Possessive and non-identity relations in Turkic switch-reference

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This paper provides an overview of non-canonical patterns of switch-reference involving the converb in *-(V)p* in selected Turkic languages. *-(V)p* is usually described as a same-subject converb, but we show that it can conform to McKenzie's (2012) extended definition of "same-subject" as expressing the identity of topic situations, rather than subject referents. In addition to tracking cross-clausal subject identity, *-(V)p* can be used when the possessor of the subject of one clause corefers with the subject of another clause and when the events expressed by the two clauses are in a close temporal and/or causal relationship. Based on Stirling (1993) and Bárány & Nikolaeva (2019), we argue that the role of possessors in Turkic switch-reference is captured by lexically specified conditions licensing the use of *-(V)p* when two subjects are in a possessive relation. Finally, we suggest that both types of non-canonical switch-reference can be seen as ensuring discourse continuity.

1 Introduction

Haiman & Munro (1983: ix) define switch-reference (SR) as an "inflectional category of the verb, which indicates whether or not its subject is identical with the subject of some other clause". According to this definition, the SR *pivots* (i.e. the two NPs that are related by SR marking) are syntactic surface subjects. De Sousa (2016: 58) provides a similar characterisation of *canonical* SR, but also mentions that there are *non-canonical* SR systems that diverge from this canon (see also van Gijn 2016 for discussion of how Haiman & Munro's definition has been challenged).

One type of non-canonical SR system is characterised by the use of same-subject (SS) and different-subject (DS) marking in contexts that go beyond the simplest cases

of coreference and disjoint reference of subjects, as is observed in many languages. Such non-canonical cases typically concern the semantic relations between pivots (e.g. inclusion and intersection relations, rather than strict coreference or disjoint reference) and the choice of pivots (e.g. subject pivots vs. object pivots), and have been discussed by Comrie (1983), Nichols (1983), Foley & Van Valin (1984), Wilkins (1988), Stirling (1993), and Keine (2013), among many others.

In a less known type of non-canonical type of SR, ss-markers are used in structures where the possessor of the subject of one clause corefers with the subject of the other clause, but the subjects do not corefer with each other. In other words, the pivots in such configurations do not appear to be two subjects, but a subject and a possessor, even in languages in which SR otherwise strictly tracks subject reference. In (1), illustrating this pattern, the subject of the main clause *alhe* 'nose' does not corefer with the first person singular subject of the marked clause, yet only ss-marking is grammatical.[1] *alhe* 'nose' is not morphosyntactically possessed but its assumed possessor is understood to corefer with the 1SG subject of the marked clause.

(1) Mparntwe Arrernte (Pama-Nyungan; Wilkins 1988: 166)

alhe	*irrke-ke*	[*ayenge*	*petye-me-le*	/ * *-rlenge*]
nose	be.itchy-PST.CMPL	1SG.NOM	come-NPST.PROG-SS	-DS

'My nose itched as I was coming along.'

Although possessors are known to play an important role in maintaining reference chains, as confirmed by textual analyses in various languages (Martin 1992; Nariyama 2003, among others), the role of internal possessors in such kinds of grammaticalised SR systems has been relatively little researched (in contrast to external possessors, discussed for example by Broadwell 1997, 2006 and Munro 2016 for the Muskogean languages Choctaw and Chickasaw). It is surveyed from a cross-linguistic perspective by Bárány & Nikolaeva (2019), who argue that there are certain cross-linguistic regularities in the way possessive relations interact with SR. The goal of the present paper is to provide an overview of internal possessors acting as SR pivots in the languages of a single genetic family, namely Turkic.

In Turkic, SR relations are expressed using converbial constructions. The link between SR and converbial constructions is often discussed in the literature on Turkic

[1] Examples without references have been elicited by the authors from five native speakers of Turkish, two native speakers of Uyghur, and one native speaker of Uzbek. For data from the literature, we mostly follow the authors' original transcription and transliteration systems but we adapt punctuation and the glosses to conform to the Leipzig Glossing Rules. *V* indicates a harmonizing vowel, which can be epenthetic. When transliteration is not provided in the source, we transliterate Cyrillic examples; ⟨ï⟩ stands for Cyrillic ⟨ы⟩ (usually a central close vowel), while ⟨š⟩, ⟨ž⟩, and ⟨č⟩ denote ⟨ш⟩, ⟨ж⟩, and ⟨ч⟩, respectively. For rendering elicited Uzbek data, we used a version of the official Latin-based script.

languages, which distinguish several types of converbs (e.g. Csató & Johanson 1992; Johanson 1992, 1995). We therefore follow these authors in including converbs in our discussion of SR. The paper will provide an analysis of the role of possessive relations in the licensing of one type of converbs, applying the basic ideas of Stirling's (1993), McKenzie (2007, 2010, 2012) and Bárány & Nikolaeva's (2019) approaches to SR. We will discuss the data from selected Turkic languages only. These are: Altai, Bashkir, Kazakh, Kirghiz (or Kyrgyz), Old Turkic, Ottoman, Shor, Tatar, Turkish, Tuvan, Uzbek, and Uyghur. The location of these languages is shown in Figure 2 in the Appendix. Our sample is obviously not exhaustive, but it reflects the selection of languages for which the available sources present the clearest evidence for the role of possessive relations in SR and, in some cases, offer a more or less explicit discussion of this issue.

Section 2 provides basic syntactic background on the types of Turkic converbial structures which we investigate in this paper. Sections 3 and 4 deal with same-subject and different-subject constructions, respectively, focussing in particular on the role of possessive relations in them. In Section 5, we describe how seemingly different SR constructions can be analysed as expressing distinct types of discourse continuity that share a common core, and sketch a tentative grammaticalisation path along which non-canonical SR involving possessors may have developed in the Turkic family.

2 Converbial structures

Converbs are defined by Haspelmath (1995: 3) as "nonfinite verb form[s] whose main function is to mark adverbial subordination" (see also Nedjalkov 1995; van der Auwera 1998; Ylikoski 2003; Weisser 2015). They are typically used as predicates of syntactically subordinate clauses which express relative time, purpose, manner, or other adverbial relations. Being adverbial, converbial clauses are generally not selected and they are not arguments of the main predicate. Nevertheless, they show coreference restrictions between nominals in the converbial clause and nominals in the main clause (see e.g. Nedjalkov 1995).

Haspelmath does not mention SR in his definition of converbs, but he does address cross-linguistic differences in whether converbs allow or require overt subjects (Haspelmath 1995: 9–11). This property correlates coreference restrictions of the subject of the converbial clause. Generally, converbs that have null subjects require these to corefer with the subject of the superordinate clause. Such converbs can be referred to as same-subject converbs (SS-converbs), as they appear to fulfil the same function as SS-markers in other languages. In contrast, converbs that require overt subjects generally do not have coreference requirements (or in fact require disjoint reference) between subjects (Haspelmath 1995: 10), and can be classified as different-subject converbs (DS-converbs) or converbs without coreference restrictions ("varying-subject" or VS-converbs in Nedjalkov 1995). In many languages, SS-converbs are in (paradigmatic)

opposition to VS- or DS-converbs, matching one of de Sousa (2016: 58) properties of canonical SR. As we discuss throughout this paper, however, SS- and DS-interpretations interact with whether the subjects of converbs are overt or not across Turkic. This arguably makes Turkic converbs different from canonical SR systems, as we briefly mention in Section 6.

The Turkic languages are very well suited for both synchronic and diachronic comparisons of SR because a number of converbs have been rather stable in the history of the family. In this paper, we focus on the converb in **-(V)p*, which goes back to Proto-Turkic (Johanson 1998: 117) and is probably the most common converb in Turkic. This converb is attested in the earliest records of Turkic (on which see Tekin 1968; von Gabain 1974; Johanson 1995; 1998; Erdal 1998, 2004), later varieties such as Old Anatolian Turkish (Turan 1996, 1998, 2000), (Old) Ottoman Turkish (Kreutel 1965; Hazai 1973; Kerslake 1998; Buğday 1999; Anetshofer 2005) and Kipchak (Drimba 1973; Berta 1996), as well as in all modern branches of the family. At present, the converbs in *-(V)p* are found in most modern Turkic languages with the exception of Sakha (or Yakut; Pakendorf 2007; Petrova 2008) and Chuvash (Krueger 1961). They are "contextual converbs" in Nedjalkov's (1995) terminology: they allow for a great variety of interpretations of relations between clauses. At least in some Turkic languages, they are ambiguous in terms of SR.

First, *-(V)p* converbs are used in constructions with multiple predicates in which the highest argument of the converb is phonologically null and interpreted as coreferential with the highest argument of the superordinate clause (generally, but not always, a finite verb). We will refer to such constructions as same-subject constructions (or SS-constructions). Some SS-constructions have been analysed as monoclausal, i.e. as depictives, serialisation, auxiliary, or VP coordination constructions (see e.g. Keine 2013). They are claimed to represent different stages of a grammaticalisation path along the lines of (2) (Anderson 2004; Schroeder 2004; Nevskaya 2008, 2010; Graščenkov 2015, Ótott-Kovács 2015).

(2) SS-clause > monoclausal structure with lexical finite verb > auxiliary construction (> bound TAM morphology)

In this paper, we leave monoclausal constructions aside and will only focus on the first stage of this hypothesised process, namely SS-constructions with converbial clauses which can be analysed as biclausal structures.

Most typically, but not always, such SS-constructions are subordinating and the converbial clause indicates the manner in which the main clause event is happening. However, the interpretation of the semantic relation between the two clauses varies from one example to another and depends significantly on the lexical semantics of the items involved as well as contextual clues. Evidence for biclausality comes from various syntactic tests, for example extraposition of the converbial clause, the possibility of

extraction from the converbial clause, as well as centre-embedding. What is more, the very fact that there are non-canonical patterns in which the two subjects are disjoint but linked by a possessive relation, as we show in Section 3, suggests a biclausal analysis. Syntactically, such SS-structures often resemble control constructions in which the dependent subject is PRO and have been analysed as such for a number of Turkic languages (e.g. Graščenkov & Ermolaeva 2015 for Kirghiz and Kazakh; Göksel & Öztürk 2019 for Turkish). In (obligatory or functional) control constructions, the reference of PRO is strictly linked to a syntactic controller, which is often, but not always, the subject of a superordinate clause. PRO subjects differ from null pronominal elements in that their reference is usually more strictly associated with their controller and does not allow free reference in the same way that pronouns do.

Second, *-(V)p* converbs can have overt subjects which must be referentially disjoint from the main subject. The reference of the converbial subject does not come from the main clause but is independently established. We will refer to such constructions as different-subject constructions (DS-constructions). DS-constructions show more variation than SS-constructions in terms of their syntax. In some Turkic languages, DS *-(V)p* clauses can be coordinated with or subordinate to another clause, and these structures affect the possible interpretations of these constructions. For example, for Kazakh, Ótott-Kovács (2015) argues that *-(V)p* can appear both as a coordinating head and as a verbal or adjectival element heading a subordinate, adverbial clause. She also stresses that such structures are often ambiguous, meaning that the surface form does not disambiguate between a coordinated or a subordinate structure, but that context can serve to make this distinction. Evidence for the existence of both types comes from syntactic tests. As Weisser (2015: Ch. 6) argues, in general, converbial clauses are subordinate structures, because they can often be centre-embedded, i.e. in a non-peripheral position in the clause, and because they do not block asymmetric syntactic operations, for example topicalisation in the matrix clause. Ótott-Kovács (2015) demonstrates that the application of these tests confirms the structural ambiguity of Kazakh *-(V)p* clauses with disjoint subjects.

Ótott-Kovács data further demonstrate semantic and structural variability in subordinating constructions with *-(V)p*, which in Kazakh can be interpreted either as manner clauses or temporal or causal clauses. She treats *-(V)p* as semantically underspecified and attributes the difference to the different height of adjunction: in her analysis, manner clauses are adjoined to the Voice projection, while temporal or causal converbial clauses are adjoined higher in the structure and are freer in terms of their position with respect to their finite verb (Ótott-Kovács 2015: 86–88). This analysis may well carry over to the other Turkic languages in some form, but we leave open for future research whether differences in the position of *-(V)p* clauses could account for and explain the whole range of variation shown in this paper and whether we can talk about several distinct *-(V)p* markers with their own properties for each language. What is important

for us here is that the interpretation of *-(V)p* interacts with the discourse properties of null and overt subjects as well as with other aspects of discourse continuity in Turkic, to give rise to the variation in SS- and DS-constructions found in the languages we discuss here.

Another difference between SS-constructions and DS-constructions which is relevant in this respect is that in the latter, disjoint subjects of converbial clauses must be overt. We defined SS-constructions as structures with null subjects which, in the general case, strictly corefer with the subject of the main clause. This type of coreference between a null subject, be it PRO or a null pronoun, and an overt noun phrase is cross-linguistically common, and is a canonical case of SR. In contrast, coreference between two overt noun phrases without binding is less straightforward. Two overt proper names or lexical nouns referring to the same individual are generally ruled out by binding Condition C (Chomsky 1981), as are certain combinations of coreferential lexical or proper nouns and overt pronouns, while others, as well as coreferential overt pronouns, can in principle be grammatical in certain structures.

