Clause linking in Japhug*

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This paper presents a detailed description of clause linking in Japhug, based on a corpus of traditional narratives and conversations. It follows the methodology used in Dixon and Aikhenvald’s (2009) collective book on this topic, to ease crosslinguistic comparisons. Although Japhug has a very rich system of con-verbs, there is not a single meaning that requires a non-finite form: all subtypes of clause linking can be expressed exclusively with finite verb forms, and these indeed predominate in our corpus.

Keywords: clause linking, conditional, counterfactual, purposive, tense, relative time

1. Introduction

This paper deals with clause linking in Japhug Rgyalrong. Although this topic has been summarily treated in previous publications (Jacques 2008: 317–325), the present work is based on a considerably larger corpus, which comprises about 50 hours of narratives and one hour of conversations. Elicited examples are only used when no attestation of a particular construction can be found in the texts.

In addition to richer data, this paper benefits from the descriptive framework and terminology provided by Dixon and Aikhenvald (2009). Their classification of clause linking subtypes is semantically based, and allows a detailed description

* The glosses follow the Leipzig glossing rules. Other abbreviations used here are: AUTO autobenefactive-spontaneous, ANTICAUS anticausative, ANTIPASS antipassive, APPL applicative, DEM demonstrative, DIST distal, EMPH emphatic, FACT factual, GENR generic, INDEF indefinite, INV inverse, LNK linker, MC main clause, PFV perfective, POSS possessor, SC subordinate clause, SFP sentence final particle, TESTIM testimonial. I would like to thank Alec Coupe, Scott DeLancey, Graham Thurgood and two anonymous reviewers for valuable comments and suggestions on previous versions of this article. This research has been funded by the ANR 12-CORP-0006 Himalco project.
of all competing constructions available for expressing a particular meaning in the target language, and the semantic differences between them.1

Dixon and Aikhenvald’s approach to clause linking is all the more relevant to the present work in that two out of the 15 languages in their sample, Galo and Kham (Post 2009 and Watters 2009), belong to the Sino-Tibetan family, and thus allow family-internal typological comparisons.

In this paper, we first present background information on Japhug Rgyalrong verbal morphology, as well as on other elements involved in clause linking, such as postpositions, relator nouns and linkers. Then, we devote a section on each of the five major categories of clause linkings distinguished by Dixon (2009): Temporal (including Conditional), Consequence, Addition, Alternative and Manner linking.

2. Background information

In this section, we present general information on TAM marking in Japhug, linkers, relator nouns and postpositions which are necessary to understand the data presented in the body of the paper, as coordination and subordination are marked by specific verb forms and/or by independent subordinating or coordinating markers.

2.1 TAM marking in Japhug

Since subordinating and coordinating constructions in Japhug often select specific TAM categories, a detailed list of all TAM categories is a necessary preliminary to the description of clause linkings.

In this section, we first describe the building blocks of TAM marking (directional prefixes and stem alternation) and then present an inventory of the available TAM categories (both finite and non finite).

1. However, following the suggestion of an anonymous reviewer, we avoid Dixon’s supporting vs focal clause whose definition is not entirely explicit (Dixon 2009: 2–5) and keep the more common terms ‘subordinate clause’ and ‘main clause’ instead, except for the constructions where there is no syntactic or morphological evidence for postulating a subordinating relationship. In the examples, the subordinate clause is indicated between square brackets, without including the postposition, relator noun or linker.
2.1.1 Directional prefixes
Most verbal forms in Japhug have a directional prefix that contains information on TAM, transitivity and (in the case of motion and concrete action verbs) the direction of the action.

With the exception of contracting verbs whose stem starts in *a*- and which present special alternations (see Jacques and Chen 2007 for more information), Japhug intransitive verbs have three series of prefixes (A, B and D) and transitive ones four series, as shown in Table 1. The distribution of these four series will be explained in more detail in Section 2.1.3.

