The Syntax and Semantics of Clause-Chaining in Toposa

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Some languages make extensive use of clause-chaining. According to Payne (1997: 312), clause-chaining has been documented for languages in the highlands of New Guinea, Australia and the Americas. In Africa it is found in Ethiopia (Völlmin et al. 2007), in Kiswahili, a Bantu language (Hopper 1979: 213-215, Mungania 2018), in Anuak, a Western Nilotic language (Longacre 1990: 88-90 and 2007: 418) and in Toposa, a VSO language of South Sudan (Schröder 2011). Clause-chaining is characterized by a long combination of non-finite clauses that have operator dependency on a finite clause, and it usually signals foregrounded information in discourse (see also Dooley 2010: 3). Besides its discourse function, clause-chaining exhibits morpho-syntactic and semantic properties as demonstrated in this paper with examples from Toposa, an Eastern Nilotic language.

Keywords: clause-chaining, foreground-background distinction, clause-chaining model, clause-skipping, discourse structuring.

1. Introduction

Some of the world’s languages occur with extensive use of clause-chaining. Clause-chaining is found widely in SOV languages in Papua New Guinea (Elson 1964), in Australian languages (Austin 1979), in North American Indian languages (Longacre 1990), and in South America, Korea and Japan (Longacre & Hwang 2012). In Africa it is prevalent in SOV languages in Ethiopia (Völlmin et al. 2007), and it is reported for three SVO languages Kiswahili and Kisukuma, both Bantu languages (Hopper 1979: 213-215, Mungania 2018, Mbuki 2019), and Anuak, a Western Nilotic language (Longacre 1990: 88-90 and 2007: 418). I have argued recently that Toposa, an Eastern Nilotic language in South Sudan is also a clause-chaining language because of the way it organizes its discourse (Schröder 2011). However, Toposa is VSO.

In East Africa the clause-chaining phenomenon surfaces as narrative tense (Kiswahili), converses (Ethiopia) or consecutive tense (Bantu/Tanzania). Particular the converses in Ethiopia from Afroasiatic languages have attracted attention and discussions (see Völlmin et al. 2007). Converbs and clause-chaining effects have recently also been discovered in some Nilo-Saharan languages (Amha & Dimmendaal 2006).

This paper will show that the phenomenon of clause-chaining as described in Toposa cannot be regarded as a morpho-syntactic phenomenon only that conceptualises narrative or consecutive tense. A better option is to analyse clause-chaining as a discourse feature, because it motivates and underlines the structuring of texts; a fact which has so far been overlooked for a number of Nilotic and Bantu languages in East Africa.

This paper will demonstrate the typical characteristics of Toposa clause-chaining i.e. its morpho-syntactic and semantic properties, the foreground-background distinction, the reference tracking in the chains and several strategies that cause the chains to end. It will demonstrate its distribution i.e. that the non-finite verb form of the clause chains is not restricted to coordinative

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1 This paper was presented in Pavia, Italy, at the conference on ‘Syntax of the World’s Languages VI’, from 8th to 10th September 2014. I thank all who attended the presentation for their valuable contributions.
sentence structure only, but that it is also found in purpose and means-results subordinative sentence linkages.

The paper is organized as follows: Section 2 describes the characteristics of clause-chaining in Toposa i.e. its morphosyntactic and semantic features and the foreground-background distinction, section 3 discusses the clause-chaining model, section 4 deals with the reference tracking in the clause chains, section 5 presents a discussion how clause-chaining motivates the structuring of a discourse and section 6 will present the conclusion.

2. Characteristics of clause-chaining in Toposa

Clause-chaining has been defined in different ways. One common understanding is that clause-chaining characterizes non-finite clauses that show operator dependencies on the finite clause (Dooley 2010: 3, Payne 1997: 312, Longacre 1990: 11, Myhill & Hibiya 1988: 363). The finite clause can stand on its own and carries all the inflectional features like tense, aspect and mood (TAM) on a finite verb and is often referred to as the main clause in a coordinative-subordinative sentence construction. In a coordinative-clause-chaining combination the finite clause is referred to as the 'controlling clause', as it controls the TAM dependency. I shall refer to the non-finite clauses as medial clauses as coined by Haiman (1987), also mentioned in Bianti (2007:3).

The next section will demonstrate the morpho-syntactic properties and the correlation of clause-chaining to the foreground-background distinction in Toposa.

2.1 Morpho-syntactic properties of clause-chaining. This section will discuss the morpho-syntactic properties and the orientation of the chain with data from Toposa and considers the properties of clause chaining and the status of the finite and non-finite clause.

Let us look first at the morpho-syntactic properties of clause-chaining in Toposa, i.e. the operator dependency of tense/aspect of the non-finite verb, and the orientation of the chain.

Clause-chaining languages typically indicate the dependence on the controlling clause through morpho-syntactic means and they also determine the direction of the chain through the word order, which is either prenuclear in SOV languages, or postnuclear in SVO/VSO languages.

In Toposa, a typical clause chain starts with a controlling clause that is inflected for tense and aspect, whereas the verbs in the subsequent medial clauses carry the dependency markers to-/ki- which signal tense-aspect dependency on the finite verb or on a temporal adverbial that sets the time frame in the controlling clause, as in the following example (taken from Schröder 2013: 27):

(1) Bee koñoŋu° nuwan, to-lot-o Ne-buka Kwee
it-is-said long.ago very DEP-PL M/S-Hyena and jackal
ŋa-ki-rap ŋa-desiŋ moogwa, to-rī-am-u-tu
INF-DER-search F/PL-some food DEP-find-ALL-PL
ŋa-ate ka ni-toonį.5
F/SG-cow of D/SG-person
‘It is said that long long ago, Hyena and Jackal went to search for some food, they found a cow of someone.’

2 Van Valin & LaPolla (1997: 455) describe the dependency of chained clauses in terms of TAM operator dependency.
3 The data for this research are based on a collection of oral Toposa texts compiled in M. Schröder (2010).
4 Longacre (2007) identifies such an opening for clause chains as implicit finiteness.
5 Note that +/- ATR has not been marked in these data. Underlined vowels at the end of words indicate voiceless vowels.
The above sentence represents a typical beginning of an animal fable. The story is set with
the formula bee ‘it is said’ and the adverbial koloŋ nuwan that sets the time frame to the past and the
following sentences are chained to the initial clause with the dependency marker to- in toloto ‘they
went’ and in toryamutu ‘they found’. Both verbs do not have the typical inflection that marks person,
tense, and aspect on finite verbs. Compare these verbs with fully inflected ones (taken from Schröder
2008: 51):

(2) a. É-múj-ì    ná-kírin.  
   1P-eat-PRS:IMP F/SG-meat
   ‘I am eating meat.’

b. Ì-múj-ì    ná-kírin.
   3P-eat-PRS:IMP F/SG-meat
   ‘He is eating meat.’

c. È-múj-ì    ná-kírin.
   1P-eat-PST:IMP F/SG-meat
   ‘I was eating meat.’

d. È-múj-ì    ná-kírin.
   3P-eat-PST:IMP F/SG-meat
   ‘He was eating meat.’

As these data show, the normal finite Toposa verb is marked for tense, aspect, person, and
number. The tense system is a past and non-past type. Tense in Toposa is marked by the tone pattern
that extends over the entire verb and varies according to verb class, person, number, and tense
category. In addition to the tone pattern, a tense prefix a- occurs in the third person singular and
plural in the past tense. In example (2c) and (2d), this tense prefix a- has become fused with the
person agreement prefix i-, resulting in e- (for a more detailed description of the fusion of the past
marker in TO and KI-class verbs see Schröder 2008: 53). Note how the tone pattern on the verb for
first-person singular changes from HHL in (2a) to LHF in (2c) to mark the change from non-past to past.
Similarly, the third-person changes from LHL in (2b) in non-past to LLH in (2d) in the past.