However, in many languages with null arguments, both in the Turkic family and beyond, the choice between an unpronounced argument and the use of an overt pronoun is influenced by the information structure of an utterance. As Enç (1986) and Erguvanlı-Taylan (1986) argue, discourse continuity in Turkish is signalled using null pronouns — overt pronominals can indicate contrast or a change of topic. This means that coreference between overt pronominals and lexical or proper nouns can be ungrammatical even in structures that do not violate binding conditions.

The following examples illustrate this. Erguvanlı-Taylan (1986: 215) shows that in minimal pairs which differ in the overtness of a pronominal subject in the main clause, different coreference relations arise (independently of whether the proper name is in the subordinate or the main clause). In (3a), with a proper name subject in the subordinate adverbial clause and a null subject in the main clause, coreference is possible. This is impossible with an overt subject, (3b).

(3) Turkish (Erguvanlı-Taylan 1986: 215)

a. [*Erol çalış-ır-ken*] ∅ *müzik dinle-r*
Erol work-AOR-ADV music listen-AOR.3
'While Erol$_i$ works, he$_i$ listens to music.'

b. [*Erol çalış-ır-ken*] *o* *müzik dinle-r*
Erol work-AOR-ADV 3SG music listen-AOR.3
'While Erol$_i$ works, s/he$_{j/*i}$ listens to music.'

The Uzbek structure in (4a), with the adverbial suffix *arkan* 'while', is an analogous example to (3b). It is grammatical, but it does not support a coreferential reading

between the two subjects. This reading is only possible when at least one of the subjects is unpronounced. (4b), with the Uzbek variant of *-(V)p*, is barely acceptable at all according to our Uzbek consultant. The reason is of course that it is a SS-converb: this rules out disjoint reference, while coreference is ruled out because both subjects are overt.

(4) Uzbek

a. [*Eldor ishl-arkan*] *u musiqa tingla-r e-di*
Eldor work-ADV 3SG music listen-IPFV COP-PST.3
'While Eldor$_i$ was working, s/he/it$_{j/*i}$ was listening to music.'

b. ??/*[*Eldor ishl-ab*] *u musiqa tingla-r e-di*
Eldor work-CVB 3SG music listen-IPFV COP-PST.3
intended: 'While Eldor$_i$ was working, s/he/it$_{i/j}$ was listening to music.'

The Kazakh structure in (5), with the adverbial subordinator *-ken*, illustrates the same point as (3) and (4) — subordinate structures with an overt pronoun and an overt proper name are grammatical, but coreference is ruled out. In the absence of the pronoun in analogous constructions, coreference is possible (Ótott-Kovács 2015: 105).

(5) Kazakh (Ótott-Kovács 2015: 105)

[*ol üy-ine ket-ken*] *soŋ Ayša tamaq pisir-ų-ge*
3SG house-3.POSS-DAT go-NF after Aisha food cook-NMLZ.NF-DAT
kiris-ti
start-PST.3
'After s/he$_{j/*i}$ went home, Aisha$_i$ started cooking.'

What these examples show is that in general, independently of SR, overt subjects in several Turkic languages cannot corefer with each other in contexts not involving binding. This restriction is arguably the source of the overtness of subjects in DS-constructions. We return to this point in Section 6.

In the rest of the paper we will not discuss syntactic aspects in much detail, but will concentrate on what semantic and/or pragmatic conditions make SS- and DS-constructions acceptable in certain cases and ungrammatical in others.

3 Same-subject constructions

This section addresses the role of possessive relations in biclausal SS-constructions. In the examples below, the relevant null subject will be indicated by '∅', which we use as a representational convention, leaving open the exact nature of the null element involved.

3.1 Old Turkic

Old Turkic is the language of three sets of inscriptions or writings found in what is today Western Mongolia and Northwest China from the 8th to the 11th century CE (Erdal 1998, 2004). It is the earliest attested form of Turkic, but it is still a matter of debate how Old Turkic relates to other Turkic languages.

According to Johanson (1998: 82–83), the modern Turkic languages can be classified as forming six branches: Southwestern (Oghuz), Northwestern (Kipchak), Southeastern (Uyghur), Northeastern (Siberian), Oghur, and Khalaj. Johanson (1998: 81–85) describes the first splits in the Turkic family as illustrated in Figure 1.

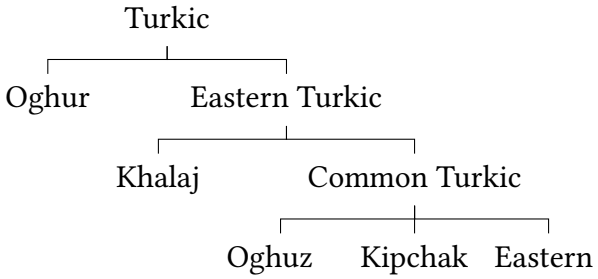

Figure 1 Early splits in Turkic according to Johanson (1998)

The first branch to split off was Oghur, followed by Khalaj.[2] The remaining bigger branch is referred to as "Common Turkic" by Johanson (1998) and Erdal (2004), but they disagree in which languages exactly "Old Turkic" stands for. Johanson (1998: 85) argues that it could represent a stage at which the language has not yet split into the Northwestern, Southwestern and Uyghur or Eastern branches shown in Figure 1. If true, this would arguably make Old Turkic the ancestor of all modern Turkic languages discussed below. Erdal (2004: 11, fn. 20), however, writes that this view is "clearly mistaken" and suggests that Old Turkic represents a stage after Common Turkic has split into the three main branches shown in Figure 1. In particular, Erdal (2004: 6) uses the term "Old Turkic" to refer to "*Asian* Turkic" (emphasis in original), presumably making it the ancestor of the modern Eastern Turkic branches only, but not the Western ones. Menges (1995: 60) seems to agree with this division, referring to Erdal's Asian Turkic as the "Central Asiatic group". In any case, Erdal (2004: 11) also points out that Old Turkic and the ancestor of Common Turkic were "probably quite similar" to each other. We therefore start our discussion with data from Old Turkic and take it to represent the Common Turkic situation or at least to be very close to it. Other ancient Turkic varieties are insufficiently known in the relevant respect.

Possessive noun phrases in Old Turkic and modern Turkic languages generally include a possessed noun as the head of the phrase, marked with a possessive suffix

[2] Róna-Tas (1991: 28) suggests that Yakut (Sakha) might have been second instead.

indicating the person and number of the possessor, and optionally the possessor itself in genitive case (see e.g. Erdal 2004: 381–383 on Old Turkic; Öztürk & Taylan 2016 on Modern Turkish). (6) illustrates an example with an overt genitive possessor and a possessive suffix on the possessed noun.

(6) Old Turkic (Erdal 2004: 381, ŠU S9)

mä-niŋ *sü-m*
1SG-GEN arm-1SG.POSS
'my army'

The genitive of the possessor indicates that possessors are dependents of the possessed noun ("satellites" in Erdal's terminology) rather than dependents of the main predicate of the clause. Evidence for the internal status of possessors also comes from word order in the possessive phrase: Erdal (2004: 381) points out that adjectives and demonstratives can precede possessors in the possessive phrase (see also Bošković & Şener 2014 on Modern Turkish).

According to Erdal (2004: 458–463), the converb in *-(V)p* is semantically underspecified and context-dependent. It forms adverbial clauses that can express, for example, temporal, causal or adversative relations between the dependent and the main clause, or acts as a linker in clause-chaining of coordinated events. Erdal (2004: 462) points out that "such converbs clearly *are* subordinated, as they share most of their grammatical categories with some other, superordinate verb and inherit them from it; the only categories expressed by *-(X)p* forms themselves are diathesis and negation." The subject of the converbial clause is generally unpronounced and corefers with the subject of the finite clause (Erdal 2004: 461, 463). A typical example is shown in (7).

(7) Old Turkic (Erdal 2004: 459; Suv 619, 18–20)

[∅ *ör-ö* *kötür-üp*] *ulug* *ün-i-n* *ulï-dï-lar*
hand-3.POSS raise-CVB large voice-3.POSS-ACC wail-PST-3PL
'… they raised their hands and wailed loudly.'

In some examples, the unpronounced subject of the converb does not corefer with the main subject, but they are in an inalienable part–whole relation, as Erdal (2004: 463) explicitly states. In (8), the subject of the main clause is a possessed noun referring to a body part of the referent of the null subject of the converbial clause, which corefers with the main clause subject's possessor.

(8) Old Turkic (Erdal 2004: 463; Ms. Mz 708 r 29–30; cited in Zieme 1999: 295)

[∅ *bo* *körünč* *kör-üp*] *köŋül-üŋ* *yazïl-tï* *mu?*
this pageant see-CVB heart-2SG.POSS stray-PST Q
'Did your heart stray seeing this pageant?'

Thus, in Old Turkic coreference between a possessor and a subject when the two are in a part–whole relation was able to license the converb in *-(V)p* in otherwise strict ss-contexts. We are not aware of any alienable possessive relations between subjects that would license the converb in *-(V)p* in Old Turkic.

3.2 Eastern Turkic

The Northeastern branch of Turkic comprises, among other languages, Tuvan, Altai, and Shor, all of which still use the converbs in *-(V)p*. Tuvan examples and discussion are provided by Mawkanuli (2005) and Aydemir (2009). These authors report that *-(V)p* converbs show a ss-preference, however, they allow interpreting two subjects to be in a possessive part–whole relation when the converb's subject is null. (9) from the Jungar variety of Tuvan spoken in northern China demonstrates this structure for the *-(V)p* converb. The relevant referents in (9) are that of the null third person plural subject of the bracketed converbial clauses '[them] spending their lives' and '[them] raising livestock' and that of the coreferential possessor of *emdirel-i* 'life-3.POSS' in the matrix clause. We take *life* to be a relational noun, arguably construed as expressing a part–whole relation in this case. Note that the null subject of the converb *seerep* 'improve' is canonical in the sense that it is coreferential with the matrix subject 'their life'.

(9) Jungar Tuvan (Mawkanuli 2005: 161–162, ex. 43)

[[$\emptyset_i$ *emdirel-i-n* *öt-küz-üp*]
life-3.POSS-ACC pass-CAUS-CVB
[$\emptyset_i$ *mal* *žibe* *azıra-p*]] *aray* *aray* *emdirel-i*
livestock thing raise-CVB slowly slowly life-3.POSS
[$\emptyset_j$ *seer-ep*] *kün-nön* *kün-gö* *seer-en*
improve-CVB day-ABL day-DAT improve-PST.INDEF
'They spend their lives raising livestock and their life slowly improved and their living conditions became better and better day by day.', literally 'Their life, improving, got better day by day with them passing their life and raising their livestock.'

The Northeastern Turkic language Tuvan thus allows part–whole relations between pivots to license ss-converbs in *-(V)p*. The expression of possession is obligatory in such cases: the part noun must take a possessive suffix.

In our sample, Southeastern Turkic is represented by Uzbek and Modern Uyghur. In Uzbek, the converb in *-(V)p* can appear once or be reduplicated (*ishlab ishlab* in (10)). If it appears once, the converb expresses that an event has terminated, while the reduplicated form expresses continuation or repetition (Bodrogligeti 2003: 580–584). Converbial clauses in *-(V)p* tend to have null subjects coreferring with the superordinate subject, as in most examples in Bodrogligeti (2003: 580–584, 1230–1231) and as confirmed by Uzbek native speaker Zarina Lévy Forsythe (personal communication). However, when the two subjects are interpreted to be in a part–whole relation, the converb in *-(V)p* is grammatical too. The subject of the converb cannot be overt in such constructions, as shown in (10a). Alienable possession and non-part–whole relations do not license the use of the converb. This is shown in (10b) and (10c). The possessive marker on *yurag-im* 'heart-1SG.POSS' in (10a) can also be omitted, while the meaning is retained.

(10) Uzbek

a. [∅ / * *men* *korxona-da* *ishl-ab* *ishl-ab* / *tinmay* *ishl-ab* *kun*
1SG company-LOC work-CVB work-CVB nonstop work-CVB day
bo'yi *ishlayveri-b*] *yurag-im* *og'riydigan* *bo'l-di*
long work.PROG-CVB heart-1SG.POSS hurt.PROG.PTCP become-PST.3
'Having worked at the company (nonstop / all day long), my heart started to hurt.'

b. * [∅ *ötir-ib* *ötir-ib*] *ruchka-m* *tush-di*
sit-CVB sit-CVB pen-1SG.POSS fall.down-PST.3
intended: 'While I was sitting, my pen fell down.'

c. [∅ *tinmay* *ishl-ab*] *singl-im* *qo'shiq* *ayt-di*
nonstop work-CVB younger.sister-1SG.POSS song tell-PST.3
'While my sister worked nonstop, she was singing.' not: 'While I worked nonstop, my sister was singing.'