Table 1. Directional prefixes in Japhug Rgyalrong

<table>
<thead>
<tr>
<th></th>
<th>perfective (A)</th>
<th>imperfective (B)</th>
<th>perfective 3→3’ (C)</th>
<th>evidential (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>up</td>
<td>tu-</td>
<td>tu-</td>
<td>ta-</td>
<td>to-</td>
</tr>
<tr>
<td>down</td>
<td>pju-</td>
<td>pju-</td>
<td>pa-</td>
<td>pju-</td>
</tr>
<tr>
<td>upstream</td>
<td>lu-</td>
<td>la-</td>
<td>pa-</td>
<td>lo-</td>
</tr>
<tr>
<td>downstream</td>
<td>lu-</td>
<td>la-</td>
<td>pa-</td>
<td>lo-</td>
</tr>
<tr>
<td>east</td>
<td>ku-</td>
<td>ka-</td>
<td>ko-</td>
<td>ko-</td>
</tr>
<tr>
<td>west</td>
<td>jh-</td>
<td>ju-</td>
<td>ja-</td>
<td>jo-</td>
</tr>
</tbody>
</table>

Most verbs have one intrinsic direction which is lexically determined. For instance, the verb *sat* ‘kill’ selects the direction ‘down’ for all its forms: **perfective** 1sg→3sg *pju-sat-a*, **imperfective** *pju-sat*, **perfective** 3sg→3’ *pa-sat* and **evidential** *pju-sat*.

Some verbs may allow several directions with slightly different semantics. Thus, *ndza* ‘eat’ normally selects the ‘up’ direction (**perfective** 3sg→3’ *ta-ndza* ‘he ate it’), but when applied to carnivorous animals we also find the ‘downstream’ direction. This can lead to further aspectual distinctions. For instance, the direction ‘downstream’, when used with stative verbs, indicates a progressive development. Footnote (10) discusses the use of different directional prefixes with the existential copula *me*.

Verbs of motion and some verbs of concrete action can be associated with all seven series of prefixes to indicate the direction of the motion. The ‘no direction’ series of prefixes only occurs with motion verbs.

Only three verbs have defective paradigms and never occur with directional prefixes: the sensory existential copulas *yyzu* ‘exist’ and *mange* ‘not exist’ and the verb *ktruupa* ‘speak’ (see the paradigm of the latter in Jacques 2012:1215).
2.1.2 *Stem alternation*

The existence of stem alternations in Rgyalrong was first reported by Sun (2000), who proposes to distinguish three stems: the base stem (stem 1), the perfective stem (stem 2) and the non stem (stem 3). Some varieties of Zbu Rgyalrong appear to have an additional progressive stem distinct from stem 2 in the progressive form (Jacques 2004:352).

In Kamnyu Japhug, only four verbs have a perfective stem distinct from the base stem; the list is provided in Table 2.

Stem 3 on the other hand is fully productive. The rules of vowel alternation in Table 3 apply to all finite transitive verbs in the forms 1sg→3, 2sg→3 and 3sg→3'; stem 3 does not appear in verb forms with the inverse marker (see Gong 2014). Jacques (2004:351–7) provides a historical analysis of these alternations, and shows that they result from the fusion of the verb stem with two suffixes.

Table 2. Stem 2 alternation in Japhug Rgyalrong

<table>
<thead>
<tr>
<th>Stem 1</th>
<th>meaning</th>
<th>Stem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ce</td>
<td>to go (vi)</td>
<td>ari</td>
</tr>
<tr>
<td>suxce</td>
<td>to sent (vt)</td>
<td>syyri</td>
</tr>
<tr>
<td>yi</td>
<td>to come (vi)</td>
<td>ye</td>
</tr>
<tr>
<td>ti</td>
<td>to say (vt)</td>
<td>tut</td>
</tr>
</tbody>
</table>

Following the Leipzig glossing rules, we indicate stem 2 as [II] and stem 3 as [III] in the glosses in this paper.