Additionally, Toposa has two aspects: imperfective and perfective. Imperfective aspect is
indicated by the suffix -i, as shown in the above data.7 The perfective aspect is indicated by the
suffix -iţi:

(3) É-múj-ìţi    ná-kírin.
   1SG-eat-PFV F/SG-meat/ACC
   ‘I have eaten meat.’

As these comparisons show, the two verbs toloto ‘they went’ and toryamutu ‘they found’
of example (1) do not have the typical tense-aspect inflection of the finite Toposa verb, they
represent a non-finite form. Note also that they do not employ the typical person agreement marking
as shown in example (2a-b).

The question that scholars are concerned with in regard to the non-finite clause in clause
chains is whether the non-finite clause is coordinative or subordinative in nature. These non-finite
clauses are exemplified in example (1) as those clauses that start the clause with the to- prefixed to

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6 Note that the personal pronoun is usually not expressed as a free word but is integrated as an argument in the verb (Schröder 2008: 111).
7 The imperfect marker has an allomorph -e before the plural suffix -te, used in second and third person plural. First person plural uses the suffix -i with the plural suffix -o.
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the verb, where the verb has lost those inflectional features of tense and aspect exemplified in the
examples (2).

Some scholars point out that the non-finite clause in clause-chaining is like a coordinative
198) discusses that in Papua New Guinean languages and mentions these clauses have been termed
coordinative, citing Haiman (1980, 1983), Comrie (1983), and MacDonald (1983), among others. However, in Toposa, the non-finite clause shows morpho-syntactic dependency on the independent
clause through the verbal prefixes to/ki. The dependency is of such a kind that the infinite clause
picks up the TA inflection from the finite clause as in the case of example (1) and the medial clause
continues to exhibit past tense. As this morpho-syntactic property of the non-finite clause exhibits
morpho-syntactic dependency as an implicit inflectional property some scholars call it “quasi-
coordinating” (Haiman & Munro 1983: xii, Stirling 1993: 15), because the clause shares with the
coordination the inflectional property of past tense. Van Valin & LaPolla (1997: 455) add another
dimension to the discussion they point out that a medial clause has semantically coordinative effects
because it chains events in the narrative. In this respect the medial clause in example (1) displays
the semantic coordination of the events of tolo ‘they went’ and toryamut ‘they found’, but morpho-syntactically the events dependent on the tense introduced through the formal opening of a
narrative with the formula bee ‘it is said’ and the adverbial koloŋ nuwan ‘long ago’ setting the time
frame to the past. Van Valin and LaPolla call this clause linkage “cosubordination”.

For a better understanding of the two paradigms the following examples demonstrate the
difference between the inflected and dependent verb forms in Toposa for a KI-class verb (a-d) and
a TO-class verb (e-h)⁸ (Schröder 2015a: 234-235).

(4)

a. è-múj-í
   3P-eat-IMP
   ‘He was eating (inflected form).’

b. kí-múj
   DEP-eat
   ‘He was eating (dependent form).’

c. è-múj-é-té
   3P-eat-IMP-PL
   ‘They were eating (inflected form).’

d. kí-múj-à
   DEP-eat-PL
   ‘They were eating (dependent form).’

e. á-lòs-í
   3P-go-IMP
   ‘He was going (inflected form).’

f. tó-lót
   DEP-go
   ‘He went (dependent form).’

⁸ Like most Eastern Nilotic languages Toposa has two verb classes. The distinction between the verb classes
relies on the person prefixes that are associated with the classes. In the TO-class the personal
prefixes in the
order of 1st/2nd/3rd person SG and 1st/2nd/3rd person PL are: a-, i-, e-, e, i-, i, in the Ki-class the person prefixes
are e-, i-, e, i, i, i. The marker TO and KI are taken from the respective imperative markers.
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Examples (5a-b) below demonstrate how the dependency marking would differ in first person singular and plural in personal narratives (Schröder 2015a: 233):

(5)  
   a. … a-to-lotqo
      1P-DEP-go
      ‘I go/went.’
   b. … a-to-lot-o
      1P-DEP-go-PL
      ‘We go/went.’

As the first person is marked with an overt prefix preceding the dependency marker of the medial verb, the assumption is that even DEP verb forms have a slot for marking the (coreferential) person on the verb, but they are only overt in the first person singular and plural, but zero in the third person.

Example (5a-b) are not finite verbs, they depend on a finite clause. A clause from a first person narrative shall demonstrate the use of the first person plural non-finite medial verb in a chain (Schröder 2015a: 233):

(6)  
Koloŋ ki-riŋ-a diri̱ isuwa ki-ra ni-soroko,  
long ago DEP-be.still-PL truly we.EX DEP-be M/PL-young.men
a-to-lom-a na a-bee-I Nakamoŋo.  
1P-DEP-enter-PL F/SG-place which 3P-call-IMP Nakamoŋo
‘Long ago [when] we were still young men, we settled in a place called Nakamongo.’

The non-finite forms of the verb are not normal infinitives, however. This can be seen from constructions like the following (Schröder 2013: 28):

(7)  
To-lot-o Ne-bu ka Kwee ɲa-ki-rap ɲa-desiŋ moogwa.  
DEP-go-PL M/SG-hyena and jackal INF-DER-search F/PL-some food
‘Hyena and Jackal went to search for some food.’

The verb ɲakirap ‘to search’ represents the typical infinitive form, which consists of the prefix ɲa- and the derivation prefix ki-.

Example (6) and (7) also show that the direction of the chain is post-nuclear, i.e. that the controlling clause precedes the medial clauses. The post-nuclear orientation of medial clauses is still a rare phenomenon (Dooley 2010: 6 and Payne 1997: 321), mainly because most cases of clause-chaining presented in the literature were found in SOV languages, whereas Toposa is a verb-initial language.

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9 The derivation prefix occurs only when there is no verbal extension like allative, ablative, or benefactive. I am fairly certain that this is only true of TO-class verbs, KI-class verbs retain the ki- prefix.
2.2 Foreground/background distinction. I classified Toposa as a clause-chaining language (Schröder 2011) because it structures its discourse according to clause-chaining. The reason is that not all languages that indicate a TAM dependency in non-finite clauses are typical clause-chaining languages but only those whose discourse structure is organised through clause-chaining, a fact that will be demonstrated for Toposa in the following section.

The TAM marking in narratives has often been related to the distinction between foreground and background information as stated by Unger (2006: 306, among others). Under functional linguistic approaches, foregrounded events typically represent the event line of a story and are chronologically ordered. Representatives of this position are Hopper (1979/1998), Reinhart (1984), Fleischman (1985, 1990), Longacre (1990) and Longacre & Hwang (2012). In line with this position, a typical understanding of foregrounded information is that it can be regarded as thematic information that develops and progresses the plot (or the arguments of a text), i.e. it represents the backbone of a text that carries the discourse forward and is of primary importance (Callow 1974: 52-53, Levinsohn 2010: 66). Background information on the other hand supports, explains and clarifies the thematic information and is of secondary importance, as described in Grimes (1975) and Levinsohn (2010: 69-71), among others.

As discussed in the previous section, in Toposa, the clause chain markers to-/ki- are verbal prefixes that indicate in all medial clauses that the medial verb has the same tense/aspect as the verb in the controlling clause (which in narratives usually is a form of past tense).

