but it is nevertheless found in a number of the Sayan Turkic varieties. In Central Tuvan (105) or in Soyot (106), *-GAš* can appear in this causal function with a range of roots, and thus it does not appear to be lexically restricted to *bol-* ‘to be’, as it is in this function in some of the other Sayan Turkic varieties (see below).

- (105) Central Tuvan (Anderson & Harrison 1999: 58)

Xem uglat-kaš parom čor-basta-an.
 river flood-GAŠ.CV ferry go-CES-GAN.PST
 ‘The ferry stopped running because the river flooded.’

(106) Soyot (Rassadin 2010: 53)

Karañh-in-da jü=tä köz-il-bäs bol-i ber-gäš
 darkness-POSS3-LOC what=FOC see-PSV-NEG.AOR be-A.CV GIVE.AUX-GAŠ.CV
dolyan-diri tüšt-ip kör-gäš ün-är jer
 around turn-IP.CV AUX.ATT-GAŠ.CV exit-INTRATERM.VN place
joq bol-yan.
 NEG.COP BE.AUX-GAN.PST
 ‘Because nothing was visible in the dark, he tried to turn around, but there was no way out.’

In the unspecified variety of Tuvan described by Tažibaeva (2012), the causal reading of *-GAš* appears restricted to auxiliated uses of the stem *bol-* ‘be’ when following a past-marked, (post)terminal verbal noun or past participle form of a verb (107)–(108), itself often in the role of an auxiliary in a large complex predicate, and with a negative scope operator in the base clause.

(107) Tuvan, unspecified (Tažibaeva 2012: 207)

Baž-ım aar-y ber-gen bol-yaš seminar-že bar-ıp
 head-1 hurt-A.CV AUX.PRF-POSTTERM.VN BE.AUX-GAŠ.CV seminar-ALL go-IP.CV
šida-va-dī-m.
 CAP-NEG-DI.PST-1SG
 ‘Because my head hurt I could not go to the seminar.’

(108) Tuvan, unspecified (Tažibaeva 2012: 208)

Kirgışbičii-zin-den aažī+sañ-ī-n küš+ažil-ya dadiktir-ıp
 Kirgischchildhood-POSS3-ABL character-POSS3-ACC labor-DAT train-IP.CV
kel-gen bol-yaš am ooñ murn-un-da dirgel-ıp
 AUX.CLOC-GAN.PST BE.AUX-GAŠ.CV now PRON3.GEN before-POSS3-LOC appear-IP.CV
kel-gen bergedeeškin-ner-den korg-up sürte-ve-en.
 AUX.CLOC-GAN.PST difficulty-PL-ABL fear-IP.CV fear-NEG-GAN.PST
 ‘Because Kirgīs had been training his character against difficulties from early childhood, he was not frightened by the problems he now encountered.’

In Todzhu, a similar pattern is attested (109), involving a *-GAš*-marked form of *bol-* in a causal function.

(109) Todzhu (Bergelson & Kibrik 1995: 399)

Men korg-a ber-gen bol-gaš börü-nü ölür-üp
 I fear-A.CV AUX.PRF-POSTTERM.VN be-GAŠ.CV wolf-ACC kill-IP.CV
šida-va-an men.
 CAP-NEG-GAN.PST 1SG
 ‘I could not kill the wolf because I was scared.’

Note however that in this Sayan Turkic lect, the stem *bol-* can also carry causal semantics in different-subject contexts as well, and thus one finds a formal opposition of causal *bol-gaš* in same-subject contexts contrasting with *bo-orga* in different-subject ones in Todzhu (110).

- (110) Todzhu (Bergelson & Kibrik 1995: 399)
Börü anıyak bo-orga ölü-be-di-m.
 wolf young be-ARGA.CV kill-NEG-DI.PST-1SG
 ‘Because the wolf was young I did not kill it.’

Note that some of the other semantic functions of *-GAš* in Tofan that can be used as a same-subject marker have analogs in the different-subject marking system as well, maintaining the particular manifestations of the norms of Tofan grammar. Thus, converbs that are etymologically dative-marked past participles/postterminal verbal nouns (*-GAN-gA*) or non-past participles/intraterminal verbal nouns (*-Vr-gA*) can have causal interpretations as well in different-subject contexts (111)–(112). Note as mentioned above that dative-marked forms in Tofan tend to be semantically as well as syntactically dependent or subordinate, unlike the locative-marked ones that are typically semantically coordinate—a system that differs in this respect from that of Todzhu.

- (111) Tofan (Rassadin 1978: 186)
Išten-gen/ım/ge möngün ber-gen.
 work-GANGA.CV/POSS1SG/ money give-GAN.PST
 ‘Because I worked, they gave me money.’

- (112) Tofan (Rassadin 1978: 186)
Bo hem-nı men üst-ü-n kəš-tı-m kehⁱ-er
 this river-ACC I above-POSS3-ACC cross-DI.PST-1SG cross-INTRATERM.VN
čer čok bol-ırğa.
 place NEG.COP BE.AUX-ARGA.CV
 ‘I crossed this river in the upper reaches because there was no crossing-place.’

Note that a causal meaning can also be found with *bolyaš* in Tsengel Tuvan (113).

- (113) Altai-Tsengel Tuvan (Taube 2008: 117)
Ton-um bayay bol-yaš doo-p joru men.
 overcoat-POSS1SG old become-GAŠ.CV freeze-IP.CV AUX 1SG
 ‘Because my *ton* overcoat had become old, I’m always freezing.’

9. Purposive functions

Purposive functions of *-GAš* marked forms are also typically lexically restricted and found only in specific grammaticalized combinations, and again frequently are em-

bedded within a same-subject vs. different-subject formal opposition. Thus, in Todzhu one finds the sequence *-Vr deeš* in a same-subject construction grammaticalized to encode the meaning ‘in order to’, while conversely in different-subject formations, that is, when the subject of a converb clause is different from that of the base clause, one rather finds the construction *-ZIn deeš* instead in this same function. Compare (114) and (115)–(116) in this regard.