Table 3. Stem 3 alternation in Japhug Rgyalrong

<table>
<thead>
<tr>
<th>Stem 1</th>
<th>Stem 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>-a</td>
<td>-e</td>
</tr>
<tr>
<td>-u</td>
<td>-e</td>
</tr>
<tr>
<td>-uu</td>
<td>-i</td>
</tr>
<tr>
<td>-o</td>
<td>-ym</td>
</tr>
</tbody>
</table>

2.1.3 *Finite TAM categories*

There are nine basic finite TAM categories in Japhug, as represented in Table 4. All finite forms except the factual require one and only one directional prefix. All forms can be correctly produced by combining the appropriate derivational prefixes and stems.²

² For the TAM categories requiring stem 3, it is restricted to 1sg→3, 2sg→3 and 3sg→3’ forms; all other forms take the base stem. The person affixes and the past transitive -t suffix are not
In the case of past imperfective *pu*-i, evidential imperfective *pj*-v, testimonial *ju*- and present *ku*-i, the direction that is lexically selected by the verb is neutralized. Note that the past imperfective marker *pu*- is formally identical to the perfective *pu*- ‘down’ prefix, a feature found in all Rgyalrong languages (see Lin 2011).

The evidential and evidential imperfective forms are used with the circumfix *k*-…-*ci* in the case of verb forms whose stem begins in *a*- (including verbs with the progressive *asu*-).

In addition to the basic forms, there are periphrastic TAM categories combining one of the nine categories with the copulas (*nu* ‘be’ and *mar* ‘not be’).

<table>
<thead>
<tr>
<th>Table 4. Finite verb categories in Japhug Rgyalrong</th>
</tr>
</thead>
<tbody>
<tr>
<td>stem</td>
</tr>
<tr>
<td>factual</td>
</tr>
<tr>
<td>imperfective</td>
</tr>
<tr>
<td>perfective</td>
</tr>
<tr>
<td>past imperfective</td>
</tr>
<tr>
<td>evidential</td>
</tr>
<tr>
<td>evidential imperfective</td>
</tr>
<tr>
<td>testimonial</td>
</tr>
<tr>
<td>present</td>
</tr>
<tr>
<td>irrealis</td>
</tr>
<tr>
<td>imperative</td>
</tr>
</tbody>
</table>

The past imperfective and evidential imperfective forms cannot be used with most dynamic verbs,\(^3\) except in several types of conditionals, in particular counterfactuals (see (3.3.2) and (3.3.5)) and in combination with the progressive *asu*-. Periphrastic past imperfective and evidential imperfective (combining a verb in the imperfective form with the copula *nu* ‘be’ in the past imperfective *pu*-*nu* or evidential *pj*-*nu*) are used in all other contexts with dynamic verbs. Example (1) illustrates the use of the non-periphrastic past imperfective with the stative verb *xtci* ‘be small’ constrating with the periphrastic form of the dynamic verbs *sqa* ‘cook’ and *lvt* ‘throw, pour’.\(^4\)

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3. See Lin (2011) for a study of the past imperfective in Rgyalrong languages.

4. Note also that the auxiliary only appears after the last verb in the past imperfective, see Section 3.1.
When we were small, (people) used to cook (Rhododendron leaves) and pour the juice on the crops (to kill bugs). (Rhododendron 2: 83)

Japhug, as other Rgyalrong languages, has a clear tense distinction between past and factual in the imperfective (see Sun 2000, Lin 2003 and Jacques 2004: 371–392), but no grammaticalized future.

Some clause linking constructions require a specific finite TAM form, in particular the imperfective (with the postposition $\text{cuungu}$, see (3.2.3)), the past imperfective (in one of the counterfactual constructions, (3.3.5)) and the perfective (in the iterative coincidence linking, (3.3.1)).

2.1.4 Converbs

There are three converbs in Japhug (perfective, gerund and purposive), which combine the base stem of the verb with a prefix tuu- or $sy$- (etymologically probably nominalizing prefixes) and with person prefixes or directional markers in some cases. The converbs are non-finite in the sense that they cannot appear as an isolated sentence without clause chaining, and can only index one argument with possessive prefixes (see for instance Jacques 2014: 4 for the paradigms), whereas finite verbs index up to two arguments with a combination of prefixes and suffixes distinct from the possessive prefixes (see for instance Jacques 2010: 134). In addition, non-finite verb forms lack transitivity marking and are not compatible with some TAM markers.