For a demonstration of how the to-/ki- markers work for the distinction of background and foreground information, I shall examine three types of texts: a narrative, a procedural and a descriptive-expository text.

First, let us consider the beginning of a narrative (taken from M. Schröder 2010: 6):

(8) S1 Bee koloŋ nuwan, na eyakatarŋ ķituŋa kidyaama,
It-is said time long ago when there.were people in.heaven
ta-tamu Ņakujuŋ nayeawunŋ ikesiŋ kopə,
DEP-thought God to.bring them down
‘It is said [that] long ago, when there were people in heaven, God planned to bring them down [to earth].’

S2 Abu ņakujuŋ, to-limokŋ niŋaniŋ nitikawosonŋ nibe Napurukucu,
came God, DEP-told bird very.clever who.called Napurukucu
tem, ‘To-woyiu ņawuno, kotere ki-yooliyorotŋ ķituŋa kopə.’
DEP:said IV-twist rope in.order.to DEP-take people down
‘God came, he told a very clever bird whose name was called Napurukucu (= Orange Starling), he said, Twist a rope in order to take people down.’

S3 To-woyiu nai Napurukucu ņaputŋ natikaаниŋ, to-woi loowoi.
DEP-twisted so Napurukucu tendon-string which.strong DEP-long very
‘So Napurukucu twisted a strong tendon-string, it was very long.’

S4 Ki-yooliwunoe nai ķituŋa, ki-bitibitiŋ kopə, ķaberŋ
DEP-were-let-down so people, DEP-let.themselves down, women
ka ķide tya ķikecekilyokŋ.
and children and husbands-theirs

An extensive discussion of the different views on how the TAM distinction contributes to the foreground-background distinction is found in Unger (2001: 98-130), and (Unger 2006: 3-5).

Note that the term “procedural” here refers to a type of text as defined in Longacre (1996: 10), not to the sense in which it is used in Relevance Theory (Sperber & Wilson 1995: 258), see also example (10).
‘The people were let down, they let themselves down, the women and children and their husbands.’

S5 To-doka ŋituŋa ŋurwa ŋiaarei, juutawar, kiiya kwala.
DEP-climbed down people days two dusk dawn
‘The people climbed down [for] two days, [from] dusk <juu> [until] dawn <kiiya> (= day and night).’

The first part of sentence (S1) Bee koloŋ nuwanj, na eyakatarŋ ŋituŋa kidyaama ‘It is said long ago, when people were in heaven’ sets the scene for the narrative, the main verb bee ‘it is said’ is a frozen form of the verb bala ‘to say’ which developed into an opening formula. That the time frame for the events is set in the past is underlined through the adverbials koloŋ o̱ nuwan i̱ ‘long ago’.

The clause represents the setting of a narrative and opens up the contextual information that all people were in heaven, and raises expectations of what is going to happen to them. The medial clause tatam Ńakuj ‘God thought’ which carries the dependency marker ta- has the same time frame as that of the controlling clause which points to the distant past. In the expression abu Ńakujy ‘God came’ in (S2) the person agreement prefix a- of abu ‘he came’ includes the fused past tense marker a-. This sentence serves as the controlling clause of a long chain. All other events following abu, i.e. those that carry the to-/ki- markers, take place in the past, copying the past marker of the initial clause into the entire chain (taken from Schröder 2013: 33):

(9)  
ta-tamų ‘he thought’
to-limokį ųikaŋįti ‘he told the bird’
tem12 ‘he said’
to-woyiu Napurukucu ‘Napurukucu twisted’
to-woi ‘it (the rope) was long’
ki-yooliwunoe nai ŋituŋa ‘so the people were let down’
ki-bitibitiunį kopo ‘they (the people) let themselves down’
to-doka ŋituŋa ŋurwa ŋiaarei ‘the people climbed down for two days’

It is widely accepted that narratives are built on successions of events that take place in the past, so the above chain represents the foreground information of one paragraph.

On the other hand, if a verb carries the normal tense-aspect markers as described in conjunction with examples (2a-b) and (3) and if there is no to-/ki- marking, the hearer infers that that information does not contribute to the sequential order of the events but clarifies, explains or supports the sequence of events and is more backgrounded. In this way the relative clause (S2) nibe Napurukucu ‘which was called Napurukucu’, which introduces one of the main characters of the story, is backgrounded.

Next, let us consider a procedural text. Like narrative texts, which are based on a progression of events, procedural texts also involve progression, but while narratives tell what someone did, procedural texts describe how it is (normally) done.13 A narrative is fundamentally descriptive in nature, whereas a procedural text is more prescriptive. While succession of events or processes is a common feature of both narrative and procedural texts, the two texts substantially differ in terms of participants. A narrative has a +participant setting and the procedural has a -participant parameter.14 The following Toposa procedural text describes how a woman gives birth, and the activities and customs that surround it (taken from M. Schröder 2010: 113):

12 In this verb, the dependent marker t- is fused with the root.
13 This kind of discourse is found in manuals, prescriptions of recipes and any kind of rule book.
14 C.f. Longacre’s text typology (Longacre & Hwang 2012: 37).
The customs of the Toposa are different, but there are some customs which are the same [for all clans].

When a woman gives birth, the umbilical cord of the child is cut with a blade.

The woman is put into a house.

The placenta is carried outside, according to some customs the placenta is buried at the entrance of the house or at the foot of (= under) a ngoomo-shrub.

The woman stays in the house until the umbilical cord of the child falls off.

In this text the dependency markers signal the progression of processes, not of narrated events. However, in the same way as in narratives, the chains also adopt the tense of the controlling clause. The first sentence egelagela ŋitalyo ka Ŋitoposa, tarai eya ŋitalyo ŋicye lu ikwaan ‘The customs of the Toposa are different, but there are some which are the same’ is expressed in the present tense, and so is the beginning of the second clause Na idowuno ŋaberu ‘when a woman gives birth’, whereas all medial clauses follow the tense operator of the controlling clauses and adopt present tense, and carry the dependency marker to-/ki- for clause-chaining (discussed in Schröder 2013: 34):

In procedural texts no aspect marking is employed, because another feature of procedural texts is the use of the passive marked with the suffix –ae and –oe as seen in example (7).

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example (2a-b) and (3) above. Since these verbs do not carry to-/ki- marking, they contain background information: they set the scene for the description of the processes of childbirth.

Inside the chain of salient processes of childbirth, a statement is made about the disposal of the placenta: enukwakino naŋasepę nakutuky ka ŋakai ‘the placenta is buried at the entrance of the house’, no foreground indicator appears in this comment. (Why this sentence does not carry the foreground marker to-/ki- will be explained in section 3).

My final example comes from a descriptive-expository text. This type is neither agent-oriented, no does it have a progression of events, in effect it describes how people normally do it. Our example describes the ritual of initiation among the Toposa, and it uses present tense (M. Schröder 2010: 114):

(12) S1 Sekę na ecamitere ŋakitasapaną ŋituña, isyawunete mono
So when is.wanted to.initiate people, begin DM
ŋikaŋak’a, ki-ryama, to-tukwo ŋatemarį itemokino
leaders DEP-meet DEP-discuss that is.appropriate
ŋide lu eriŋa ŋesapana, itasapanaio.
children who are.not.yet not.initiated be.initiated
‘When it is wanted (= when the leaders want) to initiate people, the generation-set leaders begin, they meet, they discuss that it is alright to initiate the children (= filial generation) who have not yet been initiated.’

S2 To-sewutu na ŋitooni ni edikino erawuni ŋekanaŋa ka ŋikasapanaka.
DEP-select then person who will become leader of initiates
‘They select a person who will become generation-set leader of the initiates.’