While our data from Eastern Turkic are very limited and obviously depend on the selection of the examples cited in the existing descriptions, it seems that the relevant converbs are ss-converbs but can also be used in contexts where the dependent subject is null and the two subjects stand in a part–whole relation but not in an alienable possessive relation. In this sense modern Eastern Turkic languages behave just like Old Turkic, addressed in the previous section.

3.3 Western Turkic

The best-known representatives of Southwestern Turkic are Modern Turkish and its historical predecessor Ottoman Turkish, the language of the Ottoman Empire in use from the 13th to the 20th century (Kerslake 1998).

In (later) Ottoman, the relevant converbs have their Modern Turkish forms *-(y)Ip*, and like in other Turkic languages, they are primarily ss-converbs. In the Ottoman texts analysed by Hazai (1973), there are instances of ss-constructions with *-(y)Ip* in which the two subjects are in a possessive relation with each other.

(11) Ottoman Turkish (Hazai 1973: 166, 180)

a. +… [[∅ *uzak iola gid-üp*] *kari-si bir ol-up*] *eger*
long travel go-CVB wife-3.POSS one be-CVB when
gyendi-ile al-ür-se
self-with take-AOR-SBJV

'… when, travelling for a long time, and having one wife, he takes her along …'

b. [∅ *hics bir şej bil-me-jüp*] *hajvan-dan csok fark-i*
not one thing know-NEG-CVB animal-ABL much difference-3.POSS
iok-tur
NEG-COP

'… not knowing anything, he does not differ much from an animal.' literally '… his difference from an animal is not much.'

In both examples in (11), the null subject of a converbial clause corefers with the possessor of the subject in an existential construction. The possessive relation in (11a) is a kinship relation, meaning that it involves a relational noun and inalienable possession, but the possessive relation in (11b) is abstract and it is not obvious whether *fark* 'difference' can be construed as relational. These types of possessive relations do not generally license ss-converbs in Old Turkic and Uzbek (and possibly Tuvan), as suggested in Sections 3.1 and 3.2, or at least we do not have evidence for this. This indicates that in Ottoman, there are fewer semantic restrictions on which types of possessive relations can license ss-converbs than in Old Turkic, because the subjects do not need to be in a part–whole relation.

In Modern Turkish, *-(V)p* is canonically an ss-converb (Brendemoen & Csató 1987; Kornfilt 1997: 391; Göksel & Kerslake 2005: 406, 439–440; Göksel & Öztürk 2019), but licenses possessive relations between two subjects as well. Such clauses are commonly described as subordinate (see e.g. Göksel & Öztürk 2019; Bárány & Nikolaeva 2019; but see Kornfilt 1997; Keine 2013 for a different view). Canonical examples, illustrating the same-subject restriction of *-(V)p*, are shown in (12).

(12) Turkish (Kornfilt 1997: 391)

a. [*Hasan iş-in-i bit-ir-ip*] *ev-in-e git-ti*
Hasan work-3.POSS-ACC end-CAUS-CVB house-3.POSS-DAT go-PST.3
'Hasan finished his work and went home.'

b. *[*Hasan iş-in-i bit-ir-ip*] *Ali ev-in-e git-ti*
Hasan work-3.POSS-ACC end-CAUS-CVB Ali house-3.POSS-DAT go-PST.3
intended: 'Hasan finished his work and Ali went home.'

The same-subject restriction of the converb in *-(V)p* is so strong that even in contexts which can favour disjoint reference between subjects, the null subject can only corefer with the subject of the main clause. This is shown in (13). With *-(V)p*, it must be the speaker that is interpret as the subject in both clauses in (13a). That the context can support other readings is shown by (13b) with the converb in *-ince*.

(13) Turkish (Bárány & Nikolaeva 2019: 15)
Context: *The speaker is working from home, while her housemate spends the day away before returning home.*

a. [∅ *ev-e gel-ip*] *pişir-me-ye başla-dı-m*
house-DAT come-CVB cook-AN-DAT start-PST-1SG
'I came home and started cooking.', not 'She came home and I started cooking.'

b. [∅ *ev-e gel-ince*] *pişir-me-ye başla-dı-m*
house-DAT come-CVB cook-AN-DAT start-PST-1SG
'When she/I came home, I started cooking.'

However, Brendemoen & Csató (1987), Johanson (1992, 1995), Göksel & Öztürk (2019), and Bárány & Nikolaeva (2019) show that the SS-requirements are not absolute and that (alienable) possessors and wholes in part–whole relations can also seemingly act as SR pivots. According to Johanson (1995: 318, 332), this is ensured by "pragmatic inference".

Bárány & Nikolaeva (2019) report (14)–(16) with *-(V)p* indicating a range of possessive relations between the null subject of the converbial clause and the subject of the main clause, although they note that their consultants accept different possessive relations more readily with another converb in *-(y)A* than with the converb in *-(V)p*. Obviously, both 'shoes' and 'car' are alienable.

(14) Turkish (Bárány & Nikolaeva 2019: 16)

[∅ *tüm gece koş-up*] *Selcen-'in ayakkabı-sı yıpran-dı*
all night run-SS.CVB Selcen-GEN shoe-3.POSS wear.out-PST.3

'Selcen ran all night long and her shoes wore out.' literally 'Running all night long, Selcen's shoes wore out.'

(15) Turkish (Bárány & Nikolaeva 2019: 16)

[∅ *çok genç ol-up*] *oğl*(-u)* / *araba*(sı) yok*
very young be-SS.CVB son-3.POSS car-3.POSS NEG

'Being very young, s/he does not have a son / a car.' literally 'Being very young, his/her son / car does not exist.'

(16) Turkish (Bárány & Nikolaeva 2019: 17)

a. [∅ *yürü-ye yürü-ye*] *ayağ*(-ım) ağrı-dı*
walk-SS.CVB walk-CVB foot-1SG.POSS hurt-PST.3

'I was walking and walking and my legs hurt.'

b. [∅ *yürü-ye yürü-ye*] *ayakkabı*(-m) yıpran-dı*
walk-CVB walk-CVB shoe-1SG.POSS wear.out-PST.3

'I was walking and walking and my shoes wore out.'

Thus, modern Turkish differs from Old Turkic and the Eastern Turkic languages in allowing a wider range of possessive relations to license SS-converbs, and, arguably, it is even less restrictive than Ottoman. In Modern Turkish the converbs in *-(V)p* are licensed by alienable and inalienable possessive relations between their subject and the subject of the matrix clause, even though they are SS-converbs. They are therefore sensitive to coreference relations of possessors of subjects in addition to just subjects alone. For the possessor of the matrix subject's head to be interpreted as the subject of the converbial clause, possession must be overtly coded, either by the possessive suffix on the head or the possessive suffix and a free-standing possessor. These possessors are generally marked with the genitive (Öztürk & Taylan 2016) and they cannot be passivised or control subject agreement on the finite verb, showing that they are true internal possessors (cf. Göksel & Öztürk 2019).

The Northwestern branch of Turkic is represented in this paper by Bashkir and Kirghiz. For Bashkir, Say (2019) suggests that converbial clauses with *-(V)p* may be structurally ambiguous between adverbial subordination and coordination. One argument for a coordination analysis is that the converbial clause can be under the scope of

the same illocutionary operator as the finite clause. Evidence for structural subordination comes from the fact that converbs can be centre-embedded (albeit rarely) and that extraction out of the converbial clause is generally allowed. Like in most other Turkic languages, the semantic relation between the converbial clause and the main clause is underspecified and context-dependent. The exact semantic interpretation of this relation varies significantly from one example to another but usually includes causal, temporal, or manner relations.

In Bashkir, too, the converb in *-(V)p* is a SS-converb. Say (2019) illustrates this with (17), in which the referent of *Bulat* cannot be interpreted to be in hospital. It is not entirely clear whether *kemder* in fact belongs to the converbial clause in (17), however, but as we pointed out above, in the general case, a SS-interpretation is associated with null subjects.

(17) Bashkir (Say 2019: 207)

kemder *Bolat-təŋ* *tanaw-ə-n* *jemer-ep* *bolnica-la* *jat-a*
someone Bulat-GEN nose-3.POSS-ACC destroy-CVB hospital-LOC lie-IPFV.3
'Someone$_i$ broke Bulat$_j$'s nose and he$_{i/*j}$ is in hospital now.'

Again, the possessor of one of the subjects can corefer with the subject of the other clause. In the following examples, the null subject of the converbial clause corefers with the possessor of the main clause subject.

(18) Bashkir (Say 2019: 211)

[∅ *bäšmäk* *aša-p*] *Bolat-təŋ* *es-e* *awərt-tə*
mushroom eat-CVB Bulat-GEN inside-3.POSS ache-PST.3
'Bulat's stomach ached because he ate some mushrooms.'

(19) Bashkir (Say 2019: 206)

[[∅$_i$ *qojma* *aša* *töš-öp*] ∅$_j$ *järäxätlän-ep* *quj-ɣan*]
fence through descend-CVB wound-CVB put-PTCP.PST
barmaɣ-əm *jünäl-mä-j*
finger-1SG.POSS fix-NEG-IPFV.3
'My$_i$ finger$_j$ that got hurt when I$_i$ was climbing over the fence is not healing up.'

Summarising, in this section, we have surveyed subordinating biclausal constructions in which the subject of the dependent clause is unpronounced. They are generally control SS-constructions but also allow possessors of one of the subjects to corefer

with the other clause's null subject. In other words, possessors of subjects can act as if they were subjects with respect to SS-relations. This property is typical of the converb in *-(V)p* in all languages we have considered in this section. Turkic languages differ in the types of possessive relations which license this non-canonical same-subject, however. The Western Turkic languages Bashkir and Turkish show relatively similar patterns that do not seem to be attested in either modern Eastern Turkic languages in our sample or the older varieties of Turkic, because in Turkic and Bashkir the subjects of two clauses can stand in an alienable possessive relation. We will propose an analysis of these patterns in Section 5.1.

4 Different-subject constructions

We first identify the general properties of DS-constructions in Sections 4.1 and 4.2 before discussing the role of possessive relations in them in Section 4.3.

4.1 Different-subject constructions and clausal linking

Two main semantic types of DS-constructions with *-(V)p* converbs are discussed in the literature on Turkic. The first type, which we do not address here, involves "referentially deficient" (Stirling 1993) subjects, such as the (expletive or null) subjects of weather predicates. See, for example, Nevskaya (1998: 239), Erdal (2004: 464), and Say (2019: 217) for discussion of such patterns in Shor, Old Turkic and Bashkir, respectively. In the second type of DS-constructions with *-(V)p*, the converb does not seem to track the referential identity of two subjects in the first place. Instead, its function is to present a cohesive sequence of events by signalling the close conceptual link between the eventualities expressed in the syntactically related converbial and main clause. Examples involving this kind of discourse continuity and disjoint overt subjects with *-(V)p* converbs are found in several Turkic languages, although they do not appear to be very numerous.

For Old Turkic, Erdal (2004: 464) notes that he is aware of "one real exception" to the generalisation that the converb in *-(V)p* requires either subject identity or part–whole relations between referential subjects, shown in (20). Example (20) contains two converbial clauses (indicated by "1" and "2"), and a finite clause (without brackets). Based on Erdal's translation and discussion, we interpret converbial clause 1 to be a dependent of converbial clause 2. The two disjoint, overt subjects of the converbial clauses are highlighted in (20): even though their subjects are disjoint, the events expressed by the two clauses form a temporal sequence and are causally linked. We assume that this licenses the use of the *-(V)p* converb in clause 1 in this situation.

(20) Old Turkic (Erdal 2004: 464–465; TT VI 456–458)

[[$_1$ ***täŋri burxan*** *bo* *nom* *yarlïg* *yarlïk-ap*]
sky Buddha this teaching order preach-CVB

[$_2$ ***kamag kalïn kuvrag*** … *ärtiŋü* *ögrünčülüg* *sävinčlig* *bolu*
all numerous community very joyful joyful become
tägin-ip]] *köŋül-lär-i* *köküz-lär-i* *bilgä* *bilig-lär-i*
reach-CVB heart-PL-3.POSS breast-PL-3.POSS wise knowledge-PL-3.POSS
yaro-dï *yašu-dï*
shine-PST.3 sparkle-PST.3

'The god Buddha preached this teaching, (then) the whole numerous community … became exceedingly joyful and their hearts, breasts and wisdom shone brightly …'

Erdal (2004: 465) notes that the exceptional nature of two overt subjects has led certain scribes to replace the same-subject converb *yarlïkap* in this sentence with a different verbal form without a same-subject requirement. However, there seem to be more examples that fit our definition of a DS-construction.

Even though there are several first person possessive suffixes in (21), there is no first person *subject* in any of the clauses in that example. (21) therefore represents a use of *-(V)p* with disjoint subjects.