The infinitive in $kv$- or $kuu$- also has converbial uses (especially in the Manner linking, cf Section 7).

The perfective converb tuu- expresses an immediate succession between two events (‘as soon as’); its use is described in Section 3.2.4. It is formed by combining the imperfective form of the intrinsic prefix, the tuu- prefix and the stem 1 of the verb. Since there is a homophonous prefix tuu- for second person, the perfective converb is formally identical to the second person singular imperfective form for all verbs whose stem 1 and stem 3 are identical (which includes all intransitive verbs and some transitive ones); these quasi-homophonous forms are however easily distinguished for transitive verbs with stem 3 alternation, as illustrated by Table 5.

5. More precisely, the 2sg form of intransitive verbs and the 2sg→3sg form of transitive ones.
Table 5. Examples of the perfective converb $tu$-

<table>
<thead>
<tr>
<th>stem</th>
<th>meaning</th>
<th>imperfective (2sg)</th>
<th>perfective converb</th>
</tr>
</thead>
<tbody>
<tr>
<td>sci</td>
<td>to be born (vi)</td>
<td>$\dot{c}u-u-tu-sci$</td>
<td>$\dot{c}u-u-tu-sci$</td>
</tr>
<tr>
<td>ce</td>
<td>to go (vi)</td>
<td>$ju-tu-ce$</td>
<td>$ju-tu-ce$</td>
</tr>
<tr>
<td>$ts'i$</td>
<td>to drink (vt)</td>
<td>$ku-tu-ts'i$</td>
<td>$ku-tu-ts'i$</td>
</tr>
<tr>
<td>ndza</td>
<td>to eat (vt)</td>
<td>$tu-tu-ndze$</td>
<td>$tu-tu-ndza$</td>
</tr>
<tr>
<td>mto</td>
<td>to see (vt)</td>
<td>$piju-tu-mt$</td>
<td>$piju-tu-mto$</td>
</tr>
</tbody>
</table>

It is a paradox that a perfective converb is not marked by the perfective stem (stem 2) or by perfective directional prefixes, but receives imperfective markers. This complex question, which probably can only receive a historical answer, will not be discussed in this paper.

The gerund expresses that the event in the subordinate clause occurs at the same time as that of the main clause (3.2.3). It is formed by combining a prefix $sv$- with the partially reduplicated verb stem (only the last syllable is reduplicated), as the verb $mts\text{ur}$ 'be hungry' in example (2).

(2) $kut\text{ca} sv-mts\text{ur}$ $mts\text{ur}$ $ku-ruzi-t$ $tce$, jis\text{yi} nd$v$

here GERUND-be.hungry IPFV-remain-1SG LNK today however $tum\text{ukumpci} ku$ pu$\ddot{i}$-wy-nu-mbi-$a$ $cti$
heavens ERG PFV:DOWN-INV-AUTO-give-1SG be.AFFIRM:FACT
I am very hungry here, but heavens have sent it (down) for me (to eat).
(Slobdpon 253)

The prefix $sv$- has an allomorph $svz$- before sonorant derivation prefixes. In the case of verbs that already have a reduplicated stem, such as $nuuqambumbjom$ 'to fly',

no further reduplication occurs in the gerund formation. Reduplication of the last syllable of the verb stem is not sensitive to morpheme boundaries. Thus, the verb $nuu-y-mu$ 'to be afraid of' has the applicative prefix $nuu-y$-, but the $y$ part of the prefix participates in the reduplicated form $svz-nuu-y-mu$-y$mu$ 'while being afraid of it'.