(114) Todzhu (Bergelson & Kibrik 1995: 400)

Ava-m-ga użuraž-ır deeš men xooray čor-up-tu-m.
 mother-POSS1SG-DAT meet-AOR PURP I town move-PRF-DI.PST-1SG
 ‘I went to town to meet my mother.’

(115) Todzhu (Bergelson & Kibrik 1995: 400)

Ava-zi dīštan-zīn deeš uru-u mün-nū
 mother-POSS3 rest:RFLXV-3.IMP PURP daughter-POSS3 soup-ACC
xayīndir-īp ka-an.
 cook-IP.CV AUX.PFV-GAN.PST
 ‘In order to let her mother rest, her daughter cooked the soup.’

(116) Todzhu (Bergelson & Kibrik 1995: 401)

Čilig bol-zun deeš ool pečka-nī oda-p-kan.
 warm become-3IMP PURP boy stove-ACC heat-PRF-GAN.PST
 ‘In order to get warm, the boy started up the stove.’

Note that in most Sayan Turkic varieties, the *-GAš* form of the verb *de-* ‘say’, i.e., *deeš*, has been grammaticalized in combination with the *-Vr* form of a verb in the function of a causal or purpose subordinator (or postposition) as well: Dukhan *teeš* (Ragagnin 2011: 167), Tuvan of Tuva *deeš* (Anderson & Harrison 1999: 76), Tofan *däāš* (Rassadin 1978: 179), Tsengel Tuvan *deeš* (Taube 2008: 107, song 35). See examples from Altai-Tsengel Tuvan (117) and from Dukhan (118).

(117) Altai-Tsengel Tuvan (Aydemir 2009: 124)

Onu bir yadyīrlī-ır deeš bar šülükčü-ler-i-n bar
 PRON3.ACC one laugh-AOR PURP all poet-PL-POSS3-ACC all
īraazī-lar-ī-n bar igilči dovšūrču-lar-ī-n jī-ip
 singer-PL-POSS3-ACC all igil-player dovšuur.player-PL-POSS3-ACC gather-IP.CV
gelir+jer=le yadyīrt-ī al-vas irgin.
 AUX.CLOC-INTRATERM.VN+place=INS make.laugh-A.CV CAP-NEG.AOR EVID
 ‘In order to have her laugh once, he gathered all his poets, all his singers, all his Igil-players and Doshuur-players into one place, but he could not get her to laugh.’

- (118) Dukhan (Ragagnin 2011: 137)

Gulər al-ər deeš Akköl jora-an.
 flour take-AOR PURP Akköl go-GAN.PST
 ‘He went to Akköl in order to get flour.’

Negative forms use the *-BAs* non-past negative with *deeš*, as in the following example from Central Tuvan:

- (119) Central Tuvan (Anderson & Harrison 1999: 76)

Men olar-ga šaptik kat-pas deeš bažiŋ-če
 I PRON3PL-DAT obstacle add-NEG.AOR PURP house-ALL
kir-ip kel-di-m.
 enter-IP.CV AUX.CLOC-DI.PST-1SG
 ‘I came inside in order to not disturb them.’

In Central Tuvan, in addition to the *-Vr* form, this same converb form of “say” can be used with a verbal complement in the conditional to form purposive constructions as well.

- (120) Central Tuvan (Delger-Ool 1960: 123)

Bis siler-niŋ=bile biče xööreš-se deeš kel-gen ulus bis.
 we you.PL-GEN=INS little converse-COND PURP come-GAN.PST people 1PL
 ‘We came in order to talk with you.’

In the early sources on Sayan Turkic, e.g., Katanov (1903), this element, grammaticalized in the construction *-Vr tääš*, is found in a purposive function.

- (121) i. Karagass from Katanov (1903) ii. Karagass from Katanov (1903)

küräž-ir tääš ñämgär-ir tääš
 fight:RCP-AOR PURP feed-AOR PURP
 ‘um zu kämpfen’ ‘um (ihn) zu ernähren’ (Menges 1959–1960: 128)

- (122) Soyot from Katanov (1903) (Menges 1959–1960: 128)

...qudala-ar tääš id-a pār-di.
 free-AOR PURP send-A.CV AUX.INCH-DI.PST
 ‘... begann (Leute) auszusenden, um zu freien.’

However in Radloff’s Soyot lect, the purposive construction with *tääš* may take the converb in *-ARGA.CV*, i.e., etymologically a dative-case marked form of the *-Vr* participle.

- (123) Soyon from Radloff's
- Proben*
- (Menges 1959–1960: 128)

t'a(a)l-arya *tääš*
 wage.war-ARGA.CV PURP
 'in order to wage war' *-arya* = < *-*ar-ya* <*-INTRATERM.VN-DAT

In Central Tuvan and some other lects, *deeš* can be used in causal functions as well, but this typically involves past (participle) marked verbal complements, as in the following examples (124)–(125):

- (124) Central Tuvan (Anderson & Harrison 1999: 36)

Kizil-dan ün-gen deeš öör-üp tur men
 Kyzyl-ABL leave-GAN.PST SUBORD be.happy-IP.CV STAND.AUX 1SG
 'I am happy to be leaving Kyzyl.'

- (125) Tuvan, unspecified (Tažibaeva 2012: 210)

Eki nom tip ber-gen-iñ deeš sejee
 good book find:CV AUX.BEN-POSTTERM.VN-POSS.2SG PURP you:DAT
čettir-di-m.
 thank-DI.PST-1SG
 'Thank you for having found a good book for me.'

In this particular function in Central Tuvan, *deeš* has further grammaticalized into a postposition and may now take a nominal complement as well (126).