S3 Kalo talę ka Toposa, esewunio pitoonți kalon
According custom of Toposa, is.selected person from
kalę kalo kajokon ka ŋirotiŋa ka daañ.
home from good in ways in all
‘According to the sacred custom of initiation a person from a good family in every way is selected.’

S4 Ku-wudakișį na ŋituña lu ecamito ŋasapana waapei,
DEP-gather then people who want initiation one.place
ŋikilyoŋa ka ŋide lučik, ta-ŋama ŋikoraec kode ŋemoŋa.
men and children small DEP-eat rams or ox
‘The people who want to be initiated gather in one place, the men and the children [of the new set], they eat goats or an ox.’

S5 Narumworetiŋt ŋuna, to-lo to-lo na ŋaperiŋt, end
DEP-go then DEP-sleep in.sleeping.ground
‘[After] the end of that they then go to sleep in the [separate] sleeping.ground.’

S6 Ani iwalari, ki-ryewutu ŋaberũ kečę tya taityekečę
When dawns, DEP-grind wives their and their.mothers

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16 One reviewer raised the question whether procedural (texts that deal with how it is done) and descriptive-expository texts (texts that describe how people normally do it) can be collapsed into one category. I maintain the position that they are distinct. Procedural texts are prescriptive in nature, they are like rule books, they represent a collection of rules that lead to a completion of a product like the recipe for a cake. Descriptive-expository texts are descriptive in nature and describe what people normally do from an observational point of view.
ka njide njatapae.

of children porridge

‘When it dawns, the wives and the mothers of the children grind [and bring] porridges.’

S7 Na epapuuneta ṇaberũ naperitũ. ku-waasi ṇikilyokọ, When approach women sleeping-ground DEP-sing men
ta-mawutũ ṣiṣiṣa ṣuuni kode ṣoọọọnọ, to-kusete ṣuurupepe,
DEP-praise people three or four DEP-blow.SIM horn
ŋepite ọla kuwaani ṣaberũ dan ọnaa. kece.
custom that DEP-praise women also cows their
‘When the women approach the sleeping-ground, the men sing [antiphonally], they praise three or four people [so they come out and perform a dance], while they are blowing a horn, according to custom the women also sing praises of their cows.’

S8 Kuwaakisi ọla ọnaa ọnamu ọko. DEP-put then women foods down
‘Then the women put the foods on the ground.’

S9 To-sewun-ae ọla ọnaa lu eko-akini ipe aki ọnaa ọku. DEP-select-PAS then people who distribute food to people
‘Then people are selected who distribute the food to the people.’

This text describes the events that happen during the initiation of young men. The chain adopts the present tense from the controlling clause. The first part of the sentence Sekę na ecamitere ọnkatasapa ọnaa, isayawuneto mono ọkṣa, ... ‘When initiation of the people is wanted, then the generation-set leaders begin,’ opens the expository text and is the controlling syntactic clause in present tense and imperfective aspect. The following clauses describe the initiation process and they are all marked with the clause chain indicators to-/ki- (see also Schröder 2013: 37):

(13) ki-ryama ‘they (the leaders) meet’
to-tukwo ‘they discuss’
to-sewutũ ọnko ‘they select a person’
ku-woaka ọnaa ‘the people gather’
ta-ọnko ọko kode ọmọọ ‘they eat goats or an ox’
ki-ryewutũ ọnaa ọtapa ‘the wives bring porridge’
ku-waasi ọkṣa ‘the men sing’
ta-mawutũ ọnaa ṣuuni kode ọọọnọ ‘they praise three or four people’
to-kusete ọurupepe ‘while they are blowing a horn’
ku-woaka ọnaa dan ọnaa kece. ‘the women also praise their cows’
ku-woaka ọnaa ọnamu ọko. ‘women put food on the ground’
to-sewunac ọnaa ‘people are selected’

As with the other genres considered before, also here in this descriptive text all chained clauses are the ones that contain foregrounded information. Embedded in the chain there are a few clauses showing background information: The sentence (S3) Kalo talé ka Toposa, esewunio pitooni, kalo kalé kalo kajokon ‘according to the sacred custom of the Toposa, a person from a good family is selected’ clarifies who one of the main actors is in the initiation process. The following clauses in (S1) lu ẹriŋa ọsapa, itasapani ‘[children] who are not yet initiated, are initiated’, and in (S4) lu ecamito ọsapa ‘[people] who want initiation’ are both backgrounded and serve as clarifications regarding the actors in the initiation process. (S6) Ani iwalar ‘when it dawns’ sets the
stage for the next phase of the initiation process. All these clauses (which exhibit normal tense aspect marking) are selected as background information by the hearer.\(^\text{17}\)

In Toposa clause-chaining is not genre-specific, it can occur beyond the narrative text which is the most frequent genre that employs clause-chaining (c.f. Dooley 2010:4).

After having established how the features of clause-chaining structure the narrative, procedural and descriptive-expository texts a further question has to be answered, what is the scope of the clause-chaining features in Toposa?

3. The clause chaining model

It is not uncommon that clause chains to a certain extent may contain subordinate clauses although these are typically considered background information, and thus this behavior of some clause-chaining languages confuses the fundamental distinction discussed above. In any case, a language has to be tested whether subordinated clauses can appear with the medial marker, and if so, which ones and how the clause chaining effect in subordinated clauses effects the overall model of coordinative and subordinative sentences known from English.

Longacre (1996: 285-286) observed that language could either fall under the ‘co-ranking’ or ‘chaining model’. The co-ranking model groups clauses such as time, condition, concession, purpose, reason etc. as subordinate clauses. The chaining model however cannot allow two independent verb forms following each other but forces the chaining effect to dominate the structure of discourse. Following this suggestion Toposa falls into the chaining model. In this model the structures that follow the initial inflected opening clause are reduced to structures that are marked with the clause chaining marker.\(^\text{18}\) Thus, the division of the clause types is organised around the overall foreground and background effect. The clause types that such a model employs are independent, medial clauses and as a third category subordinated clauses with finite verbs. Those clauses are found in clause skipping. To start the argument, the next section will demonstrate the clauses known as subordinate clauses that use the medial verb form.

3.1. Subordinative clauses with medial verbs. The following subordinative clauses are integrated into the chains and use medial verb forms. Such clauses are purpose and means-result clauses.

In Toposa, the purpose clause employs the medial verbal form. If kotere occurs with a medial verb, it introduces a purpose clause and its meaning is introduced with the semantic connection kotere ‘in order to’, see the following example:

\[
\begin{align*}
(14) \quad \text{… ta-tyakae} & \quad \text{nai} & \quad \text{kalo} & \quad \text{kidinj} \\
\text{DEP} & \quad \text{divide} & \quad \text{DIS} & \quad \text{from} & \quad \text{middle} \\
\text{kotere} & \quad \text{ku-waae} & \quad \text{nepeewae} \\
\text{in.order.to} & \quad \text{DEP} & \quad \text{store} & \quad \text{one part} \\
\end{align*}
\]

‘It was divided in the middle (= into two parts) in order to store one part.’

It is also possible that kotere introduces semantically a means-result relationship. In that case a medial verb has to be used, see the following example:

\[
\begin{align*}
(15) \quad \text{To-sewutu} & \quad \text{nelepa} & \quad \text{kode} & \quad \text{nekaru,} \\
\text{DEP} & \quad \text{choose.VEN/PL} & \quad \text{month or year} \\
\end{align*}
\]

\(^{17}\) This observation is confirmed by Unger (2006) for narrative texts. He states that there is a correlation between the expectation of listeners to understand events in narratives as their most relevant information through the encoding of tense and aspect (p. 306), but that this relationship has rarely been reported for non-narrative types of text (Unger 2011: 110). However, the two texts in (10) and (12) above show that the Toposa markers are not confined to narratives but are also found in procedural and expository-descriptive texts.