6. The root $mbjom$, which cannot occur independently with the meaning 'fly', is partially reduplicated as $mbu$-$mbjom$ with additional prefixes.
Table 6. Examples of the gerund sy-

<table>
<thead>
<tr>
<th>stem</th>
<th>meaning</th>
<th>gerund</th>
</tr>
</thead>
<tbody>
<tr>
<td>γywu</td>
<td>cry (vi)</td>
<td>syz-γywum-~wu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gerund-cry</td>
</tr>
<tr>
<td>nuandzulhuyuz</td>
<td>be sleepy (vi)</td>
<td>sy-nuandzulhuy~huyuz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gerund-be.sleepy</td>
</tr>
<tr>
<td>nuaymu</td>
<td>be afraid of (vt)</td>
<td>syz-nuaymum-~ymu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gerund-be.afraid.of</td>
</tr>
<tr>
<td>nuqambumbjom</td>
<td>fly (vi)</td>
<td>sy-nuqambumbjom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gerund-fly</td>
</tr>
</tbody>
</table>

The purposive converb, like the gerund, is formed by combining a sy- prefix with the reduplicated stem of the verb; it differs from it in that it also requires a possessive prefix and the imperfective directional prefix. The possessive prefix can be coreferent to either S, P or A: in the case of transitive verbs this form is ambiguous. The purposive converb most commonly occurs in the negative, meaning ‘in order not to X’, and for this reason it is this form which is chosen as representative in Table 7.

Table 7. Examples of the purposive converb sy-

<table>
<thead>
<tr>
<th>stem</th>
<th>meaning</th>
<th>purposive converb</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(3sg negative form)</td>
<td></td>
</tr>
<tr>
<td>jmuut</td>
<td>to forget (vt)</td>
<td>u-yi-yu-sy-jmu-~jmuut</td>
<td>in order not to forget</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3sg-NEG-IPFV-PURP-forget</td>
<td></td>
</tr>
<tr>
<td>ndu</td>
<td>to hit (vt)</td>
<td>u-yi-tu-sy-nduu-~nduu</td>
<td>in order not to be beaten / not to beat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3sg-NEG-IPFV-PURP-hit</td>
<td></td>
</tr>
<tr>
<td>acq’e</td>
<td>to cough (vi)</td>
<td>u-yi-tu-sy-acq’ju-~acq’e</td>
<td>in order not to cough</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3sg-NEG-IPFV-PURP-cough</td>
<td></td>
</tr>
</tbody>
</table>

Other forms of the purposive converb are presented in Section 4.2, including affirmative forms and forms with other personal prefixes.

The infinitive form is the base stem of the verb prefixed with the kv- (for dynamic verbs) or kuy- (for stative and non-animate intransitives). This form can be prefixed with the negative my- and in the case of transitive verbs with a possessive prefix coreferent with the P. The infinitive mainly occurs in complement clauses and in citation form, but it can also be used as a converb for the Manner (Section 7) and Purposive (Section 4.2) linkings.
All converbial prefixes are historically probably derived from nominalizations. As described in Jacques (2014, under review), we find a series of four prefixes for nominalizations in Japhug: *ku*- for S/A argument, *ky*- for P argument, *sv*- for oblique arguments (including instrument, place and time) and *tu*- for action nominalization. The infinitive is likely to originate from core argument nominalization prefixes *ku*- and *ky*, the immediate precedence converb from the action nominalization prefix and the purposive and gerund from the oblique nominalization prefix.

The details of the grammaticalization pathway from nominalization to converb cannot be fully analyzed by investigating only Japhug data, and require a comparative study that goes beyond the scope of this paper. Nevertheless, we do find ambiguous sentences where a particular form could be either analyzed as the infinitive or as a nominalization, such as (165) or (166) in Section 7.

Example (3) shows an oblique instrument nominalization *sv*-χtci ‘cleaner’ inside of a relative clause. The direct object of the main verb *nuw*-wy-*nu*-p’ut is *yztivu* ‘Selaginella’, and the nominalized relative clause *tutivu sv*-χtci is an adjunct (without case marking) that should be understood as ‘(as) a pan cleaner’. This type of relative clause used as adjunct could easily be reanalyzed as a purposive converb ‘people would unroot it in order to clean pans’.