- (126) Central Tuvan (Anderson & Harrison 1999: 36)

Sen deeš kel-di-m.
 you because come-DI.PST-1SG
 'I came because of you.'

Note that this *-GAš* form of "say" is lacking in Jungar Tuvan, and instead the *-p* converb form of *de-*, i.e., *de-p*, is used in Jungar Tuvan, based on the complete lack of *deeš* in the texts in Mawkanuli (2005) and confirmed by an anonymous reviewer.¹⁶ In the few instances where one would expect it, based on Tuvan of Tuva norms, one finds *dep* instead.

16 As pointed out about by an anonymous reviewer, this lack likely reflects Kazakh influence in Jungar Tuvan. However, as pointed out by a second anonymous reviewer, it is at least in principle possible that the form in Jungar Tuvan is an archaism showing that it split from the rest of Sayan Turkic before the *deeš* construction was grammaticalized, rather than having replaced an earlier form with a pseudo-archaic form copied from Kazakh. So it is possible that this gap is not innovative or contact triggered, but rather a retention from an earlier state in this peripheral Sayan Turkic variety.

- (127) Jungar Tuvan (Mawkanuli 2005: 135: 98)

Oyna-ar de-p ol bar-dī.
 play-AOR say-IP.CV s/he go-DI.PST
 ‘She went there in order to play.’

10. Case-marked forms of -GAŠ

Case-marked forms of the -GAŠ converb are also attested across different Sayan Turkic varieties in a wide range of functions, most overlapping with unmarked forms of the same converb. Jungar Tuvan stands out as the Sayan Turkic variety that uses ablative marked forms of -GAŠ in the widest range of functions, typically associated with -GAŠ alone, i.e., -GAŠtan. These -GAŠtan forms occur perhaps even more frequently than simple -GAŠ forms do in Jungar Tuvan texts in Geng Shimin (2000) or Mawkanuli (2005). These examples include ones in same-subject/ narrative-propulsion contexts (128)–(131).

- (128) Jungar Tuvan (Mawkanuli 2005: 149: 16)

Urūy-lar bar-yaš-tan güskö-nūŋ žem-in dažī-ir irgin.
 girl-PL go-GAŠ.CV-ABL mouse-GEN food-POSS3.ACC carry-AOR EVID
 ‘The girls go there and carry away the mouse food.’

- (129) Jungar Tuvan (Mawkanuli 2005: 149: 18)

Aškījak bar-gaš-tan ool-dar-nī gag-ar irgin.
 old.man go-GAŠ.CV-ABL child-PL-ACC hit-AOR EVID
 ‘The old man goes there and beats the boys.’

- (130) Jungar Tuvan (Mawkanuli 2005: 105: 10)

Ooŋ bilen arga išd-i-nge apar-ip baza gak-kaš-tan
 PRON3:GEN with forest inside-POSS3-DAT take-IP.CV and beat-GAŠ.CV-ABL
bir žeže surax-tar sura-p dur irgin.
 one some question-PL ask-IP.CV STAND.AUX EVID
 ‘So having taken them to the middle of the forest and beaten them, (the soldiers) asked them some questions.’

- (131) Jungar Tuvan (Mawkanuli 2005: 150: 19)

Ool-dar bar-gaš-tan bōrū-nū ölür-ür irgin.
 boy-PL go-GAŠ.CV-ABL wolf-ACC kill-AOR EVID
 ‘The boys go and kill the wolf.’

The use of the ablative-marked converb functioning in a similar manner to the simplex one in Jungar Tuvan also includes formations expressing a relationship of immediate anteriority between the event of the converb clause and that of the base clause (132).

- (132) Jungar Tuvan (Geng Shimin 2000: 51, 25)

Unuun dur-yaš-tan ool-dar-in-ya aytī-ydur.
 then stand-GAŠ.CV-ABL son-PL-POSS3-DAT say-NARR/EVID
 ‘Then she stood up and spoke to her sons.’

Ablative-marked forms of the *-GAš* converb may also encode simultaneity in Jungar Tuvan (133)–(134).

- (133) Jungar Tuvan (Mawkanuli 2005)

Iyi žibe dur-gaš-tan žok giži gel-be-en de-er-de
 two thing stand-GAŠ.CV-ABL no person come-NEG-GAN.PST say-AOR.PRTCPL-LOC
üš orus šerig yıştag-niň murmu-un-da baalıg-dī
 three Russian soldier winter.camp-GEN south-POSS3-LOC mountain.pass-ACC
až-ir šab-ip žoru-y bar-dī irgin.
 cross-INTRATERM.VN gallop-IP.CV move-A.CV AUX.TLOC-DI.PST EVID
 ‘(As) both were standing there and said “No, no one has come”, the three Russian soldiers crossed the mountain pass on the front side of the winter encampment and were apparently galloping away.’

- (134) Jungar Tuvan (Mawkanuli 2005: 151, line 5)

Žudaŋ bol-gaš-tan kündölögü emidirel žibe-zī-niň ereydep
 poor be-GAŠ.CV-ABL daily life thing-POSS3-GEN barely.enough
žaža-p gīmīyla-p dur-ar irgin.
 make-IP.CV live-IP.CV STAND.AUX-AOR EVID
 ‘Being poor, they eked out a bare living in their daily life.’

Also, in Jungar Tuvan, narrative strings with same-subject co-reference of both ablative-marked and unmarked forms of *-GAš* are found, showing that they largely appear to occupy the same functional domains.