(21) Old Turkic (Erdal 2004: 463; UIII 37, 30–33)

[[*agaz-ïm-ta-kï* *tatag-lar* *barča* *uitlini-p*] [*artokra*
mouth-1SG.POSS-LOC-ATTR taste-PL all disappear-CVB exceedingly
ačïg *bol-up*]] *kün* *täŋri* *yaroq-ï* *köz-üm-tä* *arïtï*
bitter become-CVB sun sky shining-3.POSS eye-1SG.POSS-LOC at.all
közün-mäz
appear-NEG.PTCP

'The tastes in my mouth have all disappeared and have become exceedingly bitter and no sunlight appears to my eyes any more.'

The converbial clause in (22) involves a null subject, which is uncommon in DS-constructions, as discussed in Section 2. Erdal (2004: 464) suggests that coreference between the main clause subject *agï barïm* and the object of the converb *berip* is "implicit", that is, contextually determined; we suspect that this ensures discourse continuity in this instance.

(22) Old Turkic (Erdal 2004: 464, KP 7, 5)

[∅ *kün-i-ŋä* *ay-ï-ŋa* *munčulayu* *ber-ip*]
day-3.POSS-DAT month-3.POSS-DAT so give-CVB

aglïk-ta-kï *agï* *barïm* *azkïna* *kal-tï*
storehouse-LOC-ATTR treasure riches little remain-PST.3

'He gave (alms away) in this way day by day and month by month and (of) the riches in the storehouse there remained just a little amount'.

Other Old Turkic examples with *-(V)p* licensed by disjoint subjects involve a possessive or part–whole relation between two overt subjects in constructions with *-(V)p*, as we show in more detail in Section 4.3.

Nevskaya (1998: 236–239) discusses the converb in *-(V)p* in Shor (referring to it as a "gerund"). She characterises it as a strict ss-converb with a few exceptions (less than 5% of occurrences in her corpus), namely when one clause has a non-referential subject, such as nouns expressing weather phenomena, when the converbial clause is impersonal, when the predicate is passivised, or when there is partial coreference between subjects. More generally, two events that are linked causally or temporally can license the use of *-(V)p* with disjoint subjects. In temporal constructions, the dependent subject refers to a natural phenomenon that affects the main subject participant (23a), or one clause refers to a human action and the other clause denotes a period of time to which the other event is anchored (23b).

(23) Shor (Nevskaya 1998: 240)

a. [*Naġbur* *čaġ-ïp*], *pis* *üy-de* *čat* *qal-dï-s*
rain fall-CVB 1PL home-LOC lie remain-PST-1PL

'The rain falling, we stayed at home.'

b. [*iygi* *alïpt-ïŋ* *qol-u-na* *kir-ip*], *odus* *čïl* *ert* *par-dï*
two hero-GEN hand-3.POSS-DAT enter-CVB thirty year pass go-PST.3

'Since he was captured by two strong men, thirty years have passed.'

This pattern is also attested in other Turkic languages, including Uzbek, Altai and Tuvan:

(24) a. Uzbek (Gadžieva & Serebrennikov 1986: 153)

[*jaĭlov-ni* *qorongilik* *bosi-b*] *odam-lar* *havo* *ŭrniga*
summer.camp-ACC darkness press-CVB man-PL air instead
tuproq *jutiš-gan*
earth swallow-PST.3

'When darkness descended on the summer camp, people were swallowing earth instead of air.'

b. Altai (Gadžieva & Serebrennikov 1986: 152)

[*dibe* *kil-ip*] *kar* *kajïl-dï*
spring come-CVB snow melt-PST.3

'When the spring came, the snow melted'

c. Tuvan (Isxakov & Pal′mbax 1961: 317)

[*čas* *düž-üp*] [*xar* *er-ip*] *sug* [*šorgalanïp*
spring arrive-CVB snow melt-CVB water through.gutters
ag-ïp] *oŋgar-lar-da* *xöölbelten-ip* *čït-kan*
flow-CVB hole-PL-LOC form.pools-CVB do-PFV.3

'When spring came and the snow melted, the water flowed through the gutters and formed pools in the holes.'

In addition to temporal continuity, DS-constructions demonstrate a close logical connection between two clauses. (25) presents a Shor example in which the two subjects are fully disjoint, but there is a causal relationship between the two events.

(25) Shor (Nevskaja 1988: 161)

[*Altïn Suuču* *alčaŋ kiži-m* *pol-ïp*] *anï* *alarga* *köl-di-m*
Altin Suuchu bride-1SG.POSS be-CVB 3SG.ACC collect come-PST-1SG

'Since Altïn Suuchu is my bride, I came to collect her.'

Presumably, in this example the causal relationship is strengthened by the referential identity of the converbial subject and the main object, but this need not be the case. In the Mišar variety of Tatar, the converb in *-(V)p* is only licensed with disjoint subjects when there is a close semantic connection between two clauses, which is usually causal or concessive (Pazel′skaja & Šluinskij 2007; Graščenkov & Ermolaeva 2015; Ermolaeva 2016). This is demonstrated by the following minimal contrast. As (26a) shows, disjoint subjects are usually ungrammatical with *-(V)p* when the clauses are semantically independent, but they are licensed when there is a causal, (26b), or a concessive/adversative, (26c), relation between the two events even in the absence of

coreference between participants. More concretely, the differences in grammaticality between (26a) on the one hand and (26b,c) on the other are a consequence of (26a) being interpreted as denoting two distinct events where neither causes or influences the other, while there is such a link between the events expressed in (26b,c). For (26c), Ermolaeva (2016) suggests that *-(V)p* is licensed by the concessive relation between the two events.[3]

(26) Mišar Tatar ((26a,b) from Graščenkov & Ermolaeva 2015: 46; (26c) from Ermolaeva 2016: 420)

a. *[*min kil-ep*] *zefär kit-te*
1SG come-CVB Zufar leave-PST.3
'When I came, Zufar left.'

b. [*büre kil-ep*] *alsu šürlä-de*
wolf come-CVB Alsu get.frightened-PST.3
'A wolf came, (therefore) Alsu got frightened.'

c. [*jɤzak watɤl-ɤp*] *išek ačɤl-ma-dɤ*
lock break.down-CVB door open-NEG-PST.3
'The lock broke down but the door didn't open.'

Kazakh shows similar patterns. We mentioned above that the converb in *-(V)p* in Kazakh is structurally and semantically ambiguous. One of its functions is to form same-subject manner adverbial clauses, but Ótott-Kovács (2015) points out that *-(V)p* can also form clauses that express a temporal or causal relationship to the superordinate clause. Although these data do not seem to support McKenzie's (2012) suggestion that non-canonical SR is not found in subordinating configurations, subordinating clauses can have disjoint subjects.

(27) Kazakh (Ótott-Kovács 2015: 88)

[*Ülken-der šäy iš-ip*] *Qïzïl-dïŋ šeker qaw-ïnïn*
big-PL tea drink-CVB Qïzïl-GEN sugar bag-3.POSS.ABL
že-p žam-qan-da Rawšan öz-i-niŋ boma-sï-men
eat-CVB LNK.CONT-NF-LOC Rawšan self-3.POSS-GEN colt-3.POSS-INS
qošma-mï
say.goodbye-PST.3
'When the grown-ups drank tea, Raushan, while eating form Kyzyl's sugar bag, said goodbye to her own (camel) colt.'

[3]The two subjects can arguably also be understood to be in a part–whole relation with each other, which might contribute to licensing *-(V)p*.

Low coordination using *-(V)p* involves coreferential subjects, while higher coordination involves linking two clauses with their own subjects (see also Keine 2013 for a similar analysis of SR in other languages). On Ótott-Kovács's (2015) analysis, the same marker *-(V)p* expresses both types in Kazakh, giving rise to the syntactic variation in *-(V)p* constructions mentioned in Section 2. In (28), both clauses involve questioning an argument of the verb. Such symmetric operations are possible in coordinated structures only.

(28) Kazakh (Ótott-Kovács 2015: 102, 101)

a. *keše* *meyramχana-da* [*Asqar* *kim-men* *töbeles-ip*] *Bolat* *kim-men*
yesterday restaurant-LOC Asqar who-INS fight-CVB Bolat who-INS
söz-ge *kel-gen?*
word-DAT come-PRF.3
'Yesterday at the restaurant, who did Askar have a fight with, **and** who did Bolat argue with?'

b. [*kim* *pek* *kaġ-ïp*] *kim* *dala-ġa* *tïġ-ïp* *ket-ti?*
who sign hit-CVB who outside-DAT go.out-CVB leave-PST.3
'Who did give a sign, **and** who went out?'

It is generally acknowledged that this type of clausal coordination itself signals a tighter link between the conjoined clauses than a link between a corresponding sentence sequences (see e.g. an overview in Fabricius-Hansen & Ramm 2008, and the literature cited there). Temporal continuity between coordinated events is generally required. In (28a), for instance, it is supported by the expression 'yesterday at the restaurant' but in (28b) it is not linguistically expressed within the sentence itself. The interpretation of such conjoint structures demands a lot of textual and situational context, as well as reliance on extralinguistic knowledge systems, so their pragmatic acceptability may be a matter of variation.

According to Hebert & Poppe (1963: 31) the subject of the Kirghiz converb in *-(V)p* must corefer with that of the main clause. However, like in Kazakh, DS-constructions are possible and are in principle ambiguous between interpretations suggesting coordination and subordination (Ermolaeva 2016). The structures in (29) and (30) show centre-embedding, which indicates subordination according to Weisser's (2015) criteria, as mentioned above. Ermolaeva (2016) accounts for the ungrammaticality of the examples in (29) by suggesting that mere temporal succession of events does not suffice to license *-(V)p* — the events need to be in a causal or concessive relation.

(29) Kirghiz (Ermolaeva 2016: 423)

a. * *ajgül* [*tilek* *ojgon-up*] *čaj* *demde-di*
Ajgul Tilek wake.up-CVB tea boil-PST.3
intended: 'Tilek woke up and Ajgul made tea.'

b. * *ajgül* [*tilek* *ajnek-ti* *ač-ɨp*] *toŋ-up* *qal-dɨ*
Ajgul Tilek window-ACC open-CVB freeze-CVB remain-PST.3
intended: 'Tilek opened the window and Ajgul got cold.'

In (29), disjoint subjects in the converbial and the main clause are impossible. But if analogous structures are enriched by a context that supports a link between the events expressed by the two clauses, disjoint subjects are felicitous. This is shown in (30). (30a) corresponds to (29b) enriched with a context, while (30b) is only licit in a situation in which the two referents are married before the events expressed. Not all speakers Ermolaeva (2016) consulted found (30a) equally acceptable, hence it is marked with "?".

(30) Kirghiz (Ermolaeva 2016: 423, 424)

a. Context: *It was freezing outside.*

ajgül [*tilek* *ajnek-ti* *ač-ɨp*] *toŋ-up* *qal-dɨ*
Ajgul Tilek window-ACC open-CVB freeze-CVB remain-PST.3
'Tilek opened the window and Ajgul got cold.'

b. Context: *Ajgul was Tilek's wife / *Ajgul wasn't Tilek's wife.*

ajgül [*tilek* *düjnö-dön* *kajt-ɨp*] *ǯesir* *qal-dɨ*
Ajgul Tilek world-ABL leave-CVB widow remain-PST.3
'Tilek died and Ajgul became a widow.'

In (31), with a peripheral converbial clause, the same interpretation is available independently of whether the context specifies that Ajgul and Tilek were married or not. In contrast to (30b), (31) is structurally ambiguous.

(31) Kirghiz (Ermolaeva 2016: 424)

[*tilek* *düjnö-dön* *kajt-ɨp*] *ajgül* *ǯesir* *qal-dɨ*
Tilek world-ABL leave-CVB Ajgul widow remain-PST.3
'Tilek died and Ajgul became a widow.'

Ermolaeva (2016) suggests that this difference is due to different contextual requirements of coordinate and subordinate structures. Coordination is licensed by a temporal link between events, while subordination requires additional context, which creates a causal link between clauses.

In Uyghur, too, a causal and temporal link between the converbial and the main clause can license *-(V)p* in the absence of coreference between subjects.

(32) Uyghur

a. [*saʼät* *ǧiriŋl-ap*] *uyɣinip ket-ti-m*
clock ring-CVB wake.up-PST-1SG
'The clock rang and I woke up.'

b. [*müšük(-üŋ)* *yoqa-p* *ket-ip*] *küŋl-üm* *yerim* *bol-di*
cat-2SG.POSS disappear-CVB leave-CVB heart-1SG.POSS half become-PST.3
'The / your (sg.) cat disappeared and I became sad.', literally '… my heart became half.'

According to our consultants, the use of *-(V)p* is infelicitous if it is not clear what the causal relation between two events is. This is shown in (33). It is only felicitous *with* the adverb *lap* 'suddenly' which indicates a closer semantic link between the two clauses.