(3) *yztivu* nuw kucungu tce [tutivu sv*-χtci]
Selaginella dem in.the.past LNK pan NMZL:OBLIQUE-wash
*nui-wyi-nu-p’ut* puu-ŋgrvl
IPFV-INV-AUTO-unroot PST.IPfv-be.usually.the.case
In the past, people would unroot Selaginella (to use as) a pan cleaner.
(Selaginella, 106)

This type of ambiguous constructions are perhaps the pivot forms which allowed reanalysis from nominalized verb to converb. This type of reanalysis following the pathway in (4) has been described in several Sino-Tibetan languages (see for instance Coupe 2007) and is widely attested in various language families (Epps 2009).

(4) NMLZ ⇒ RELATIVIZATION ⇒ CONVERB

A trace of the nominal origin of converb is the fact that they can be used with the ergative *ku* in some contexts, as in example 75 below.

2.2 Postpositions

Apart from specific verbal forms, the markers of clause linking include post-position, relator nouns and linkers.
Postpositions are a closed class of markers that appear after a noun phrase or a clause. The noun phrase/clause and the postposition constitute a postpositional phrase, of which the postposition is the head. They differ from relator nouns, which must bear a possessive prefix and are treated in Section 2.3.

The postpositional phrases headed by the ergative/instrumental *ku*, comitative *cʰo*, genitive *ɣɯ* and locatives *zɯ*, *ri* and *tɕu* can be relativized (Jacques under review). In the following these postpositions will be referred to as *core postpositions*.

Relativization of these phrases involves a nominalized verb in the relative with the prefixes *ku*- (for the A marked with the ergative) or *sʰ-* (for all the other ones, including the instrumental). Some verbs such as *amumi* ‘be on good terms’ or *naχtɕɯɣ* ‘be similar’ select a postpositional phrase with *cʰo*.

Example (5) illustrates this use of *cʰo* as well as a relativized postpositional phrase in *cʰo*.

(5) tɕe [uozo u-ʃv-rmumi] nu
   lnk it 3SG-NMLZ:OBLIQUE-be.on.good.terms dem
   dm mə ca ku-fse qazo
   be.man:FACT because water.deer NMLZ:S-be.like sheep
   ku-fse, tʰɔv ku-fse, uozo cʰo
   NMLZ:S-be.like goat NMLZ:S-be.like it comit
   ku-naχtɕɯɣ sɯjno, xɕj ma my-ku-ndza nu
   NMLZ:S-be.identical herbs grass apart.from NEG-NMLZ:A-eat dem
   ra cʰo nu amumi-ru nu tɕe,
   PL with dem be.on.good.terms:FACT-PL lnk

The (animals) that are on good terms with the rabbit are many, it is in good terms with those that only eat grass, like water deer, sheep or goats. (Rabbit, 33–4)

Of the core postpositions enumerated above, only the genitive *ɣɯ* is never used in clause linking.

Temporal postpositions are only found after noun phrases (6), pronouns (7) or temporal relator nouns (example (8)). They include *caŋpei* ‘since’, *myvtsa* ‘until’, *cuŋgwu* ‘before’, *jvznə* ‘at the time when’, *cumuma* ‘immediately after’ and *kʰwmuːz* ‘only then, only after’.

(6) tɕe saχʃu cuŋgwu pu-ru-ryz-i-j, tʰɔa kʰ-tsʰi-j
   lnk lunch before PST:IPV-AUTO-STAY-1PL tea PFV-drink-1PL

We stayed there before lunchtime, and we had breakfast. (Dpalcan story 1, 15)

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7. The locative *tɕu* is not restricted to spatial reference, but can also be used for temporal reference.
(7) \textit{ažo čungu a-pi ra atu ryzī-nu tce},
1sg before 1sg.poss-elder.sibling pl up.there stay:fact-pl lnk
nuumū ra yu nuu-rmi ty-z-myke q’e,
dem pl gen 3pl.poss-name imp-caus-be.first[III] lnk
Before me, (choose) first names for my elder brothers, who are stay-ing up
there. (Gesar, 123)

(8) \textit{nuu u-q’u čanpci zo u-ngu}
dem 3sg-after from emph 3sg.poss-well.off.family
puu-t’on ky-ti nuu-ju ja
pst.ipfv-have.a.well.off.family nmlz:p-say testim-be sfp
From that time on, their family was prosperous. (Divination3, 66)

Apart from the core postposition and the temporal postpositions, we find
the postposition \textit{ma} (or \textit{muuma}) ‘apart from’ whose postpositional phrases cannot be
relativized. It can also appear after pronouns (9), noun phrases and clauses.