- (135) Jungar Tuvan (Geng Shimin 2000: 49, 9)

Ooŋ so-on-da ada-zīn-ya bir qujaq sigen al-dīr-yaš
 PRON3:GEN after-POSS3-LOC father-POSS3-DAT one armful hay bring-CAUS-GAŠ.CV
bod-u ayaŋjī eš-keš daš qir-in-ya qaa(y)-yaš-tan
 self-POSS3 rope twist-GAŠ.CV stone point-POSS3-DAT stick-GAŠ.CV-ABL
örttet-keš xan-ya ada-zī-n dayīn sal-iptur.
 burn:CAUS-GAŠ.CV khan-DAT father-POSS3-ACC again send-PST.NARR
 ‘Then she had her father bring her an armful of hay, and she made a rope and put the rope on a stone and burned it.’

In other Sayan Turkic lects, case-marked forms of *-GAš* are also attested in a range of different functions and even in various different cases in Central Tuvan. Thus, an ablative form can encode anteriority (136)—often in same-subject contexts.

- (136) Central Tuvan of Tuva (Anderson & Harrison 1999: 79)

Ol bažiŋ-nī tīv-al-gaš-tan dika öörüškü bol-gan.
 that house-ACC find:CV-AUX.SBEN-GAŠ.CV-ABL very happy become-GAN.PST
 ‘She got really happy after finding the house.’

However, a genitive-marked form of *-GAš*, i.e., *-GAš-tIŋ*, is also found in Central Tuvan, but conveys a nuance of either immediate anteriority (137) or simple same-subject narrative sequencing (138).

- (137) Central Tuvan of Tuva (Anderson & Harrison 1999: 58)

Kel-geš-tiŋ men-če dolga-vīt!
 come-GAŠ.CV-GEN I-ALL call-PRF
 ‘As soon as you return, give me a call!’

- (138) Central Tuvan of Tuva (Anderson & Harrison 1999: 58)

Düün ol kiži ketti-n-e al-gaš-tiŋ čemnen-e
 yesterday that man dress-RFLXV-A.CV AUX.SBEN-GAŠ.CV-GEN eat:RFLXV-A.CV
al-gaš-tiŋ čuun-a al-gaš-tiŋ škola-že
 AUX.SBEN-GAŠ.CV-GEN wash:RFLXV-A.CV AUX.SBEN-GAŠ.CV-GEN school-ALL
čor-up-kan.
 go-PRF-GAN.PST
 ‘Yesterday that man got dressed, ate, washed up and went to the school.’

In Dukhan, the genitive-marked form of *-GAš* may indeed also convey anteriority without same-subject co-reference across the converb and base clauses (139):

- (139) Dukhan (Ragagnin 2011: 111)

Geje pol-sa jerle tayya g^hh^jə-sə i^hh^j-er
 evening become-COND really taiga person-POSS3 drink-INTRATERM.VN
ji-ir je-m-ən ji-p al-yaš-təŋ
 eat-INTRATERM.VN eat-N.DER-POSS3.ACC eat-IP.CV take-GAŠ.CV-GEN
gil-ər jime jok.
 do-INTRATERM.VN thing NEG.COP
 ‘As for the evening, once they have had their evening meal and drinks, taiga people don’t really have anything to do.’

However, this same formation may also occur in the narrative-propulsive/same-subject context that the unmarked form of the *-GAš* converb also typically occurs in (140).

- (140) Dukhan (Ragagnin 2011: 110)

Irey hayrəhan-nəŋ pir gara-a-n al-gaš-təŋ pir saahar
 bear merciful-GEN one eye-POSS3-ACC take-GAŠ.CV-GEN one sugar

suu-βad-ar.

dip-PRF-AOR

‘He takes out one eye of the bear and flicks a piece of sugar (into his mouth).’

As mentioned above, tail-to-head linkage may sometimes be marked in Dukhan narratives by a verb copy in the *-GAš*+genitive form, not just the simple *-GAš* form, as in the following two strings (141)–(142). In (141), representing original text sentences 19–20, the predicative elements of sentence 19 are copied in the genitive-marked form of the converb at the beginning of sentence 20.

(141) Dukhan (Ragagnin 2011: 234)

- (19) *Irey hayrəhan tilgə-jek i^hxə jettən-əp al-gaš-təŋ*
 bear merciful fox-DIM two take.by.hand-IP.CV AUX.SBEN-GAŠ.CV-GEN
petək day-γədə ün-əp pa-ar jime.
 high mountain-DIR exit-IP.CV AUX.TLOC-INTRATERM.VN thing
- (22) *Ün-əp par-γaš-təŋ tilgə-jek ool*
 exit-IP.CV AUX.TLOC-GAŠ.CV-GEN fox-DIM son
tay gür-ə-n o^hrta ot ot-a-βad-ar.
 mountain limit-POSS3-ACC middle fire fire-V.DER-PRF-AOR

‘The bear and the little fox go hand and hand up into the high mountains. Having gone up, little fox makes a fire in the middle of the ridge.’

In (142), on the other hand, representing original sentences 25–26, the whole (end) of sentence 25 is copied in the genitive form of *-GAš* converb, to which the emphatic clitic has been appended.

(142) Dukhan (Ragagnin 2011: 234–235)

- (25) *Pir šala iŋgay al-ər.*
 one bit further take-AOR
- (26) *Pir šala iŋgay al-gaš-təŋ=na šala*
 one bit further take-GAŠ.CV-GEN-EMPH bit
iŋgay bol-ər/ən/da oh irey hayrəhan petək tayga-dan
 further become-ARDA.CV/POSS3/ ITJ bear merciful high taiga-ABL
juy-l-əp pa^ht-a pa-ar jime.
 roll-V.DER-IP.CV sink-A.CV AUX.TLOC-INTRATERM.VN thing

‘(And the bear) takes himself a little further over there. After having taking himself a little further over there, oh, the bear goes rolling down from the high taiga.’

Finally, there are also case-marked forms of *-GAš* of the pronominal verb in its connective functions in Sayan Turkic varieties like Dukhan and Jungar Tuvan. In Dukhan, this appears as a genitive-marked form of the pronominal verb stem in its middle-reflexive derivative (143), i.e., *iŋja-n-gaš-təŋ*.