\(^{18}\) Longacre (1996: 286) also calls this verbs ‘consecutive’ verb.
kotere ku-waruneta njituŋa njiboro ka ṃakidamadam. so that DEP-look.VEN/INS/PL people things of dance
‘They choose a month or a year, so that people will look for the things of the dance.’

The idea that subordination clauses headed by conjunctions could be part of the chain was rejected by Myhill & Hibiya in their clause-chaining definition (1988: 363). They specifically stated that clauses headed by conjunctions cannot constitute chains. This statement was falsified through example (14) and (15) in Toposa. Note that the above two examples show that kotere ‘in order to/so that’ is polysemous and context has been used to disambiguate the meaning of the clauses.

The coordinative contrast relationship is expressed by the conjunction tarai ‘but’ which can occur with and without medial verbs. The narrator can decide which contrast clause is foreground or background information. Consider tarai with a medial verb first:

(16) Ki-bi Lobela Lolemumoe, tarai to-peg Lolemumoe jik. DEP-ask Lobela Lolemumoe but DEP-deny Lolemumoe strictly
‘Lobela interrogated Lolemumoe, but Lolemumoe denied [it] strictly.’

Note how tarai here heads an event clause with an event verb that is part of the foreground event line in a narrative. If however tarai is used with an inflected verb, the verb is a non-event verb that places the sentence in the background information span also taken from a narrative text:

(17) To-ɲara ɲekasukowut ɲaberu, tarai a-po tu
DEP-ask elder wives but 3PP-come-P/PER ɲaberu daan ɬo-tooroso, women all DEP-sleep
‘The old man called [his] wives, but all the women had come [discourse] [and] had fallen asleep.’

The tarai clause with the inflected verb describes an anterior event and represents background information.

The coordinative additive relationship also employs the medial clause marking and no conjunctions are used. The sentence construction consists of a controlling clause and one or two (at most) medial clauses:

(18) A-bu to-osik ɲakimar sementiks, ta-lakari ɲakilo.
3P-came DEP-give.up reading semantics, DEP-happy more.than
‘He gave up studying semantics and felt much happier.’

(19) E-bariat ɲekilye, to-yar-ite.
3P-rich man DEP-live-SIM
‘The man is rich and (furthermore) successful.’

Note in (18) the onset abu ‘he came’\(^{19}\) has to occur. In example (19) the suffix -ite indicates simultaneity. The second clause of example (18) can also be understood as a result of the first statement ‘he felt much happier’. In example (19) the medial clause demonstrates a dependent consequential relationship. The above examples confirm Longacre’s (1996: 286) observation that in the chaining model two independent clauses following each other are not permitted. The next category of clauses represents the subordinative clauses with finite verb inflection.

\(^{19}\) The full function of abu ‘he came’ occurring in texts or in single co-ordination is still under investigation.
3.2 Subordinative clauses with finite verbs. In Toposa, temporal adverbial clauses and adverbial clauses with ‘until’, complement clauses, and reason clauses are typically not included in clause chains and occur with inflected verbs.

Toposa has temporal adverbial clauses that are introduced with ani ‘when’ and na ‘at the time’, ‘whenever’. These clauses occur with fully inflected verbs, see the following examples taken out of example (5):

(20) Na e-yakataře njituŋa kidyaama, …
when 3PP-were people above
‘When there were people in heaven, …’

The verb in the clause is fully inflected and it introduces the chains for the whole story as it is part of the introduction. The temporal clause is followed by the medial verb tatamy Nakuŋy (God thought), see another example with ani taken also from example (5):

(21) …ani e-baa-si njurwa apana uni,
when 3PP-say-IMP:PL days up_to three
ku-buŋakiŋi ǂJaberi na a-poți …
DEP-eager woman who 3PP-be_pregnant
‘When it was almost three days, a woman that was pregnant was eager to…’

The inflected verb in the clause that starts with the conjunction ani ‘when’ interrupts the chain. Ani often indicates the beginning of a new paragraph. The clause chain stops before the adverbial subordinate clause with ani and at the same time this clause also starts a new chain with kubuŋakiŋi ǂJaberi ‘a woman was eager’. Temporal clauses are also used for discourse structuring see the session below.

The adverbial clause expressed by tanį ‘until’, which is placed at the end or in the middle of a chain, is used with inflected verbs and typically contains background information. The following example shows the occurrence of tanį in the middle of a clause chain:

(22) Ki-syautu20 nai ikesi pe-kere, to-sukwo kaneni
DEP-begin DIS they INF-race DEP-runPL from.there
tanį e-naŋ-i ǂNebu nikalonaniŋ, to-nara ǂNebu ǂNakidoŋoko.
until 3P-reach-IMP hyena far_away DEP-call hyena frog
‘They began racing, they ran from there until Hyena reached far away, Hyena called Frog.’

As this example shows, the chain is not broken through the occurrence of the adverbial clause with ‘until’, a phenomenon that is explained in the section under clause insertion.

In some languages, clause-chaining can include conditional clauses (see Stirling 1993: 190, where an example for Amele is quoted). In Toposa, conditional clauses are generally not included in the chain and are used with inflected verbs. As the following example shows, the conditional clause often interrupts a chain to provide some background information:

---

20 If sentences are starting with a dependent verbs, they are taken out of chains for the purpose to show certain linguistics features for example (22) demonstrates that the adverbial clause starting with tanį ‘until’ is not used with a dependent verb.
(23) …ani e-cam-ɨtiŋes ɨɲa-ki-marä.
If 3PS-want-PER he INF-DER-count
ki- tegyelana ka ɲateketa kode ka ɲikalea keçë.
DEP-CAUS:divide by categories or by homes their
‘If he wants to count [them], he divides [them] into their categories, or by their homes.’

Note that the verb in the conditional clause carries a perfective suffix and the present tense meaning, so the verb in the medial clause copies the present tense meaning.

Note further that the conjunction ani ‘when’ can also be used for conditional clauses with the meaning ‘if’. The conditional realis will use ani only and the irrealis ani kerai.

Adverbial clauses of manner are always regarded as background information and occur with an inflected verb, as in the following example:

(24) Bee koloŋ ɲacye paaran, to-rot-okì Ɲemiriŋ. It.is.said long.ago another day DEP-set.out-BEN mouse
to-rukwa-u Ǹẹṣẹti e-per-i kana duĩ keŋ. DEP-ALL lion 3P-sleep-IMP in hole his
‘It is said that one day Mouse set out, he found Lion sleeping in his hole.’

The manner clause eperi kana dui keŋ ‘sleeping in his hole’ has an inflected verb.

Toposa has a conjunction kotere which can be used with both, inflected and medial verbs. In case kotere occurs with inflected verbs its meaning is ‘because’ and it represents a reason-result sentence in a chain, see the following example:

(25) … kʉ-wokọrì, kĩ-jirakini na-kipi, kotere e-kuryan-iti daŋ Ñepeootọ. DEP-run DEP-slip water because 3P-afraid-PER also hunting-dog
‘He runs away, slips into the water, because he is also afraid of hunting dog.’

The subordinative clause introduced by kotere has an inflected verb, following two medial verbs and is often placed at the end of the sentence construction. The occurrence of the medial verb indicates to the hearer that the clause is not providing the purpose for the action of the previous clause, but it is semantically a reason-result clause, compare with example (14).

Complement clauses occur with fully inflected verbs and not with medial verbs.