(9) \textit{u-y’e u-ruez yvzu}
3sg.poss-grandson 3sg.poss-supernatural.ability exist:sensory
u-kū-ti nزو ma me tce
3sg-nmlz:s/a-say 2sg apart.from exist:fact lnk
Nobody says that his grandson has supernatural abilities apart from you.
(Nyima Wodzer2011, 144)

2.3 Relator nouns

Relator nouns are an open class of possessed nouns which, like postpositions, oc-
cur as the head of a postpositional phrase.

Relator nouns differ from postpositions and linkers in that they bear a obliga-
tory possessive preix coreferent with the preceding noun phrase (10).

In this section, we mark all examples of relator nouns with a preceding hyphen
(as in \textit{-ŋgu ‘inside’ or \textit{-q’u ‘after’}) to indicate the presence of a possessive preix.

(10) \textit{tce tuergi ku-wxti nuu ra nuu-ŋgu tu}
lnk fir nmlz:s/a-be.big dem pl 3pl-inside exist:fact
ma ku-xtcì nuu ra nuu-ŋgu me.
apart.from nmlz:s/a-be.small dem pl 3pl-inside not.exist:fact
There are (fir mushrooms) among big firs, but there none among little ones.
(Fir mushroom, 63)

Unlike postpositions, which require a preceding constituent (whether noun phrase
or clause), relator nouns can stand on their own as in (11).
When relator nouns take a clause rather than a noun phrase as their modifier, the possessive prefix is invariably the third singular *u*. This is the situation observed in all instances of clause linking based on relator nouns in this paper.

Some relator nouns encode basic syntactic functions, e.g. the dative -ɕki and -pʰe and -tʰt ‘instead of’. Relator noun phrases with the dative as their head can be relativized, but the other ones cannot (Jacques under review).

Most relator nouns have either a spatial or temporal meaning, as -q’u ‘after (temporal or spatial)’, -tax ‘on’, -pa ‘under’, -ŋłu ‘inside, in, among’, -kʰukʰa ‘while’, -juja ‘while, along with’ and -raŋ ‘while’. The development of relators from concrete nouns is a very common grammaticalization pathway, especially in the Sino-Tibetan family (see for instance DeLancey 1997, Coupe 2007: 184).

The locative postpositions *ri* or *zɯ* can follow these relator nouns as in (12) or (13), without a testable semantic difference. With -ŋłu the locative merges with the relator noun to become -ŋłu (see an example in (17)).

---

8. These two dative markers are semantically equivalent, but some speakers, within Kamnyu village, prefer one or the other.
Some markers such as \textit{uwɛ}\textsubscript{u}\textsubscript{uβ} ‘in order to’, while having the trace of a possessive prefix \textit{u}- suggesting that they were relator nouns at an earlier stage, cannot be analyzed as such anymore as they only appear after clauses, not after noun phrases.

2.4 Linkers

Linkers are a diverse class of markers which cannot be classified as either postpositions or relator nouns. Some linkers are homophonous with postpositions, for instance the concessive \textit{ri} with the locative \textit{ri} and the causal \textit{ma} ‘because’ with \textit{ma} ‘apart from’.

Some linkers, such as \textit{tce} ‘then’, \textit{q’e} ‘then’, \textit{ndye} ‘adversative’, \textit{ri} ‘but’, \textit{ma} ‘because’ can be phonologically anchored on either the preceding (example (14)) or the following phrase (15). The first option is the most common.

\begin{enumerate}
\item \textit{ndzi-tcwu ci tu ri, pause ndzi-tcwu nuu}
\end{enumerate}

\begin{enumerate}
\item \textit{ckrvz uu-ngu kunnv tu-ku-lo\textsubscript{l}}
\end{enumerate}

\begin{enumerate}
\item \textit{ma nu\textsubscript{u}nu p\textsubscript{a}k\textsubscript{v}y tce bnuu-twp’u tu.}
\end{enumerate}

\begin{enumerate}
\item \textit{nuu qa\textsubscript{y}y, azo a-ky-su\textsubscript{z} nuu tce, qa\textsubscript{y}y nuu}
\end{enumerate}

\begin{enumerate}
\item Others such as \textit{no} ‘adversative’, \textit{tyk’o} ‘at the moment when’, \textit{nv} ‘conditional’, \textit{zo} ‘emphatic’ form a phonological constituent with the preceding group.