- (143) Dukhan (Ragagnin 2011: 142, 77)

Īn-ja-n-gaš-təŋ *höngen* *te-p* *ekkə* *je-m.*
 that-V.DER-MED-GAŠ.CV-GEN höngen.bread say-IP.CV good eat-N.DER
 ‘And so, *höngen* bread is a good food.’

In Jungar Tuvan, one finds an *ablative*-marked form of the *passive*-marked form of the same, viz., *ī(n)ja-l-yaš-tan* ~ *anja-l-yaš-tan* (144)–(146).¹⁷

- (144) Jungar Tuvan (Geng Shimin 2000: 49, line 35)

Ī(n)ja-l-yaš-tan *ol* *uruy* *ol* *χan-niŋ*
 do.thus-PSV-GAŠ.CV-ABL that daughter that khan-GEN

¹⁷ Note that in addition to the use of the passive form of the pronominal verb stem in an ablative case-marked form, Jungar Tuvan stands apart morphophonologically from the remaining Sayan Turkic lects in a number of salient ways, most likely due to prolonged contact with Kazakh. Among the atypical features found in this high-contact variety of Tuvan, which has undergone clear restructuring due to the particular sociolinguistic milieu in which it is presently embedded, is (a) that some speakers have bound subject markers in the 1SG.SUBJ *-BIn* with full consonantal assimilation and vowel harmony (vi), not clitic ones like [=men] with neither, as in Central Tuvan of Tuva (vii), and, moreover, as is still found in the speech of other Jungar Tuvan speakers as well. For more on Jungar Tuvan, see (Mawkanuli 1999, Geng Shimin 2000 and especially Rind-Pawłowski 2014, 2016)

- (vi) Jungar Tuvan (Mawkanuli 2005: 116)

žok men aragu iš-pes-pin
 no I vodka drink-NEG.AOR-1SG
 ‘No, I don’t drink vodka.’

- (vii) Central Tuvan (Field Notes)

čok men pivo iš-pes men
 no I beer drink-NEG.AOR 1SG
 ‘No, I won’t drink (any) beer.’

This restructuring also includes (b) the presence of high > low round harmony (viii)–(ix), e.g., in the present/future or the *-A/j* converb, and (c) low > low round harmony (ix)–(x) in the past-tense marker *-GAn*, or plural *-LAr* (and sometimes the dative *-GA*, but not the locative *-DA*), all of which are features that likely reflect idiolectally manifested convergence with Kazakh, resulting from the strong Kazakh-contact milieu within which Jungar Tuvan is found today.

- (viii) Jungar Tuvan (Mawkanuli 2005: 135)

Nak ola-p büd-ör.
 exact do.that-IP.CV end-AOR
 ‘It ends exactly like that.’

- (ix) Jungar Tuvan (Mawkanuli 2005: 114, 108)

sös-tör-ü öl-gönde
 word-PL-POSS3 die-GANDA.CV
 ‘his words’ ‘when/if (you) were dying’

- (x) Jungar Tuvan

ät-tan düž-ö žügö
 horse-ABL descend-A.CV why
 ‘getting off from the horse’ ‘why’

dažir-ar-i-nan ???

abuse-INTRATERM.VN-POSS3-ABL/INS

‘So it was that the daughter (was freed) from the khan’s humiliation...’

- (145) Jungar Tuvan (Geng Shimin 2000: 50, line 7)

Anja-l-yaš-tan, ol qıryan qayay bičii ool-dar-i-nen qadi
do.thus-PSV-GAŠ.CV-ABL that old sow little son-PL-POSS3-INS together
jobalanjoq äme+dzuw-up jörü-y be-er ergin.
without.worry live-IP.CV MOVE.AUX-A.CV AUX.PRF-AOR EVID
‘So that sow lived together with her little sons with no worry.’

- (146) Jungar Tuvan (Geng Shimin 2000: 51, 27)

Anja-l-yaš-tan suu-ya bar-yaš serin suŋ-ni jilmilen-ip
do.thus-PSV-GAŠ.CV-ABL water-DAT go-GAŠ.CV cool water-ACC greedy-IP.CV
iž-e bašta-dī.
drink-A.CV begin-DI.PST
‘So arriving at the water, she began to drink the cool water greedily.’

11. On the cognate converb forms of *-GAš* outside of Sayan Turkic

In this section I offer some brief comparative comments regarding the other Turkic languages that instantiate structures using a converb cognate with *-GAš* in Sayan Turkic, and that show only a subset of the domains associated with its use in Sayan Turkic varieties.

According to Efremov (1979: 65; 1980, 1984), the cognate element *-Aat* in Sakha/Yakut also functions in domains where there is first actant co-reference across the converb clause and the basic clause. However, earlier examples in Böhntlingk (1851 [1964]: 387) suggest that the element includes an extra nuance of immediate anteriority (or quasi-simultaneity) of event actions between the converb clause and basic clause.

- (147) Sakha (Yakut) (Böhntlingk 1851: 387)

San-āt ä-tärä.
think-GAŠ.CV say-NPST:3
‘Kaum hatte er nachgedacht, so pflegte er zu sagen [Hardly had he thought (it) when he said].’

- (148) Sakha (Yakut) (Böhntlingk 1851: 387)

Uot-u ott-öt čaynik-kä xār-ī simän ū-nu
fire-ACC set.to-burn-GAŠ.CV teapot-DAT snow-ACC stuff-AN.CV water-ACC
orgup-put-tara.
make.cook-PST-3PL

‘Sobald sie das Feuer angezündet hatten, stopften sie Schnee in den Kessel und brachten Wasser zum Kochen’ [As soon as they set the fire, they stuffed snow in the teapot and brought the water to a boil].’