(33) Uyghur

[*müšük(-üŋ)* *yoqa-p* *ket-ip*] *(*lap*) *yamɣur* *yaɣ-ip* *ket-ti*
cat-3SG.POSS disappear-CVB leave-CVB suddenly rain drop-CVB leave-PST.3
'The / your (sg.) cat disappeared and the rain (suddenly) started.'

In sum, we suggest that Turkic DS-constructions with *-(V)p* converbs represent a continuous stretch of discourse which appears to rely on the close temporal or causal/concessive connection between the two events with referentially disjoint subjects. Temporal or logical links indicate that the two events expressed by the converbial and the matrix clause are not independent of each other but are in some sense interpreted as subcomponents of the same event. When two events cannot be or are not interpreted in such a way, the use of *-(V)p* is illicit. It follows that different contexts can influence whether a given utterance is felicitous or not and that languages differ in terms of what kind of adverbial circumstances can be interpreted as the inherent semantico-pragmatic components of the main event. Those that can be interpreted in such a way are presumably similar to so-called "event internal" adverbials (Maienborn 2003), which specify some internal aspect of the situation taking into account conceptual knowledge about the respective event type.

We have also seen that temporal continuity tends to be more relevant for coordinated DS-constructions, while the causal relation is a property of subordinate structures, but this seems to vary across Turkic languages.

4.2 Languages with marginal different-subject constructions

The use of the converb in *-(V)p* to indicate discourse continuity with disjoint, overt subjects is not equally acceptable in all Turkic languages, however. In this section, we discuss Bashkir and Turkish, in which a temporal or causal link between the converbial and another clause does not generally license the use of *-(V)p*, but only occasional examples of this type are attested. Bashkir and Turkish therefore behave differently from the languages in Section 4.1, even though Bashkir is closely related to Tatar.

There are occasional examples in Bashkir in which *-(V)p* is possible with disjoint subjects, without a possessive relation between them, containing weather predicates (Say 2019: 217). In (34), the subject of the converbial clause is *bir xäl* 'a story', which is not in any way referentially related to the referent of the subject of the main clause, *Bulat*.

(34) Bashkir (Say 2019: 209)

[*Bolat$_i$-təŋ* *iθ-e-nä* *ber* *xäl* *töš-öp*] $\emptyset_i$ / ? *ul$_i$*
Bulat-GEN mind-3.POSS-DAT one state.of.affairs descend-CVB that
qəsqər-əp *köl-dö*
cry-CVB laugh-PST.3
'A story came to Bulat's mind and he started laughing out loud.'

All cited examples of this kind involve a possessive relation between a subject of one clause and the possessor of a non-subject in another clause. The possessor occupies the initial position in its clause, but how categorical this condition is remains unclear. Other than that, DS-constructions are not permitted. Say (2019) provides the following example, indicating that a reasonable causal relationship between two events does not license disjoint subjects in a construction with *-(V)p* in Bashkir, regardless of whether there is an overt subject in the converbial clause. A version of (35) is grammatical if the main clause is passivised, such that the speaker becomes the subject and both clauses have the same subject, showing that it is the subject mismatch that makes (35) ill-formed (Say 2019: 207).

(35) Bashkir (Say 2019: 207)

* [(*min*) *qaraŋɣə* *uram-dan* *bar-əp*] *arqa-m-a* *kemder* *huq-tə*
1SG dark street-ABL go-CVB back-1SG.POSS-DAT someone hit-PST.3
intended: 'I was walking along a dark street when / so that someone hit me in the back.'

Similarly, Bárány & Nikolaeva (2019) show that Turkish *-(V)p* clauses do not generally allow disjoint subjects even in contexts that would support such interpretations, although there are occasional examples of DS-constructions.

(36) Turkish (Göksel & Kerslake 2005: 440)

tam o saat-te Semra iş-i bırak-ıp Ahmet işbaşi yap-ıyor
exactly that time-LOC Semra work-ACC leave-CVB Ahmet clock.on do-IPFV.3
'At exactly that time Semra leaves work and Ahmet goes on duty.'

Göksel & Kerslake (2005: 440) characterise (36) as "rather unusual", due to the disjoint subjects. Bárány & Nikolaeva (2019) report, however, that similar examples are not generally felicitous, even with contexts that favour a link between the two events.

(37) Turkish (Bárány & Nikolaeva 2019: 15)
Context: *Umut is working from home, while their housemate, Nurhan, spends the day away before returning home.*

*[*Nurhan ev-e gel-ip*] *Umut yemeğ-i pişir-me-ye başla-dı*
Nurhan house-DAT come-CVB Umut food-ACC cook-AN-DAT start-PST.3
intended: 'When Nurhan came home, Umut started cooking.'

The status of examples like (36) is therefore unclear. The phrase *tam o saatte* 'at exactly that time' does indicate that the two events expressed are temporally linked. This arguably supports the DS-construction.

Thus, like with SS-constructions, Turkish and Bashkir differ from other languages addressed here: in the general case, *(V)p*-converbs do not participate in DS-constructions which express discourse continuity and contain referentially disjoint subjects. However, all relevant languages, including Turkish and Bashkir, allow overt subjects in *-(V)p* clauses when they stand in particular semantic relations with the subject of the main clause, as we show in the next subsection.

4.3 Possessive relations between different subjects

In this section, we discuss structures that are similar to the examples in Section 4.1 in certain respects: they involve variants of the *-(V)p* converb and overt subjects in the converbial clause. They contrast with the examples in Section 4.1, however, in that the two subjects are not fully referentially disjoint, but stand in particular semantic relations: inclusion (partial coreference) relations or possessive relations. Focussing on the semantic relations between events and subjects, we can identify in more detail what licenses the non-canonical use of the converb in *-(V)p* in the absence of strict subject coreference.

Starting with Old Turkic again, there are examples in which the subject of the converbial clause is overt, but which could nevertheless indicate that a particular relation between the two subjects licenses the use of the converb. This type is more numerous in terms of available examples and arguably more regular than the data discussed in Section 4.1. In (38), the subjects of the first and the last converbial clauses are overt, and they are interpreted to be in a part–whole relation with each other (we omit brackets around the clause that Erdal translates as the main clause).

(38) Old Turkic (Erdal 2004: 463; U II 29, 17–18)

ol täŋri urïsï ol ünug äšid-ip [*kork-up*]
that sky young.man that voice hear-CVB be.afraid-CVB

[*ürk-üp*] [*bälingl-äp*] [*tü tüp-lär-i yokaru tur-up*]
be.scared-CVB startle-CVB hair end-PL-3.POSS upwards stand-CVB

'that divine son heard that voice, got frightened and panicked, his hair roots stood up upright and …'

The following examples indicate a similar pattern. Here, the possessed subject is in the finite, superordinate clause, and the subject whose referent is its possessor is the subject of the converbial clause.

(39) Old Turkic (Erdal 2004: 464–465; TT VI 456–458)

… [***kamag kalïn kuvrag*** … *ärtiŋü ögrünčülüg sävinčlig bolu*
all numerous community very joyful joyful become

täginip] *köŋül-lär-i köküz-lär-i bilgä bilig-lär-i*
come-CVB heart-PL-3.POSS breast-PL-3.POSS wise wisdom-PL-3.POSS

yaro-dï yašu-dï
shine-PST.3 brighten-PST.3

'… the whole numerous community … became exceedingly joyful and their hearts, breasts and wisdom shone brightly.'

(40) Old Turkic (Johanson 1995: 325)

[*türk bäg-lär boδn ögər-əp*] [*säβn-əp*] *toŋət-miš*
Turk lord-PL people rejoice-CVB be.glad-CVB turn.down-PST.PTCP

köz-i yügärü kör-di
eye-POSS.3 upwards see-PST.3

'The Turkic lords and people rejoiced, they were glad, and their downward cast eyes looked upwards.'

Erdal (2004) also provides the example in (41). Here, the subject of the converbial clause is *ig* 'disease', which "is inalienable as it does not exist without its victims" (Erdal 2004: 464). In other words, (41) arguably shows two subjects interpreted to be in a part–whole relation without any kind of free-standing or bound possessive marking in the subject phrase that is interpreted as semantically possessed.

(41) Old Turkic (Erdal 2004: 464, ChrManMsFr r 12)

ämtï karï-dï iglä-di [ig täg-ip] montag körk-süz bol-up
now age-PST.3 fall.ill-PST.3 illness affect-CVB so ugly be-CVB
ya-tur
lie-AUX
'Now he has grown old and fallen ill, illness has befallen (him), having become ugly he lies there.'

It appears then that the possessive relation between different subjects need not be expressed morphosyntactically and can remain implicit in Old Turkic. However, this is not true of the modern Turkic languages. In Shor, for instance, the most common type of exception to the regular SS-pattern involves two subjects which are in a part–whole relation to each other. Subjects interpreted to be in part–whole relations with each other can be overt, and the "part" can be in either clause.

(42) Shor (Nevskaya 1998: 238)

a. [*čüreg-im pïrla-p*] *kör-d-im*
heart-POSS.1SG shiver-CVB watch-PST-1SG
'My heart beating, I was watching.'

b. [*čer aŋdan-ïp*] *qïrtïz-ï tömön bolor*
earth turn.REFL-CVB surface-3.POSS beneath be.FUT.3
'The earth having turned over, its surface will be beneath.'

The examples in (42) resemble those from Old Turkic, but Nevskaya (1998: 238) points out explicitly that this type of construction "has a formal marker — a personal possessive suffix."

For Altai, which is closely related to Shor, Ubrjatova & Litvin (1986: 198-199) state that the converb in *-(V)p* is generally a SS-converb but it can be used in the absence of strict coreference when one of the subjects is a part of the other. All examples they cite are DS-constructions and they also state that the possessed noun must host the possessive marker. In (43), from Altai, the relevant relation is the part–whole relation between 'his fingers', the subject of the converbial clause, and the null subject of the main clause, coreferring with 'my critic'.

(43) Altai (Ubrjatova & Litvin 1986: 146; transliterated from Cyrillic)

[*men-iŋ* *kritig-im-niŋ* *čijokkeček* *saba-lar-ï-nïŋ* *baš-tar-ï*
1SG-GEN critic-1SG-GEN thin finger-PL-3.POSS-GEN tip-PL-3.POSS
bildirlü *tarkuruža-p*] … ∅ *kenete* *arba-p* *bašta-dï*
visibly shake-CVB suddenly scold-CVB start-PST.3

'When the thin fingertips of my critic started shaking visibly, … he suddenly started scolding.'

Uzbek and Uyghur, too, show this pattern. In the elicited Uzbek example (44), the possessive phrase is the subject of the converbial clause, its head being a part of the referent of the main clause subject (see also Bodrogligeti 2003: 1230). Similarly, in (45), a possessed noun in a part–whole relation with the main clause subject acts as the subject of the converb.

(44) Uzbek

[*qoʻl-im* *sinaver-ib*] *sport-dan* *ketishga* *majbur* *boʻl-di-m*
hand-1SG.POSS break.PROG-CVB sport-ABL go forced become-PST-1SG

'Having broken my hands (several times), I had to leave sports.'

(45) Uyghur (Friederich 2012: 132)

[*büχün* *beš-im* *aɣr-ıp*] *zadila* *išlijäm-mi-di-m*
today head-1SG.POSS hurt-CVB at.all work-NEG-PST-1SG

'My head hurt so much today that I could not work at all.'

For Kirghiz, Imart (1981: §1601) mentions a few "exceptions" to the general pattern, including the example in (46), in which the main clause subject corefers with the (overt) possessor of the converb's subject.

(46) Kirghiz (Imart 1981: §1601)

[*a-nın* *bug-u* *čıg-ıp*] *kabačı* *aç-ıl-a* *tüš-tü*
3SG-GEN sorrow-3.POSS pass-CVB sad open-PASS-CVB fall-PST.3

'As his sorrow had passed, he became happy again.' (Imart's translation: 'Comme son chagrin était passé, il redevint gai.')

Recall that (29) showed that subjects with disjoint reference do not license *-(V)p* in Kirghiz, unless the context supports a causal link between two events. The examples in (47) demonstrate that, even without a context, a possessive relation between subjects

can have the same effect: both examples involve part–whole relations between the subjects and are grammatical.

(47) Kirghiz (Ermolaeva 2016: 424)

a. *darak šamal-ga [butak-tar-ɨ kɨčɨr-ap] kɨjmɨlda-dɨ*
tree wind-DAT branch-PL-3.POSS creak-CVB move-PST.3
'The tree was moving in the wind and its branches creaked.'

b. *bala [ič-i ōru-p] ɨjla-dɨ*
child stomach-3.POSS hurt-CVB cry-PST.3
'Its stomach was hurting and the child was crying.'

Example (48) from Kazakh illustrates a similar DS-construction with overt subjects linked by a possessive relation.

(48) Kazakh (Ótott-Kovács 2015: 87, 109)

[*katïn-ïm ol-ıp*] *äjel izde-p šïğ-ïp edi-m*
wife-1SG.POSS die-CVB woman search-CVB leave-PRF COP.PST-1SG
'When / After / Because my wife had died, I set out to look for a [new] woman.'