(26) … kĩ-boyii ca, ta-aŋu Kwee ñatemarì e-twaniŋ itekoŋ. 
DEP-sit DIS DEP-see Jackal that 3P-died-PER mother-his
‘He (= Jackal) sat (= waited), Jackal saw that his mother had died.’

It is not uncommon to have negation excluded from the clause-chaining devices, because they indicate background information (Longacre & Hwang 2012: 185), see the following example:

(27) Ku-cwa-kĩ ñitiŋa naaŋuŋu naŋololo ɲina, 
DEP-send-BEN people to.find river that
tarai ɲ-e-dolo ñitiŋa ɲulu, ta-tamũ nabo Lokoliningiro …
but NEG-3PP-reach people these DEP-think again Lokoliningiro
‘He [Lokoliningiro] sent people to find that river, but these people did not reach [it]. Also, Lokoliningiro thought …’

21 There is a small group of verbs in Toposa that carry perfective marking but really have present continuous meaning, possibly in the sense of ‘has started to’.
In example (27) the negative clause *tarai pedolo ɲitunga ɲulu* ‘but these people did not reach [it]’ interrupts the chain that continues with *tatamj nabo Lokoliŋiro* ‘also, Lokolingiro thought’. The negation clause is not used with the medial verb. Negative clauses are typically regarded as background information and categorized as collateral information (Grimes 1975, Longacre & Hwang 2012:18).

### 3.3 Clause insertion

There is an intriguing phenomenon in the discourse structuring of some clause-chaining languages in that they allow a clause with a regular verb inflection to be inserted into a chain without breaking it. This clause insertion is not a new phenomenon for clause-chaining languages. Lesley refers to this form of insertion as “clause skipping” (1993: 18-20).

Toposa allows two types of clauses to be inserted in this way, all subordinative clauses with finite verb inflections and metarepresentations.

The following example presents an embedded clause with regular verb inflection as an example of all the other clauses discussed above that do not break the chain (data taken from M. Schröder 2010: 48):  

(28) **Ani e-jeketa ɲakile ka ɲaate, ta-ratarata Kwee Ḑebu,**  
When 3P-become.good milk of cow DEP-cheat:INT jackal hyena  
**to-lepuuní ca ɲaate, to-ŋoba ɲakile,**  
DEP-milk:HAB:SIM cow DEP-drink.up milk  
**ani i-don-i ɲegoototo, to-lemu ɲacoto, ki-yatakinea …**  
when 3P-remain-IMP:PAST foam DEP-take urine DEP-add  
‘When the milk of the cow had become good, Jackal cheated [intensive] Hyena, he continually milked the cow, he drank up the milk, when [only] foam remained, he took urine, he added [that],…’

Into this chain of eight clauses (only five are shown), the clause *ani idonj-i ɲegoototo* ‘when [only] foam remained’ has been inserted without breaking the chain: the paragraph continues with *to-/ki-* forms, which are still dependent on the first controlling clause of the string of clauses.

In terms of the foreground-background distinction the embedded clause can be regarded as background information that clarifies the logical succession of the events in the chain. In example (28) the skipped clause explains when hyena added urine to the milk.

Chains can also have metarepresentations inserted. Metarepresentations constitute thoughts about known customs, sayings or citations. They a shared implicit background information in the mind of the narrator and listener and they are made explicit for the explanation of the succession of the actions that taken place. In the following example the metarepresentation refers to a custom that regulates the burying of the placenta (this is the same as S4 in example (10) above):

(29) **To-mudarae ɲanasepę, kalo taleo ka ɲicye,**  
DEP-carry.out placenta, according customs of some  
enukwakino ɲanasepę nakutukų ka ɲakai  
bury-PAS placenta at.entrance of house  
kode ɲicye to-nukwakina nakeju ka ɲepoomo.  
or others DEP-bury at.foot of ngoomo.shrub  
‘The placenta is carried outside, according to some customs the placenta is buried at the entrance of the house or at the foot of (= under) a ngoomo.shrub.’

Inside the chain of the salient processes of childbirth, a statement is inserted about the disposal of the placenta: *kalo taleo ka ɲicye, enukwakino ɲanasepę nakutukų ka ɲakai* ‘according to the customs of some, the placenta is buried at the entrance of the house’. The reason why this embedded comment does not carry any chaining marker *to-/ki-* is that it constitutes a metarepresentation which serves as a backgrounded explanation for why the placenta is buried at
the entrance of the house. The burying is not only a random process but has to follow clearly defined procedures. The next clause resumes the previous chain, as is indicated by the verb in njicye tonukwakina ‘others bury it’, i.e. the metarepresentational clause is inserted into the chain without breaking it.

Metarepresentations of this type do not only occur in narrative and procedural texts but also in expository ones. For example, the following contains another metarepresentation that explains a custom (I repeat here only S2, S3 and the beginning of S4 from (9) above):

(30) To-sewutų nai ŋitoonį ni edikino erawuni ņekañį ka ņikasapanaką.22
    DEP-select then person who will become leader of initiates
    Kalo talę ka Toposa, esewunio ŋitoonį kalo kalem
    According custom of Toposa, is selected person from home
    kalo kajokonįka ŋirotinį ka daanį. Ku-wudakisį nai ŋituŋa ...
    from good in ways in all DEP-gather then people
    ‘They select a person who will become generation-set leader of the initiates. According to the sacred custom of initiation a person from a good family in every way is selected. Then the people collect ...’

The inserted clause with the verb esewunio 'he is selected' shows no to-/ki- marking. Pragmatically, it is a metarepresentation that explains the principle that guides the selection of a ceremonial leader, which is underscored by the phrase ‘according to the sacred custom of initiation’. In terms of discourse structure, this clause provides additional background information.

In summary one can say the inserted clauses serve as background information to explain, clarify or comment on the actions in narrative clauses, the procedures in procedural texts or the descriptions in expository texts.

One reason for clause skipping can be explained with the principle of economy. If the narrator thinks an explanation for the action, procedure or description is needed; he inserts an inflected clause that effectively ignores the structure of the chain. In terms of language production, the insertion of background information is very efficient. Schröder (2013: 39) points out that the cognitive processing of the foreground markers to/ki have developed into pragmatic routines that guide the hearer to comprehend the foreground information effortlessly. Similarly, the absence of the foreground marker guides the hearer to access and interpret explanations and comments on the foreground information.

The next question deals with how the co-reference is handled in Toposa clause-chaining, which is either a choice between switch-reference or pivot constraint.

4. The co-referential pivot in Toposa clause-chaining


If languages have a S/A pivot constrain,23 the corefential NPs are found in S or A functions. In order to maintain the S/A constraint an NP in O function has to be passivized to satisfy this pivot. Languages with S/O pivot, however, operate with the corefential NPs of S and O. In order to keep the constraint, a NP that is in A function, has to be antipassivized.

The coreferentiality in Toposa has two major conditions (discussed previously in Schröder 2015a: 235):

22 As in S5 in example (2), the relative clause is subordinate and not part of the chain.
23 When talking about S/A or S/O pivots, S refers to the subject of the intransitive clause, A to the subject of the transitive clause and O to the object of the transitive clause.
1. Formal condition: The coreferent is marked on the verb as an integrated subject pronoun either by an overt morpheme for first person singular and plural, or by a zero morpheme for second and third person singular and plural.


How the formal and functional conditions of Toposa coreferentiality function will be demonstrated in the next section.