Outside of Sayan Turkic,¹⁸ the *-GAč* form does not appear to show a similarly strong tendency to a skewed distribution within narratively equal events, or to be a type of quasi-coordination in a same-subject like pattern, i.e., in a putative switch-reference system. Although many uses found in the literature of these languages in fact do have subject co-reference across relevant clauses, nevertheless this tendency is not as statistically strong as in the Sayan Turkic languages, and many more counter-examples can be found where there is no such subject (or first actant) co-reference across the converb clause and the basic clause. Therefore, even while clearly describing a narrative sequence and the typical “propulsive” or plot advancing meanings characteristic of this converb (Johanson 1995: 327), these forms nevertheless show no first actant co-reference across the clauses. Thus, in Uzbek for example, one finds examples with the converb *-gač* (149) below, without subject co-reference, but with a semantic relation of anteriority from the first to the second converb clause, and also a nuance of possibly either immediate anteriority or quasi-simultaneity from the second converb clause to the base clause.

(149) Uzbek (Johanson 1995: 326; Kononov 1960: 243)

Tun ket-gač tãŋ aqâr-gač quš-lar sayra-y bâšla-di.
 night pass-GAŠ.CV dawn whiten-GAŠ.CV bird-PL sing-A.CV begin-DI.PST
 ‘The night had passed and it had dawned, the birds began to sing.’

In Modern Uighur, the element *-GAč* encodes temporal simultaneity of the converb clause with the base clause (150), while the dative case-marked derivative of this, *-GAčqa* (151), rather encodes the semantic attenuation of reason/cause (de Jong 2007: 195; Friederich & Yakup 2002: 209).

(150) Modern Uighur (de Jong 2007: 195)

U tamaq ye-gäč gezit oqu-di
 PRON3 meal eat-GAŠ.CV newspaper read-DI.PST
 ‘He read a newspaper while eating.’

(151) Modern Uighur (de Jong 2007: 195)

Sughuq bol-yač-qa biz öy-din či-mi-du-q.
 cold be-GAŠ.CV-DAT we house-ABL leave-NEG-DI.PST-1PL
 ‘Because of the cold, we did not leave the house.’

The corresponding cognate element is also not limited to same-subject contexts in Karaim, where an augmented form of the cognate element in the form *-GAčox* appears to mark adverbial subordination (Kocaoğlu & Firkovičius 2006: 23; Musaev

18 Perhaps better stated as outside of Siberian Turkic varieties, if, what Efremov says about contemporary Sakha-Yakut is correct, and the language has changed in this regard or expanded the functional domain of the converb since Böhlingk recorded it.

1964: 301), encoding either anteriority (152) or immediate anteriority/quasi-simultaneity (153) between the event semantics encoded by the converb clause with respect to the base clause.

(152) Trakai Karay [Karaim] (Kocaoğlu & Firkovičius 2006: 23)

<i>kel-geçox</i>	<i>tuy-ğaçox</i>
come-GAÇOX.CV	hear-GAÇOX.CV
‘when one has come’	‘when one has heard’

(153) Karaim (Musaev 1964: 301)

<i>Da</i>	<i>edi</i>	<i>kel-gäçox</i>	<i>Avram</i>	<i>Mitsri-gä</i>	<i>da</i>	<i>kör-dü-lär</i>
EMPH	BE.AUX:DI.PST	come-GAÇOX.CV	Avram	Egypt-DAT	EMPH	see-DI.PST-3PL
<i>mitsri-lar</i>	<i>ol</i>	<i>katün-ni</i>	<i>ki</i>	<i>körklü</i>	<i>ol</i>	<i>asträ.</i>
Egyptian-PL	that	wife-ACC	COMP	beautiful	that	very

‘As soon as Avram went to Egypt, the Egyptians saw that his wife was very beautiful.’

In literary Bashkir, *-GAs* converb forms can also have anteriority or causal semantics (Juldashev 1981: 311). It is also possible that in some instances, as in (154), Bashkir exhibits an example of a quasi-finite use of *-käš* as well.

(154) Bashkir (Johanson 1995: 331)

<i>Bëđ</i>	<i>kěj-ën-ëp</i>	<i>toqsay-ðar-ibið-ðï</i>	<i>aθ-ïp</i>	<i>räxmät</i>	<i>äyt-ëp</i>
we	dress-RFLXV-IP.CV	bag-PL-POSS1PL-ACC	hang-IP.CV	thank	say-IP.CV
<i>küreš-käš</i>	<i>ular</i>	<i>bëð-gä</i>	<i>yul</i>	<i>öjrat-ëp</i>	<i>yëbär-ðë-lär.</i>
say.farewell-GAŠ.CV	they	we-DAT	way	teach-IP.CV	send-DI.PST-PL

‘We dressed, shouldered our bags, thanked them and said goodbye; and they showed us the way.’

Tatar shows a wide range of functional domains of the cognate converb element, but even so this converb is not nearly as multi-functional in Tatar as it typically is in the Sayan Turkic varieties. However, in Tatar this converb element does have a number of the same functions that are seen in Sayan Turkic, including (potentially) an emergent or quasi-same-subject coordinative function, as well as marking anteriority in both same- and switch-subject contexts (155)–(156), causal semantics (157, *bul-gaç*), and even possibly semi-finite uses in Tatar literature at least (158, *tor-gaç*). The semantic domain of this converb in Tatar also appears to include the conditional (159), which *might* be an extension of the adverbial temporally subordinate “when” semantics found in other languages, or express a logical event anteriority condition (Burganova et al. 1993: 224–225, 229).