Finally, we stated in Section 4.2 that Bashkir and Turkish *-(V)p* is not generally grammatical with disjoint overt subjects, even if the converb links two events in a causal or temporal relationship. In contrast, possessive relations between the two disjoint subjects do license the use of *-(V)p* in both languages. This is true for both part–whole relations and alienable relations. In addition, marking possession by means of a possessive suffix is obligatory. The following examples illustrate this, showing alienable possession and a kinship relation, respectively.

(49) Bashkir (Say 2019: 213)

a. [*Bolat tið bar-əp*] *mašina-hə hən-də*
Bulat fast go-CVB car-3.POSS break-PST.3
'Bulat was driving fast and his car broke down.'

b. [*Bolat-təŋ malaj-ə təw-əp*] *qəwan-əp böt-ä*
Bulat-GEN boy-3.POSS be.born-CVB rejoice-SS.CVB end-IPFV
al-ma-j
take-NEG-IPFV.3
'Bulat's son has been born and he can't stop feeling happy.'

On Say's account, such constructions require the subject that corresponds to the semantic possessor of the other subject to be more pragmatically salient than other NPs in the clause. Pragmatic salience is a relative property "measured" in terms of animacy, definiteness, topicality or affectedness, although none of these features taken alone can unambiguously define the most salient NP.

For (50), for instance, Say (2019: 209) argues that its grammaticality is a result of the functional prominence of the possessor, the horse, as the converbial clause provides more information about its physical state. What is more important for our analysis, though, is that the possessive suffix on *qarəw-e* 'force-3.POSS' is obligatory: in its absence, the example would be ungrammatical (Say 2019: 209, fn. 7).

(50) Bashkir (Say 2019: 209)

at, [*qarəw*(-e)* *qajt-əp*] *tiððän* *baš* *bir-ðe*
horse force-3.POSS come-CVB soon head give-PST.3
'The horse$_i$, once / because its$_i$ force was gone, yielded (those who were chasing it).'

While the prominence of the possessor, and the causal relation between the events in (50) play a role, too, the morphosyntactic expression of possession is therefore a crucial factor in licensing DS-constructions in Bashkir unlike in Old Turkic, for instance. However, possessive marking is not sufficient, as not all morphosyntactically expressed possessors can participate in SR. Example (51) illustrates a situation in which possession does not suffice to license a coreferential interpretation of a possessor and a subject. The reason is that the possessed noun, *ul-ə* 'his son', is as animate as the possessor but more affected by the event expressed by the converb. In this context, the possessor cannot be interpreted as the subject of the main clause as it is not more prominent than the possessed noun.

(51) Bashkir (Say 2019: 216)

[*unəŋ* *ul-ə* *awərə-p*] ∅ *eš-tän* *tuqta-nə*
that.GEN son-3.POSS come-CVB work-ABL stop-PST.3
'When his$_j$ son$_i$ got ill, he$_{i/*j}$ stopped working.'

So DS-constructions in Bashkir are ultimately fully grammatical only if (i) the two subjects stand in a possessive relation, (ii) the possessor is expressed internally to the possessive NP, and (iii) the possessor is more functionally prominent than the possessed.

(52) shows that disjoint overt subjects in a possessive relation can license the use of *-(V)p* in Turkish, too, in contrast to disjoint subjects that are not in a possessive

relation. The elicited example (53), in which there is no possessive relation between the two subjects 'this book' and 'Ahmed', is degraded.

(52) Turkish (Brendemoen & Csató 1987: 125)

[*bu kitap yüz sayfa ol-up*] *fiyat-ı iki lira-dir*
this book 100 page be-CVB price-3.POSS two lira-COP
'This book contains 100 pages and its price is two lira.'

(53) Turkish

*[*bu kitap bin sayfa ol-up*] *Ahmed on-u bitir-me-di*
this book thousand pages be-CVB Ahmed 3SG-ACC finish-NEG-PST.3
intended: 'This book contains 1000 pages and Ahmed didn't finish it.'

To summarise, in this section we reviewed non-canonical patterns of SR in Turkic which involve overt subjects. We can identify two main patterns: in the first one, the SS-converb is licensed even when the subject of the converbial clause has fully disjoint reference with the subject of the superordinate clause, as long as there is causal and/or temporal continuity between the two events. In the second pattern, the SS-converb is licensed if the overt subject of the converbial clause is in a possessive relation with the subject of the superordinate clause. Some languages, namely Turkish and Bashkir, do not in fact generally allow fully disjoint subjects in constructions with *-(V)p*, unless the subjects stand in a possessive relation. We will discuss how these two concepts, namely causal and temporal discourse continuity, on the one hand, and possession, on the other, are related to each other in Section 5.

5 Licensing conditions of Turkic switch-reference

In analysing non-canonical SR patterns, we follow Bárány & Nikolaeva (2019), who in turn build on Stirling's (1993) and McKenzie's (2007, 2010, 2012) approaches to SR, which go beyond subject identity. We lay out these approaches in Section 5.1. 5.2 provides an account of Turkic languages in which the use of the converb is licensed not only by certain types of referential relations between subjects, but also situational parameters. In Section 5.3, we discuss languages in which possession but no other situational parameters determine SR and sketch a potential diachronic pathway.

5.1 Licensing conditions

Stirling (1993) discusses two types of functions of SR. The first, arguably more canonical, function is tracking the reference of and maintaining (non-)coreferentiality between pivots.

Coreferentiality is modelled using the notion of "anaphoric conditions" (Stirling 1993: 212–215). Anaphoric conditions are semantic conditions that license the permitted referential relations between pivots, for instance identity (represented as "="), non-identity ("≠"), intersection ("∩"), and proper subset ("⊂"). Anaphoric conditions are introduced by the SS- and DS-markers in a given language, so each SR-marker is grammatically specified as being associated with particular types of semantic relations between pivots. For a language in which SR is fully canonical, strict referential identity between subjects is required. The anaphoric condition in (54a) licenses SS-marking: if the two subjects, SBJ_1 and SBJ_2, are identical, the SS-marker is used. If the condition in (54a) is not met, that is, the two subjects are not in an identity relation, as in (54b), a DS-marker must be used in the canonical case.

(54) Anaphoric conditions for canonical SR

a. $\text{SBJ}_1 = \text{SBJ}_2 \rightarrow$ SS-marking

b. $\text{SBJ}_1 \neq \text{SBJ}_2 \rightarrow$ DS-marking

However, languages differ with respect to which anaphoric conditions license SS-marking. As just mentioned, in some languages anaphoric conditions refer to proper subset or intersection in addition to identity relations.

Bárány & Nikolaeva (2019) build on this approach and argue that identity between subjects in one clause and possessors of subjects in another clause can be captured by anaphoric conditions as well. Their account is based on analyses of possessive constructions in which the possessor and the possessed noun are related to each other by two-place semantic relations such as PART-OF, for part–whole relations, or POSS (or *R*), for more general possessive relations (see, e.g. Barker 1995, 2011; Partee 1997; Partee & Borschev 2003; Ackerman & Nikolaeva 2013; Myler 2016; Ortmann 2018; Nikolaeva & Spencer 2019).

These relations are introduced syntactically and semantically in two distinct ways. On the one hand, a subtype of so-called relational nouns, for example body part expressions, are lexically specified as being in a part–whole relation to some entity (Barker 1995; Vikner & Jensen 2002; Myler 2016; Ortmann 2018). A body part noun like *leg* can be represented semantically as in (55) (cf. Myler 2016: 51; Bárány & Nikolaeva 2019: 4), meaning that it relates two arguments, *x*, the leg itself, and an entity *y*, that the leg is a part of, often expressed syntactically as a possessor.

(55) *leg*: $\lambda y.\lambda x.\text{leg}(x) \wedge \text{PART-OF}(x, y)$

As body part nouns are inherently specified as being a part of some entity, they presuppose the existence of this entity (Löbner 2011). Since the whole is presupposed, a body part noun can be understood to be part of some entity even when it is not

expressed in a possessive construction, as is indeed the case in a number of languages and constructions.

This contrasts with non-relational nouns, which are not lexically specified as being in any particular relation with another entity. In order to establish a possessive relation between a non-relational noun and another noun, the non-relational noun must be syntactically and semantically modified to accommodate a possessor. Again following Myler (2016) and Bárány & Nikolaeva (2019), we can represent a possessed non-relational noun like *bicycle* as in (56). Here, the relation POSS introduces a possessor y semantically. In syntax, this relation is spelled out as a possessive construction.

(56) *someone's bicycle*: $\lambda y.\lambda x.\text{bicycle}(x) \wedge \text{POSS}(y, x)$

Bárány & Nikolaeva (2019) propose that PART-OF and POSS can act as relations in anaphoric conditions, in addition to identity, intersection, subset relations, etc. and license SS-markers when two subjects are in these relations to each other. If subjects are analysed as pivots in these non-canonical cases too, we can account for disjoint examples by means of the additional anaphoric conditions that are defined in terms of the acceptable referential relations between pivots, either POSS or PART-OF.[4]

The second function of SR ensures the agreement relation between non-referential properties of the two clauses. Stirling (1993) argues at length that SR goes beyond what Haiman & Munro (1983) describe and tracks not just cross-clausal (non-)identity of pivots, but changes in agentivity, tense, or place, event sequence and mood, subject to cross-linguistic variation. SR expresses whether two clauses agree with respect to these features. If their values are identical, this match is spelled out as SS-marking: DS-marking is used in the case of a mismatch.

In Amele (Papuan; Papua New Guinea), for example, if the time or place of events change between two clauses in a SR-construction, this change triggers DS-marking (Stirling 1993). SR in Amele is therefore sensitive to factors other than the reference of noun phrases. According to Pustet (2013), Lakota SR markers indicate the degree to which the link between two events expressed as subclauses is interpreted to be probable and temporally close, not unlike in the Turkic data discussed in this paper. Mithun (1993) shows that SR in Central Pomo cannot be analysed as being sensitive to subjecthood: in some cases, SS-markers are used for matching agents but different subjects, and they can even be used with completely different referents. Mithun analyses this in terms of how closely related the events reported by the subparts of the SR construction are. The SS-marker is used for "closely associated actions" and "actions presented as components of a single event", while the DS-marker is used for "distinct events" (Mithun 1993: 126).

[4] Bárány & Nikolaeva (2019) present a number of language-internal and typological arguments against an alternative analysis in which possessors are treated as pivots; they are not directly relevant here.

To account for such complex patterns, Stirling (1993: 230–238) uses what she calls a "structured eventuality index", basically a bundle of information about a given clause, including its event type (e.g. an event or state), a pivot, and a location. It is the identity or non-identity of the eventuality indices of two clauses which determines whether they are linked by a SS-marker or a DS-marker. Adapting (and simplifying considerably) Stirling's work, this can be expressed as a licensing condition such as (57), where s_1 and s_2 indicate the situation that the event expressed by each clause expresses is part of.

(57) Licensing conditions for SS-markers expressing action continuity
$s_1 = s_2 \longrightarrow$ SS-marker

In the analysis we present below, we take *s* to be roughly similar to Stirling "structured eventuality index" but closer to McKenzie (2007, 2010, 2012) notion of "topic situations". Unlike propositions, which are taken to be true or false of an entire possible world, situations refer to parts of possible worlds. Formally, McKenzie treats situations as silent pronouns indicating "what part of the world an asserted proposition is true over" (McKenzie 2007: 4). Adopting this view, McKenzie can explain SR patterns in which two events with disjoint subjects are linked with an SS-marker, because the two events form part of the same larger situation. For instance, Kiowa (Tanoan; USA) has a SR system that does not track subject identity, but the identity of topic situations (introduced at the sentence level) or resource situations (introduced at the noun phrase level). When these situations match for two clauses, SS-marking is licensed, even in the absence of co-reference of subjects.

On McKenzie's account, topic situations are represented in syntax and semantics. SS- and DS-markers are lexically specified with respect to identity (SS) and non-identity (DS) of these situations. This approach resembles Stirling's in that McKenzie, too, shows that properties other than the reference of pivots are being tracked and that this information is associated with the semantic contribution of each SR marker. This also means that "SS" need not mean "same subject" as temporal, causal, and other situational links can also license a "SS"-marker. McKenzie (2012) thus uses "SS" to mean "same subject/situation". While this use does not capture possessive relations, we also maintain this label as it is widespread and, as was seen in the previous sections, possessive relations licensing SS-markers must involve subjects in Turkic.

Topic situations are more flexible than Stirling's indices, though, in that they straightforwardly allow agentive subjects with disjoint reference to be linked by SS-marking, as long as the two events are part of the same situation: this is the case in several of our DS-constructions exemplified above. The structured eventuality index, in contrast, always references a "protagonist" that is generally an agent (Stirling 1993: 231). Stirling therefore predicts that non-canonical SS-marking only appears when this protagonist

is unspecified (Stirling 1993: 245), but this would fail to account for examples with referential non-agentive subjects, as some of the examples discussed in Section 4.1.