4.1 The S/A pivot. This section shall demonstrate the S/A pivot relationship between coreferential arguments. Consider example (31) which repeats the first two sentences from example (8):

(31) A-bu Ɲakuju, to-limok i ɲikanıt i nitikawoson i nibe Napurukucu, 3P-came God, DEP-told bird very.clever who.called Napurukucu tem, “To-woyiu 24 ɲawuno, koter ki-yyooytori ɲitu a kopo.” DEP:said IV-twist rope in.order.to DEP-take people down ‘God came, he told a very clever bird whose name was called Napurukucu (= Orange Starling), he said, «Twist a rope in order to take people down.’

Consider also the following sentences in example (32) from an expository-descriptive text (which repeats three sentences from example (12)):

(32) S1 Sekẹ na ecamitere ɲakitasapan ɲitu a, isyawunete mono So when is.wanted to.initiate people, begin DM ɲikanàka, ki-ryama, to-tukwo ɲatemar itemokin leaders DEP-meet DEP-discuss that is.appropriate ɲide lu eri nà ɲesapan a, itasapanio, children who are.not.yet not.initiated be.initiated ‘When it is wanted (= when the leaders want) to initiate people, the generation-set leaders begin, they meet, they discuss that it is alright to initiate the children (= filial generation) who have not yet been initiated.’

S2 Ku-wudakísì nai ɲitu a lu ecamito ɲasapan waapei, DEP-gather then people who want initiation one.place ɲikilyok kà ɲide luucik, ta-ñama ɲikorae kode ɲemọ i men and children small DEP-eat rams or ox ‘The people who want to be initiated gather in one place, the men and the children [of the new set], they eat goats or an ox.’

S3 Ɲarumworetẹ ɲuna, to-loto nai to-pero naperi tı end this DEP-go then DEP-sleep in.sleeping.ground ‘[After] the end of that they then go to sleep in the [separate] sleeping-ground.’

The sentence in example (31) combines the S of the intransitive controlling clause Abu Ɲakuju ‘God came’ with a coreferential A of the first chained clause tolimok i ɲikanıt i ‘he told the bird’ with another coreferential A of the second chained clause tem ‘he said’. In example (32) in sentence S1 a S is found in the controlling clause isyawunete mono ɲikanàka ‘the leaders begin’ and this S has the S of the intransitive clause as coreferent and the coreferential A of a transitive clause.

24 Note that the prefix To- in this example is an imperative marker that has the same form as the dependence marker.
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kiryama,25 totukwo patemarj itemokino ‘they meet, they discuss that it is appropriate …’. Clauses in S2/S3 of example (32) link the S with a co-referential A, with a co-referential S and a co-referential S in kwudakisij nai ɲituŋa ..., ɲapama ɲikorae kode ɲemongo, ..., toloto nai, topero naperitiŋ ‘the people gather..., they eat goats or an ox, ... they go and they sleep in the sleeping-ground’.

4.2 The S/O pivot. The S/O pivot restricts the co-referentiality to either S or O in subsequent clauses. The S/O pivot linkage in Toposa is due to passive constructions that have the S constituent of the intransitive passive clause marked as accusative, like the object marking of a transitive clause (as also in most Southern Nilotic languages). Consider the following:

(33) a. È-kèr-é-tè ɲá-átûk.
   3P-run-IMP PL cow/NOM
The cows are running.

b. Í-dés-i né-kilè ɲá-átûk.
   3P-beat-IMP M/SG-man/NOM PL cows/ACC
The man is beating the cows.

c. Í-dés-ıt-àè ɲá-átûk.26
   3P-beat-IMP-PAS PL cows/ACC
The cows are being beaten or somebody beats the cows.27

All these constructions are impersonal passive constructions. In (33c) the nominative tone marking which would be HLL for ɲáátûk ‘cows’ as in (33a) would be expected, rather, it bears the accusative tone marking HHF ɲáátûk as in (33b).28 In other words, in Toposa the S of the intransitive impersonal constructions bears the accusative tone marking and it is morphologically marked in the same way as the object of the transitive clause (Schröder 2008: 58-59). The impersonal passive construction in some Eastern Nilotic languages (Toposa, Turkana and Maasai) and Southern Nilotic languages (Tugen, Kipsigis, Nandi etc.) incited debate whether this construction is a real passive construction, or an impersonal third person construction (Schröder 2015b). If the latter view is accepted, (33c) would best be translated as ‘somebody beats the cows’. Irrespective of how the construction is interpreted, the single lexical argument of the impersonal construction renders accusative case marking and constrains the occurrence to either an S or another O in conjoined sentences, see the following example taken from M. Schröder (2010: 6):

(34) ... ki-yooliwun-oe nai ɲituŋa, ki-bitibitiünj kopọ, ɲaberү DEP-let-down-PAS so people DEP-let.themselves down, women ka ɲide tya ɲikecekilyokọ and children and husband-theirs
‘The people were let down, they let themselves down, the women and children and their husbands.’

Note that in Toposa the verb kiryama ‘meet’ is intransitive: kiryama ka ɲikoku ‘he met with [the] child’.

Take note of the personal pronoun marker i in (28b) and (28c). The i- is the same for the third person singular and plural. Regarding passive: Toposa has an impersonal construction marked by passive suffixes -o ~ -ae ~ -oe.

The difference between the person agreement third person plural prefix e- of examples (33a) and the i- of (33c) is due to different verb classes. The i- occurs with KI-class verbs and the e- with TO-class verbs.

Note that the accusative tone pattern of ɲáátûk ‘cows’ is HHF only before pause and HHL (ɲáátûk) elsewhere.

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27 The difference between the person agreement third person plural prefix e- of examples (33a) and the i- of (33c) is due to different verb classes. The i- occurs with KI-class verbs and the e- with TO-class verbs.
28 Note that the accusative tone pattern of ɲáátûk ‘cows’ is HHF only before pause and HHL (ɲáátûk) elsewhere.
In (34) the O ŋituŋa ‘people’ of the passive clause, coreferences the S of the intransitive reflexive clause kibitisitiŋ ‘they let themselves down’.

See another example where the S/O pivot constraint contributes to the disambiguation of meaning (data taken from M. Schröder 2010: 8):

(35)  

S1  To-limokisj nai Dimory talokaatekece, temasi,  

DEP-tell then Stones brothers.theirs DEP:say  

“Kapesi ta-ança ŋibaren kana wiye.”  

IV-go DEP.look cattle in cattle-camps  

‘Those Stones [generation-set] said to their brothers, “Go and look after the cattle in the cattle-camps!”’

S2  Ki-det-ae ka ŋalita, ki-reńe-e, temar-ae ...  

DEP.beat-PAS with sticks DEP.chase-PAS DEP:say-PAS  

‘They were beaten with sticks, and were chased, and it was said ...’

In (35) the common O talokaatekece ‘their brothers’ coreferences another O in S2 Kidetae ka ŋalita ‘they were beaten with sticks’, and another O in another impersonal clause kireńee ‘they were chased’. The underlying S/O pivot contributes to disambiguate the coreferentiality between ‘they’ in S2. Because of the S/O pivot in passive clauses ‘they’ coreferences to ‘the brothers’ and not ‘the stones’. If the S/A pivot would be applied it would be not clear whether the subject Dimory ‘the stones’ or the object talokaatekece ‘their brothers’, introduced in S1 as A and O, are coreferenced in S2 as the ones that get beaten.

However, in other constructions, where the impersonal does not occur, the S/O pivot must also apply. As the constraint requires, in such a case the S of an intransitive clause or the O of another transitive clause have to be coreferenced, as the following example shows (taken from M. Schröder 2010: 6):

(36)  

To-woyiu nai Napurukucu ŋaputų natikaankanį, to-woi loowoi.  

DEP-twisted so Napurukucu tendon-string which.strong DEP.long very  

‘So Napurukucu twisted a strong tendon-string, it was very long.’