- (155) Tatar (Burganova et al. 1993: 224)

kayt-kač bel-ü
 return-GAŠ.CV know-VN
 'to know after having returned'

- (156) Tatar (Burganova et al. 1993: 225)

Ėti-se šěhër-gě küč-kěč Xösěyeniya mēdrēsē-se-neŋ
 father-POSS3 city-DAT move-GAŠ.CV Hussainija madrasa-POSS3-GEN
bašlangič klass-lar-in-a ker-ě.
 beginning class-PL-POSS3-DAT enter-AOR
 'When his father moves to the city, he enters the beginning classes at Hussainija madrasa.'

- (157) Tatar (Burganova et al. 1993: 224)

Kolxozčï-lar kil-ep ker-gěč keně is-e-m-ě
 kolkhoz.member-PL come-IP.CV enter-GAŠ.CV only remember-AOR-1-DAT
tös-te yalgız tügel-e-m.
 fall-DI.PST alone NEG-AOR-1SG
 'The kolkhoz members returned and only then do I remember I was not alone.'

- (158) Tatar (Burganova et al. 1993: 229)

Došman üt-mēs di-p išan-dï-k Armiya batır bul-gač
 enemy go-NEG.AOR say-IP.CV believe-DI.PST -1PL army hero be-GAŠ.CV
Sovet xalk-ï karti- yaše aŋar yardēmdē .
 Soviet people-POSS3 old-POSS3 young-POSS3 PRON3:DAT help-LOC
tor-gač.
 STAND.AUX-GAŠ.CV
 'Because the army is heroic, the whole of the Soviet people, from the young to the old, we believed that the enemy would not come, and helped.'

- (159) Tatar (Burganova et al. 1993: 229)

Ešlě-gěč namus belën ešlě-rgě kirek.
 work-GAŠ.CV conscience INS work-INF NEC
 'If/when you work, you have to work with conscience.'

In literary Bashkir, the combination of the *-GAs* converb plus the emphatic *=ta* appears to have conditional semantics (Juldashev 1981: 311), whereas this same formal combination rather has immediate anterior semantics in Tatar (160).

- (160) Tatar (Burganova et al. 1993: 229)

kayt-kač=ta ėyt-ü
 return-GAŠ.CV=EMPH say-VN
 'to say immediately after returning'

Perhaps the closest analog to the frequency with which the *-GAš* converb occurs in texts and has the range of functional domains typical of Sayan Turkic is to be found in Western Yugur, a.k.a. Saryg Uygur or Yellow Uygur (Malov 1957, 1967; Tenišev 1976, Nugteren & Roos 2006; Roos 2000). The element that is cognate with Sayan Turkic *-GAš* in Western Yugur is called the “coordinative gerund” by Geng Shimin & Clark (1992/1993: 204) or the “лишь только/когда” converb (the “just” or “as soon as/when”) by Malov (1957: 187). It is very frequent in the texts in Malov (1967). The range of its functions includes anteriority and/or narrative propulsion in same-subject contexts (161), immediate anteriority (162–163), and some quasi-finite forms (164)–(165) together with reduced clitic copular forms deriving from *er-* (166). These latter may well, in forms reduced to Ø, underlie the quasi-finite uses possibly found in Tatar and Bashkir, and in the Sayan Turkic varieties.¹⁹

- (161) Western Yugur [Saryg/Yellow Uygur] (Geng Shimin & Clark 1992/1993: 198)

Pu kel-geš sav+at-qaš=la tergen-ni alıñ-yaš
 this come-GAŠ.CV put.in-GAŠ.CV=EMPH cart-ACC take-GAŠ.CV
yus-un-ge yet-ıp ke-ptro.
 home-POSS3-DAT reach-IP.CV AUX.CLOC-IP.CV:NARR
 ‘He came back, and put it in and then he took the cart and came home.’

- (162) Western Yugur [Saryg/Yellow Uygur] (Malov 1957: 187)

Narī mañ-gaš ul’i-sına.
 to.that.side go-GAŠ.CV share-HORT.PL
 ‘Let’s go to the side and share.’

- (163) Western Yugur [Saryg/Yellow Uygur] (Malov 1957: 187)

Sür-geš xan-ıptro.
 drown-GAŠ.CV sweep.away-NARR
 ‘They were swept away drowning, having drowned.’

- (164) Western Yugur [Saryg/Yellow Uygur] (Geng Shimin & Clark 1992/1993: 197)

Bu gızıl biiq qorqa-aš tez-gen.
 this red cap fear-GAŠ.CV flee-GAN.PST
 ‘It is said that these Red Caps were scared and fled.’

- (165) Western Yugur [Saryg/Yellow Uygur] (Geng Shimin & Clark 1992/1993: 197)

Tikin-ge pay-yaš-du.
 thornbush-DAT tie-GAŠ.CV-DI.PST
 ‘He tied it to a thornbush.’

19 Or these forms may rather reflect a process of non-finite to finite marking shift—a process that has come to be called *insubordination* in the literature (Evans 2007, Evans & Watanabe 2016, Robbeets 2009).

- (166) Western Yugur [Saryg/Yellow Uyghur] (Geng Shimin & Clark 1992/1993: 195)

Alvatī sōyin-geš-ii.
 people happy-GAŠ.CV-COP
 'The people were happy.'

There are even examples in Western Yugur that suggest that the *-GAš* converb is used in this language in the function of tail-to-head linkage (167)–(168).

- (167) Western Yugur [Saryg/Yellow Uyghur] (Geng Shimin & Clark 1992–1993: 197)

Bo oy-ya yedik gel-gen-ii.
 this steppe-DAT reach:CV CLOC-GAN.PST-COP
Bo oy-ya yedik kel-geš...
 this steppe-DAT reach:CV CLOC-GAŠ.CV
 'They reached this steppe. They reached this steppe and...'

- (168) Western Yugur [Saryg/Yellow Uyghur] (Geng Shimin & Clark 1992–1993: 198)

... pēr kise yoq yer-ge yet-iptro.
 one person NEG.COP place-DAT reach-NARR
Kise yoq yer-ge jet-keš...
 person NEG.COP place-DAT reach-GAŠ.CV
 'He reached a deserted place. He reached a deserted place and...'