5.2 Part–whole relations and action continuity

Applying these ideas to our material, this section provides an account of Old Turkic and all modern Turkic languages from our sample with the exception of Turkish and Bashkir, that is, Shor, Altai, Tatar, Uzbek, Uyghur, Kirghiz, and Kazakh.

At first glance, the only anaphoric condition needed to capture non-canonical SS-constructions in these languages is PART-OF(SBJ_2, SBJ_1), which states that disjoint subjects must be in an inalienable part–whole relation. The relevant data attested in some of these languages were surveyed in Sections 3.1 and 3.2. They generally involve part–whole relations between the main subject and the unexpressed dependent subject. However, in Section 4 we also discussed constructions with an overt dependent subject. In some of these, there need not be any referential relation between the two subjects whatsoever. If overt subjects have fully disjoint reference, but the converb in *-(V)p* is nevertheless licensed, the conditions licensing it cannot be referential identity or (inalienable) possessive relations. We noted instead, following other literature, that the relevant notions pertain to the degree and the type of cohesion between events: two events are interpreted as (parts of) one larger event if there is a causal, concessive, and/or temporal link between them.

Givón (1983: 54) refers to this type of discourse continuity as "action continuity", that is the linkage of eventualities "in a way that coheres or makes temporal or causal sense" (his emphasis). This type of continuity does not necessarily involve identity of arguments, that is SS-relations in a strict sense, but has a scene-tracking effect. Informally speaking, when the two situations are identical, because the two clauses express coherently linked sub-events, an SS-marker must be used to express action continuity. Givón also suggests that action continuity is usually signalled by "verbal bound morphology". The converb in *-(V)p* is not atypical in this sense, as its tense and mood value generally depends on that of its main predicate. So although *-(V)p* does not target subject pivots in such disjoint subjects constructions, we will continue referring to it as a SS-marker with the proviso that it acts as a marker of action continuity.

It should again be emphasised that the acceptability of DS-constructions with action continuity largely depends on individual contexts and speakers, as is especially evident from the Kirghiz examples (29) and (30) above, as well as a number of other examples where speakers' judgements differed. Therefore the proper modelling of licensing conditions for this type of action continuity requires some kind of representation of contextual information, as is in fact attempted in Stirling's (1993) Discourse Representation Theory account. For our purposes, however, we are more interested in the possible types of referential relations between disjoint subjects in SR constructions.

We also saw in Section 4.3 that DS-constructions allow a possessive relation between disjoint subjects to license -(V)p converbs, and in all examples cited there, this possessive relation is inalienable, more specifically a PART-OF relation. There are other examples in which disjoint subjects are not fully referentially independent, but instead stand in inclusion or overlap relations to each other. This kind of referential overlap is illustrated for several languages in (58).

(58)

a. Tatar (Pazel′skaja & Šluinskij 2007: 48)

?[*sŭrŭ sŭjŭr-lar kŭčkŭr-ŭp*] *ketü jŭlga bujŭna kil-de*
grey cow-PL scream-CVB herd river to come-PST.3
'When grey cows mooed, the herd came to the river.'

b. Shor (Nevskaya 1998: 239)

[*nanč-ïm kel-ip*] *pis čoqtažarïs*
friend-1.POSS come-CVB 1PL speak.COM.FUT.1PL
'My friend$_i$ having come, we$_{i+1SG}$ will speak.'

c. Old Turkic (Erdal 2004: 464; KT N7)

[*oza* [*kä*]*l-miš süsi-n köl tegin agït-ïp*] *toŋra bir*
earlier come-PTCP army-ACC Köl Tegin rouse-CVB Toŋra one
uguš alpagut ärig toŋa tegin yog-ïn-ta ägir-ip
group hero place Toŋa prince funeral-3.POSS-LOC encircle-CVB
ölür-tü-müz
kill-PST-1PL
'Köl Tegin roused his army, which had come in flight, we encircled a group of Toŋra knights at the funeral ceremony of prince Toŋa and killed (them).'

In (58a) and (58b), 'grey cows' and 'my friend' are interpreted as parts or proper subsets of the collective/aggregate entities, 'herd' and 'us', respectively (the "?" in (58a) indicates variation among speakers, however). For (58c), Erdal (2004: 464) suggests that there is "referential — though not grammatical — identity" between Köl Tegin and the first person plural subject of the following clauses. There is no possessive relation between the subjects here, but the identification of the writer with the Köl Tegin's army conveys partial coreference between the subjects, Köl Tegin and the first person plural.

In Kirghiz, too, inclusion relations between subjects can license the *-(V)p* converb. This is shown clearly in (59), where the converb is only possible if the two subjects partially corefer in (59a,b), but not when their referents are not overlapping, as in

(59c), where the two subject referents must be disjoint. The difference in acceptability between (59a,b) could be a consequence of the directionality of the part–whole relation, a point of cross-linguistic variation (Bárány & Nikolaeva 2019).

(59) Kirghiz (Ermolaeva 2016: 419)

a. ?[*beten ketü bʏlʏn-ga čʏg-ʏp*] *sʏrʏ sʏjʏr-lar megrä-de*
whole herd field-DAT emerge-CVB grey cow-PL moo-PST.3
'The whole herd entered the field, and the grey cows mooed.'

b. [*sʏrʏ sʏjʏr-lar kʏčkʏr-ʏp*] *beten ketü kʏr-ga čʏk-tʏ]*
grey cow-PL scream-CVB whole herd field-DAT emerge-PST.3
'The grey cows mooed and the whole herd entered the field.'

c. *[*ak sʏjʏr-lar bʏlʏn-ga čʏg-ʏp*] *sʏrʏ sʏjʏr-lar megrä-de-lär*
white cow-PL field-DAT emerge-CVB grey cow-PL moo-PST-PL
intended: 'The white cows entered the field, and the grey cows mooed.'

Inalienable possessive relations and inclusion relations are similar because both are closely related to the notion of partitivity and are often grammaticalised in the same way cross-linguistically (see e.g. Koptjevskaja-Tamm 2017). Both relations have to do with the bridging association between two entities: in order to cognitively access an entity, a reference is made to another entity or set of entities (see Irmer 2011 and references therein). We propose that both inalienable possessive relations and inclusion relations contribute to maintaining action continuity required to license the Turkic ss-constructions because they introduce a link between two events, as a consequence of the referential relation that is established between two subject referents. It is presumably the resolution of bridging reference that facilitates continuity between two participants in SR relations when some sort of partial coreference is involved.

With respect to action continuity, two events whose subjects overlap in reference (through part–whole and inclusion relations) are arguably always in a very close temporal or causal relation to each other, as events affecting a part generally affect the other member of the relation as well (see e.g. Shibatani 1994: 471; Chappell & McGregor 1996: 5; Lamiroy & Delbecque 1998: 31; Deal 2013). This means that action continuity automatically arises between two clauses in which subjects stand in a partial coreference relation. Such constructions therefore license *-(V)p* in all the languages discussed above, as they can manifest action continuity through referential continuity. In contrast, alienable possessive relations, such as relations of (legal) ownership or control over an entity expressed by POSS, do not express continuity between events in the same way as part–whole relations do. An event affecting an alienably possessed entity need not have any effect on its possessor. Therefore alienable possessive relations

may or may not contribute to temporal or causal discourse continuity but they are not sufficient for licensing it.

Concretely, then, Shor, Altai, Tatar, Uzbek, Uyghur, Kirghiz, Kazakh and Old Turkic constructions with *-(V)p* are licensed by the two conditions shown in (60).

(60) Licensing conditions for Old Turkic, Shor, … *-(V)p*

a. $\text{SBJ}_1 = \text{SBJ}_2$

b. $s_1 = s_2$

The condition in (60a) accounts for strict subject coreference in canonical SS-constructions. The condition in (60b) accounts for both temporal and causal continuity between two clauses and for PART-OF and inclusion relations between subjects manifested in both SS- and DS-constructions. It states that the events expressed by the converbial and the finite clause share what we referred to as "topic situations" above, following McKenzie. This ensures action continuity in Givón's sense but also raises the question whether condition (60a) is still necessary in the first place, as subject identity is likely to ensure that two events are closely linked in a temporal or causal sense. However, subject coreference always seems to license *-(V)p*, even in the absence of contextual reinforcement that is necessary to license DS-constructions, as discussed for (29) and (30), for instance. Subject coreference as a condition is thus still independent of situational coherence.

As far as possessive constructions are concerned, there is some evidence that the morphosyntactic expression of the possessive relation was not required to license SS-marking in Old Turkic, arguably indicated by examples such as (41). The absence of possessive marking in such examples is not due to the general optionality of possessive marking in the language, because in regular adnominal possessives expressing the possessor is obligatory (cf. the Old Turkic possessive in (6)). Optionality is therefore a property of the SS-construction itself; unlike for regular possessives, the absence of the possessor does not affect its overall grammaticality. The reason is that, as discussed in Section 5.1, relational nouns which express part–whole relations presuppose their possessors because a possessor argument is inherently present in their semantic representation. Our analysis of SR crucially relies on semantic representations, therefore the implicit possessor argument can corefer with the subject of another clause in the SR chain even without being morphosyntactically expressed (see Bárány & Nikolaeva 2019 for further discussion). The inherent connection between parts and wholes and a suitable context facilitate the relevant interpretation. Old Turkic, in this respect corresponds to languages like Mparntwe Arrernte (in (1)) and Udmurt, discussed by Bárány & Nikolaeva (2019), which also allow possessors in part–whole relations to participate in SR without possessive morphosyntax.

Old Turkic still had the option of overtly expressing the possessive relation between two pivots, however. This is shown by examples (38)–(40). Presumably, possessive

marking supports the interpretation of discourse continuity here. Harris & Campbell (1995: 72–75) refer to such optional expressions as "exploratory expressions". Exploratory expressions can be introduced to highlight or strengthen the meaning of the construction, for clarity for example. Their use does not by itself represent a historical change because it is produced by existing grammars, but exploratory expressions can feed syntactic change because they can become grammaticalised over time. In particular, the exploratory expression of possession can lead to a reanalysis of the SR structure, we suggest.

In contrast to Old Turkic, in most modern languages addressed here, possessive relations between subjects in constructions with the *-(V)p* converb are only possible with the obligatory morphosyntactic expression of possession in the possessed noun's noun phrase. While Old Turkic as such was not the direct ancestor of modern Turkic languages, we can assume it to be the closest approximation of their common source and hypothesise the respective diachronic process with Old Turkic as a starting point. During this process, the optional expression of possessors became obligatory, as is the case at least in Shor, Altai, Tatar, Kirghiz, and Kazakh SR constructions, as far as we can tell from our available sources. At the current stage, it is no longer just the semantics of the part–whole relation that licenses ss-marking, but the morphosyntactic presence of a possessor that corefers with the (subject) pivot of another clause, so that the pivot's referent can be established through morphosyntax.

We have some (inconclusive) evidence that Uyghur may behave slightly differently, however, in that it also allows SR pivots in alienable possessive relations to license ss-constructions with *-(V)p*. This type of construction also falls under condition (60b), but suggests that Uyghur is somewhat more flexible in resolving bridging reference than Shor, Altai etc. and that therefore in Uyghur the POSS relation may contribute to action continuity in the same way as PART-OF.

In all these languages, the essence of this reanalysis of semantic part–whole relations to morphosyntactically marked ones is what Lehmann (2015: 148–152) calls "obligatorification", comparable to Givón's (1979: Ch. 5) and Comrie's (1988) "syntacticisation". This is a historical process that involves a change from a semantically or pragmatically licensed condition to a syntactically licensed one. Seržant's (2012: 371–372) discussion of the North Russian possessive perfect provides an example of this type of change: he shows that in these structures optional oblique experiencers were reanalysed as obligatory subjects. In our data, the driving force behind obligatorification of the possessor could be either the reinforcement of the coreferential interpretation of the possessor and a subject in order to avoid ambiguity and/or anaology to canonical possessive constructions in the taxonomic constructional framework (see Traugott 2007, and Sommerer 2015, among others, on the role of constructional analogy). We are not committed to either option, however. What is important for us is that, once the expression of possession has become obligatory, it can support the reanalysis of

non-canonical SR as involving any kind of possessive relation, not just PART-OF. This is what we discuss in the next section.

5.3 Alienable possession as participant continuity

We argued in Section 4.2 that the *-(V)p* converb does not generally express action continuity in the Western Turkic languages Bashkir and Modern Turkish (see also Göksel & Öztürk 2019). However, in contrast to the languages addressed in the previous section (except possibly for Uyghur), any kind of possessive relation between the main clause subject and its possessor can license *-(V)p*.