In example (36) the O of the transitive clause ŋaputų natikaankanį ‘a very strong tendon-string’ is the common argument between the two clauses and it is coreferential with the S of the descriptive clause toowi loowoi ‘it was very long’.

Another construction that demonstrates this S/O pivot is the following example (taken from M. Schröder 2010: 15):

(37)  

... ku-wara Lokolińiro ka ŋikeetuŋa ŋadokarį lobootą, to-twonikinį.  

DEP.look Lokolińiro and people his climbing to.camp DEP.difficult  

‘Lokolińiro and his people searched [where] to climb to the camp, [but] it was difficult.’

In example (37) the S of the descriptive clause totwonikinį ‘it was difficult’ references the object ŋadokarį lobootą ‘the climbing to the camp’.  

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29 Note that toowi ‘it was long’ is a stative verb.
30 Note that the verb totwonikinį is also a stative verb.
31 In a S/A pivot system as in English the two sentences had syntactically to be changed into the following constructions: the second conjoined clause would have to change into a relative clause like ‘Lokolińiro and his people looked [where] to climb to the camp, [but] which was difficult’; or the subject would have to be repeated; the clause could not just be conjoined as in ‘Lokolińiro and his people looked [where] to climb to the camp, [but] this climbing was difficult.’
5. Discourse structuring

If a language employs clause-chaining as a discourse function, this has serious implications for the overall discourse structuring, as we shall see in the following.

One question that arises is what principles govern the formation of chains, i.e. what syntactic or semantic factors may cause clause chains to terminate and new ones to begin. Dooley offers several possible factors (2010:14-15): causal event groupings, discourse units like a paragraph or an episode, topic chains, or any combination of the above.

In all three genres I have considered above, the length of clause chains is discourse-related, in that each chain spans a whole narrative unit. The clause chain breaks when a new paragraph starts, usually marked by the verb aba ‘he came’ whenever it has a discourse function, or by temporal clauses with na or ani ‘when, whenever’. The first example is the same as S2 in example (8) above.

This is the beginning of a long chain:

(38) Abu Ṣakuju, to-limokọ niṣaṣi niṣikawoson ibi Naṣurukucu, came God, DEP-told bird very.clever who.called Naṣurukucu tem, “To-woyiçu  gboolean, koṭere ki-yooliyororo niṣiṣa koṣo.” DEP:said IV-twist rope in.order.to IV-take people down ‘God came, he told a very clever bird whose name was called Naṣurukucu (= Orange Starling), he said, “Twist a rope in order to take people down.”’

The paragraph consists of eight chained clauses, as shown in (9), and closes before the next paragraph opens with ani ebaasi ɲurwa apana uni ‘when it was almost three days’:

(39) Ani e-baa-si ɲurwa apana uni, ku-buŋ-akinj when 3PP-say:IMP:PL days up.to three DEP-eager-BEN ɲaberu na a-pot-i … woman who 3P-be:heavy-IMP ‘When it was almost three days, a woman that was pregnant was eager to...’

The next example from a procedural text is the same as S2 in (10):

(40) Na i-dowun-o ɲabaru, to-tubw-oe ɲapusiti ka ɲikuku when 3P-give.birth-RFL woman DEP-cut.off-PAS umbilical of child ka ɲebanetę, ki-lomakin-ae nai ɲabaru kai. with blade DEP-put.into-PAS then woman house ‘When a woman gives birth, the umbilical cord of the child is cut with a blade. The woman is put into a house.’

The childbirth is the procedure in this paragraph. The controlling sentence Na idowuno ɲabaru ‘when a woman gives birth’ uses the verb in the present tense, and thus determines tense and aspect of the following five clauses, where all verbs are marked by the to-/ki- prefixes. The chain breaks when the next paragraph starts with na ‘when’:

‘When the woman is brought into the hut, the men never enter at all, only women enter, cooking gruel.’

The following expository sentence is the same as S1 in (12) above. The chain starts as follows:

(42) Sekê na ecamitere ɲakitasapanə ɲituŋa, isyawunete mono So when is.wanted to.initiate people, begin DM ɲikanəkakə, ki-ryama, to-tukwo ɲatemarə itemokino leaders DEP-meet DEP-discuss that is.appropriate ɲide lu eriŋa ɲesapana, itasapanio. children who are.not.yet not.initiated be.initiated

‘When it is wanted (= when the leaders want) to initiate people, the generation-set leaders begin, they meet, they discuss that it is alright to initiate the children (= filial generation) who have not yet been initiated....’

The chain that begins with kiryama ‘they meet’ consists of twelve chained clauses (as shown in (12)), which, together with the controlling clause, constitute one paragraph. The chain ends when the next paragraph is introduced through ani iwalarị ‘when it dawns’:

(43) Ani i-walarị, ki-ryewutụ ɲaberụ kece tya taityekece When 3P-dawn, DEP-grind wives their and their.mothers ka ɲide ɲatapac. of children porridges

‘When it dawns, the wives and the mothers of the children grind [and cook and bring] [calabashes with] porridge.’

6. Conclusion

This paper discussed the phenomenon of clause-chaining, and how clause-chaned medial verb forms determine both sentence structure and the overall organization of discourse in Toposa.

Like other clause-chaining languages, Toposa follows the clause-chaining model and forms chains of clauses which are dependent on a controlling clause. All verbs in such chains are marked with a special dependency marker to-ki- which signals that the tense and aspect of these verbs are the same as those in the controlling clause, i.e. there is operator dependency. The chained clauses typically contain foregrounded information in narrative, procedural and descriptive-expository texts, whereas background information is typically encoded in clauses with inflected verbs. Unlike most other clause-chaining languages, which are SOV, Toposa is VSO/VO, therefore the chained clauses always follow the controlling clause, and are thus post-nuclear.

Moreover, I have shown that medial verbs do not occur in subordinative or negated clauses, with the exception of means-result and purpose clauses. Coordinated contrast clauses either occur with a medial verb, when emphasizing foregrounded information, or with a finite verb, when they contain background information.

In Toposa discourse, clause chains determine the length of a paragraph. However, it happens that clauses can be inserted into a chain without disrupting the chain (skipping). These clauses are all subordinative clauses with finite verb that provide background information or metarepresentations. It was pointed out that in terms of language production the clause skipping follows the principle of economy forced by pragmatic cognitive routines that pick out the foreground or background information through the presence and absence of the clause-chaining marker to/ki.

The mechanism of clause-chaining also appears in isolated coordinated sentence constructions in that the to-/ki- dependency markers occur on verbs in the dependent clause. In such cases, however, the marking does not necessarily signal foregrounded information.
The Toposa non-finite verb forms are motivating the structuring of narrative, procedural and expository discourse. The discourse structure follows the clause-chaining model that do not allow two independent clauses succeed each other and the clauses that do not carry the clause chaining marker are integrated into the clause chaining system though clause skipping or opening a new paragraph for the overall structuring of the discourse.

Abbreviations

1P/2P/3P  first/second/third person
1PL/3PL/1SG first/third person plural, first person singular
ALL  allative
D/SG  diminutive singular
DEP  dependence marker
DER  derivational affix
DM  discourse marker
DS  different subject
DUR  durative
F/SG  F/PL feminine singular/plural
IMP  imperfect
INT  intensive
INF  infinitive
IV  imperative
ACC  accusative
NOM  nominative
PAS  passive
PER  perfective
M/SG  M/PL masculine singular/plural
PL  plural
POSS  possessive
PST  past
SIM  simultaneous
SS  same subject
T  tense
YESTP  yesterday’s past

References


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