Note that derived or further case-inflected forms of this *-GAš/-GAč* converb are attested not only in Sayan Turkic languages (exemplified in section 10 above), but also to a limited extent in non-Sayan Turkic languages. For example, according to Menges (1958–1959, 1959, 1959–1960, [1960–]1963, 1995), putative cognates to the Sayan Turkic *GAš* + case converb forms are said to be found in Literary Ojrot (Altai Turkic) in the form *-GAžIn*, which ostensibly reflects an old lative-instrumental form of *-GAč* > *-GAš*, also realized as *-GAč-tIn*.²⁰

20 Note that Menges also remarks on a further possible cognate seen in the complex converb in Xakas *-AbAAs*, for which various etymologies have been offered: by Bang as **-a+bar-yač* but by Malov as **-Ip+al-yač* (Menges [1960–]1963: 117). However, neither of these etymological proposals adequately accounts for the long vowel and the lack of the velar/uvular consonant in Xakas without invoking an *ad hoc* eliding of the velar due to something like rapid speech. And while the omission of, for example, the *-p* converb or the aorist *-Vr* forms with these same putative roots does occur (*bar*, *al*, in Xakas), this specifically does *not* occur with these same verb stems when used with suffixes that start with a velar/uvular consonant, as this converb does. Also, according to Menges, in theory all of these *-GAč/-GAš* forms are said to correlate with Mongolic *-yat*, suggesting a possible loan source, as it is lacking in runic Turkic sources, but if in Chuvash the *uś* in *-uśan* really is cognate with the converb element under investigation in the present study, as Menges asserts (albeit in a secondary, case-marked version), this may rather reflect an accidental gap in the runic Turkic corpus, and thus it may possibly be old in Turkic after all.

12. Summary

The *-GAš* converb and its various derivatives in the Sayan Turkic varieties perform a wide range of functions. The *-GAš* converb may encode anteriority, including immediate anteriority, or even quasi-simultaneity of action between the event expressed by the converb clause and that of the base clause. The *-GAš* converb may also serve to encode narratively equal events in a type of semantic coordination expressed through a syntactically subordinate form as a means of conveying narrative propulsion. In certain varieties, e.g., Todzhu or Tofan, this element has been grammaticalized as a same-subject marker in a switch-reference system. Further, some Sayan Turkic varieties, especially Jungar Tuvan and Dukhan, instead have conventionalized the use of *-GAš* forms to set off chunks of discourse, by copying sequences of the finite predicative element of a sentence at the beginning of the following sentence in the *-GAš* form in a system known as tail-to-head linkage. In both Tofan and Soyot, *-GAš* has been analogically extended into domains of the *-p* converb in complex predicates or auxiliary verb constructions. Further, both causal and purposive semantics can be associated with specific grammaticalized combinations of *-GAš* forms with particular lexemes like “be” or “say” in Sayan Turkic varieties, with causal semantics often associated with a *-GAš* form of *bol-* (‘be’), and purposive semantics with a grammaticalization of a verb in the *-Vr* non-past participle or intraterminal verbal noun form followed by the *-GAš* form of *de-* (‘say’). Lastly, case-marked forms of *-GAš* can appear in many of the same functions as plain *-GAš* forms, particularly in Jungar Tuvan, Dukhan and Central Tuvan. While analogs to subsets of these functions are found in a number of other Turkic languages, especially in W. Yugur and Tatar, only in Sayan Turkic varieties is such a wide array of functional domains and frequency of *-GAš* forms found in complex sentences.

Abbreviations

ABL	Ablative	INTRATERM	Intraterminal
ACC	Accusative	IP.CV	Converb in -Ip
A.CV	Converb -A, -I, -y	ITJ	Interjection
ADJ.DER	Adjectival derivation	LOC	Locative
ATT	Attemptive	MED	Medialis
AUX	Auxiliary	MITIG	Mitigation
ALL	Allative	NARR	Narrative
AOR	Aorist	N.DER	Noun Derivation
ARDA.CV	Converb in -Ar.dA, allows subject marking by possessives	NEC	Necessitative
ARGA.CV	Converb in -Ar.gA, allows subject marking by possessives	NEG	Negative
CAUS	Causative	NPST	Non-Past
BEN	Benefactive	NR	Near
CAP	Capabilitive	OBJ	Object
CES	Cessative	PFV	Perfective

CL	Classifier	PL	Plural
CLOC	Cislocative	POL	Polite
COLL	Collective	POSS	Possessive
COMP	Complementizer	POSTTERM	Post-terminal
COND	Conditional	PRF	Perfect
CONJ	Conjunctive	PROG	Progressive
COP	Copula	PROL	Prolative
CV	Converb	PRON	Pronominal
DAT	Dative	PRTCPL	Participle
DEM	Demonstrative	PRS	Present
DI.PST	Past form in -DI	PST	Past
DIM	Diminutive	PSV	Passive
DIR	Directional	PTC	Particle
DISTR	Distributive	PURP	Purposive
DS	Different-Subject	RCP	Reciprocal
DUR	Durative	REC	Recent
EMPH	Emphatic	RFLXV	Reflexive
EVID	Evidential	SBEN	Self-Benefactive
FOC	Focus	SS	Same-Subject
GAN.PST	Past form in -GAN	SUBJ	Subject
GAŠ.CV	Converb in GAŠ	SUBJ.VERS	Subject Version
GEN	Genitive	SUBORD	Subordinator
HAB	Habitual	TLOC	Translocative
HORT	Hortative	UNACMPL	Unaccomplished
IMP I	imperative	V.DER	Verb Derivation
INTRATERM	Intraterminal	VN	Verbal Noun

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