Bárány & Nikolaeva (2019) extend their approach to Turkish and Bashkir examples in which the possessive relation is not a part–whole relation, but a more general one, such as in (14), (15), and (16b). These examples show that Bashkir and Turkish have fewer restrictions on the types of semantic relations between pivots of than other modern Turkic languages in our sample, as well as Old Turkic. At the same time, DS-constructions involving subset relations are also found, as (61) shows for Bashkir.[5]

(61) Bashkir (Say 2019: 217)

[*klass* *jarəš-tar-ða* *jeŋ-ep*] *iŋ* *jaqšə* *uqəwsə-lar* *büläk-tär*
class competition-PL-LOC win-CVB most good pupil-PL gift-PL
al-də
take-PST.3

'The class$_i$ won the competition and the best pupils$_{j(j\subset i)}$ received prizes.'

This suggests that the anaphoric conditions in (62) are active in Turkish and Bashkir.

(62) Anaphoric conditions for Turkish and Bashkir

a. $\text{SBJ}_1 = \text{SBJ}_2$

b. $\text{POSS}(\text{SBJ}_1, \text{SBJ2})$

c. $\subset(\text{SBJ}_1, \text{SBJ2})$

The condition in (62a) accounts for the use of *-(V)p* when two subjects corefer and the converb's subject is left unpronounced (as discussed in Section 3.3). The condition in (62b) accounts for its use when two subjects are in a possessive relation of any sort independently of whether the converb's subject is null, as in Section 3.3, or overt, as in Section 4.3, while (62c) accounts for examples like (61). Together, the anaphoric

[5] There are also examples of DS-constructions in which both subjects are possessed by the same entity. It is not fully clear how these relate to the data and analysis in the text and we leave these for future research.

conditions in (62b) and (62c) license possessive or inclusion relations in non-canonical SR in Turkish and Bashkir, but not others types of relations.

It is clear from (62) that while action continuity is not relevant in Turkish and Bashkir, these languages emphasise referential relations between disjoint subject pivots. Givón (1983: 54–55) refers to this as "participant continuity" in discourse and links it to topic continuity. While subjects tend to be more topical than lower grammatical relations, possessors are often human and thus are also relatively high in topicality (Givón 1983: 57; 80, note 10). Therefore both possessor and subject roles are suitable for maintaining continuous topics. This seems to be especially clear for examples such as Bashkir (50) above, where the main subject 'horse' appears to be topicalised syntactically, as well as being topical in terms of its information-structural role. It is coreferential with the possessor of the dependent subject and cross-referenced by the possessive marker on it.

In Turkic, then, discourse continuity involves both action continuity and participant/topic continuity (via possession and partial coreference relations), using Givón's terms. He mentions, in fact, that action continuity is often inseparable from participant continuity (Givón 1983: 54), although he does not elaborate on this point.

There are certain differences in how the two types of discourse continuity are grammaticalised across Turkic languages. We located this difference in the different lexical properties of the converb in *-(V)p* in the two types of languages. Concretely, in Turkish and Bashkir, *-(V)p* converbs are more restricted, because disjoint subjects are only possible when participant/topic continuity is maintained. In our account this means that *-(V)p* is lexically specified to be licensed by certain referential relations between subjects (possessive and inclusion, as well as identity relations in SS-constructions). In contrast, in Shor, Altai, Tatar, Uzbek, Uyghur, Kirghiz, and Old Turkic, possessive and inclusion relations between subjects are simply a frequent subtype of the semantico-pragmatic links between situations that can license *-(V)p*, and unlike in Turkish and Bashkir, in these languages possessive relations between disjoint subjects are nearly always inalienable.

Again, assuming the Old Turkic situation to be historically primary, we can speculate that Turkic and Bashkir reanalysed the licensing condition in (60b) in their course of their history. At some stage, there were both morphosyntactic and semantic restrictions on licensing SS-marking: SS-marking involving possession was only possible with part–whole relations as a subtype of action continuity, but coding the possessive relation became obligatory, like in the modern languages addressed in Section 5.2. The next step is not attested in our data but can be hypothesised for the linguistic predecessors of Turkish and Bashkir. They arguably reanalysed (60b) as a restriction to PART-OF relations rather than situations because of the high frequency of the former in maintaining discourse continuity. At this point, temporal and causal continuity without part–whole relations between pivots was no longer sufficient to license *-(V)p*.

The range of possible possessive relations between disjoint subjects was later extended from inalienable to other possessive relations, as suggested by an earlier stage of Turkish, Ottoman. Although our evidence from Ottoman is rather sparse, it seems that it licensed inalienable relations other than part–whole between two subjects (see (11)), but not alienable relations. One way of representing this stage of the language in terms of anaphoric conditions would be that some speakers started adopting a grammar with anaphoric conditions including POSS and others retained only PART-OF of earlier stages, while in modern Turkish all or the majority of speakers allow POSS in the anaphoric conditions associated with the -(V)p converb. Thus, if Old Turkic represents the first stage of the relevant diachronic process with Turkish and Bashkir as its endpoints, the process consisted of gradually replacing (60b) with (62b) and (62c), possibly through the intermediate stage of PART-OF(SBJ_2, SBJ_1).

The prerequisite for this change was the grammaticalisation of the expression of the possessor over time through obligatorification. This made the possessor's referent fully recoverable independently of the nature of the possessive relation, which is crucial for non-relational nouns in particular because they do not presuppose a possessor. The change itself loosened the semantic restrictions on possessive relations in SR. This conforms to what Harris & Campbell (1995: Ch. 5) call "extension", i.e. the removal of semantic conditions on a syntactic construction, or, equivalently the spread of a construction to additional semantic contexts. Using Seržant's (2012) example again, once optional oblique experiencers were reanalysed as obligatory subjects of the North Russian possessive perfect, semantic restrictions on subjects were removed: while at first only animate experiencers were possible in the possessive perfect construction, after their grammaticalisation as subjects, inanimate referents were possible as well. There was therefore an "increase in generality" (Seržant 2012: 372) in this construction.

In Turkish and Bashkir, extension refers to the possibility that alienable possessive relations license SS-marking where this was previously only required for part–whole relations. Bárány & Nikolaeva (2019) in fact argue that allowing both alienable possessive relations and part–whole relations to license SS-marking is a general characteristic of non-canonical SR involving possessive relations in a larger sample of languages: if a language allows possessive relations to license SS-marking, it must also allow part–whole relations to do so, but not the other way round. The logic underlying their generalisation is that part–whole relations can be conceptualised as a possessive relation between the whole and the part and are in fact often expressed morphosyntactically just like other, alienable possessive relations. The inverse is not true, however: alienable possession in particular cannot be understood as forming a part of the possessor (e.g. with *bicycle* in (56)). Bárány & Nikolaeva (2019) therefore take POSS to be more general than PART-OF. In addition, their cross-linguistic survey suggests that those languages which allow alienable possessive relations between two pivots require the

morphosyntactic expression of possession. The Turkic data support this conjecture too.

In a nutshell, then, the direction of change we hypothesised for Turkish and Bashkir demonstrates the abandoning of purely semantic conditions and a drift toward the increased role of (morpho)syntax in the licensing of non-canonical SR.

6 Summary and other issues

This paper presented an overview of non-canonical switch-reference constructions involving the converb in *-(V)p* in the Turkic language family, focussing specifically on possessive relations between the subject of the converb and the subject of the finite clause. Building on work by Stirling (1993) and McKenzie (2012), we treated SR as a grammatical system whose function does not only consist in tracking the reference of pivots, but also in marking the more general types of discourse continuity. The semantic contribution of each particular SR marker can be described in terms of the licensing conditions that specify the types of semantic relations permitted between the controlling and the marked clause. They refer to identity and non-identity of subject pivots (we called these "anaphoric conditions" following Stirling 1993 and Bárány & Nikolaeva 2019) or pertain to various parameters of the situation as a whole.

The converb in *-(V)p*, attested in Old Turkic and nearly all modern Turkic languages, licenses the different types of non-canonical SR through its different lexical specification in different languages. The most canonical way of linking two clauses with *-(V)p* occurs when they have coreferential subjects but the subject of the converb is null, a type found in all Turkic languages examined here. This means that *-(V)p* always has an anaphoric condition licensing its use in the case of subject identity. Beyond this, however, languages differ.

In some constructions with *-(V)p* the subject of the converb must be overt and referentially disjoint from the main subject; we referred to these as DS-constructions. To account for the variation found among such DS-constructions, we suggested that *-(V)p* is licensed by two distinct ways of expressing discourse continuity. In one type, possessive (and inclusion) relations between two subjects can license the use of the converb, while in the other, temporal and/or causal/concessive continuity between events can do so. Both types can be understood to represent different types of discourse continuity: using Givón's (1983) terminology, possessive and partial coreference relations licensing non-canonical SR are a type of participant or topic continuity, while temporal and/or causal links between events are a type of action continuity. Turkic languages show different configurations of these properties and, for instance, two languages in our sample, Modern Turkish and Bashkir, only maintain participant continuity. We hypothesised that they represent a more advanced stage in the putative diachronic process.

Furthermore, there are non-canonical SS-constructions with null subjects in the converbial clause which corefer with the referent of the possessor morphosyntactically encoded on the subject of the main clause. This pattern is interesting because it instantiates what Nikolaeva, Bárány & Bond (2019) refer to as "prominent internal possessors", that is, internal possessors that exhibits certain properties of a syntactic head. In this case, the possessor of the main subject behaves as if it were a subject for the purpose of the SS-relation. It remains to see what syntactic analysis (if any) is applicable to these Turkic data. Our paper only explored the non-syntactic factors that permit possessors to participate in non-canonical SR, and established that Turkish and Bashkir are again different from other Turkic languages in that they are less restrictive in terms of the possessive relation which can hold between subjects in such non-canonical SS-constructions. We suggested that looser semantic restrictions emerged due to the extension of anaphoric conditions.

It should be noted that SS-constructions with null subjects entail an asymmetry between the two subjects: in all relevant examples, the null subject of the converbial clause corresponds to the semantic possessor and the subject of the main clause to the possessed noun; the opposite relation would be ungrammatical. The asymmetry is not represented in our anaphoric conditions but is independently motivated by semantic and syntactic reasons. Arguably the unpronounced subject of the converbial clause is unlikely to refer to the part noun, as its referent is more difficult to recover than the referent of the whole — it is simply not clear which part of the whole the null subject could refer to. Similarly, if the null subject is syntactically a PRO subject, as was suggested for some Turkic languages in the previous literature, it will not have a coreferential controller when the main clause subject's referent is the associated possessor or whole. This is reflected in the structure of the possessive construction in Turkic, in which the possessor is cross-referenced on the possessed noun by a possessive suffix, but not the other way round. Therefore the reference of the null subject expressing the part in a part–whole relation cannot be resolved syntactically.

To the best of our knowledge, SS-constructions will null subjects generally fail to license non-canonical SR based on temporal/causal discourse continuity found in DS-constructions with overt subjects. This difference may simply be a consequence of the fact that the Turkic languages allow null arguments quite freely and that null arguments tend to have an active referent in context, in particular an element of the main clause that controls into the dependent clause. Null arguments are thus not well suited to indicate disjoint subject referents. Moreover, the fact that converbs signal SR in Turkic make fully disjoint null subjects unsuited for non-canonical SR based on discourse continuity. First, many converbs that are not SS-converbs are varying-subject converbs, which also allow coreference between the subject of the converbial clause and the subject of the main clause. With both *-(V)p* and varying-subject converbs, the default interpretation of constructions with two null subjects is that the subjects core-

fer. This differs from languages in which a DS-marker must signal disjoint reference of subjects (or situations): such markers can more easily occur with disjoint null subjects. Second, converbs are nonfinite and generally do not show any subject agreement that could help with determining subject reference. Both of these factors are different in Kiowa, for instance, where DS-marking can occur with null subjects which are indexed on the verb (see e.g. McKenzie 2007: 8–9).

In sum, it is possible that, in most general terms, the correlation between overt subjects and non-canonical SR that is sensitive to discourse continuity is a consequence of independent properties of the grammars of Turkic languages, namely the relations between null and overt arguments in general, as well as the absence of agreement on converbs as markers of SR.

Abbreviations

1 = first person, 2 = second person, 3 = third person, ABL = ablative, ACC = accusative, ADV = adverbial, AN = action nominal, AOR = aorist, ATTR = attributive, AUX = auxiliary, CAUS = causative, CMPL = completive aspect, COM = comitative, CONT = continuous, COP = copula, CVB = converb, DAT = dative, DS = different subject or situation, FUT = future, GEN = genitive, INDEF = indefinite, INS = instrumental, IPFV = imperfective, LNK = linker, LOC = locative, NEG = negative, NF = non-finite, NMLZ = nominalization, NOM = nominative, NPST = non-past, PASS = passive, PFV = perfective, PL = plural, POSS = possessive, PRF = perfect, PROG = progressive, PST = past, PTCP = participle, Q = question particle, REFL = reflexive, SBJ = subject, SBJV = subjunctive, SG = singular, SR = switch-reference, SS = same subject or situation, TAM = tense, aspect, mood, VS = varying subject.

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A Map

Figure 2 Map of extant Turkic languages addressed in the paper (made using `ggmap`, Kahle & Wickham 2013, in R, R Core Team 2019)