The linkers \textit{tce} and \textit{q’e} ‘then’ can appear directly after a noun phrase or a relative clause, in which case they are topicalizers as in (16) and (17).

\begin{enumerate}
\item \textit{ma n\textsubscript{u}nu p\textsubscript{a}k\textsubscript{v}y tce bnuu-twp’u tu.}
\end{enumerate}

\begin{enumerate}
\item \textit{nuu qa\textsubscript{y}y, azo a-ky-su\textsubscript{z} nuu tce, qa\textsubscript{y}y nuu}
\end{enumerate}

\begin{enumerate}
\item \textit{nuu qa\textsubscript{y}y, azo a-ky-su\textsubscript{z} nuu tce, qa\textsubscript{y}y nuu}
\end{enumerate}
The linker \textit{n} is mostly restricted to conditionals (3.3) and to alternating or repeated action linkings (5.3). It also occurs with nouns and ideophones with a semantics very close to that of the repeated action linking.

The structure noun+\textit{n}+noun expresses an action which is repeated many times, or which presents a continuous progression or increase (example (18)). This construction is restricted to locative and temporal nouns.

\begin{equation}
\text{ta} \text{n} \text{n} \text{ta} \text{n}, \text{ta} \text{n} \text{t} \text{o} \text{w} \text{y} \text{t} \text{s} \text{u} \text{m}
\end{equation}

\text{up LNK up up LNK up \textsc{evd:up-inv-take.away}}

He was taken away, up and up. (Flood3, 21)

With ideophones, the same structure is also found and expresses a rhythmic atelic action as in (19) (see Jacques 2013b).

\begin{equation}
\text{tu} \text{-n} \text{k} \text{e t} \text{c} \text{e d} \text{z} \text{a} \text{y} \text{n} \text{v} \text{d} \text{z} \text{a} \text{y} \text{z} \text{o}
\end{equation}

\text{pfv-walk LNK \textsc{ideo:long.and.thin} \textsc{link ideo:long.and.thin emph}}

\text{tu} \text{-n} \text{k} \text{e n} \text{u} \text{-n} \text{u}

\text{ipfv-walk \textsc{testim-be}}

When it walks, it walks with (its neck) erected and moving up and down, long and thin. (Peacock, 56)

The semantics of the constructions found in examples (18) and (19) as well as the repeated action linking (5.3) present some of the the iconic functions of reduplication mentioned by Sapir (1921:76): repeated occurrence, increase in size and added intensity.

The emphatic linker \textit{zo} occurs after stative verbs (in finite or non-finite forms), adverbs (expressing degree such as \textit{wuma} ‘really, very’, quantity such as \textit{t’amtcvt} ‘all’ or place and time such as \textit{awnduundvt} ‘everywhere’), ideophones and some clause linking types (especially Temporal and Manner linkings). It also occurs with any element followed by the verb \textit{fse} ‘be like’.

The linker \textit{zo} indicates a higher degree, greater intensity, frequency or quantity depending on the semantic nature of the preceding element. It cannot stand on its own and it marks the element preceding it as an adverbal modifier as an adverbal modifier of the following verb, except in the case of ideophones (which can appear, followed by \textit{zo}, after the verb that they modify, see Jacques 2013b).

Finally, we find correlative linkers \textit{tci} and \textit{ri} ‘also’ in the Elaboration linking (5.2), which are repeated after noun phrases in successive clauses; these noun phrases necessarily have the same syntactic function in each clause.
2.5 Other linking strategies

In addition to clause linking markers (postpositions, relators and linkers) and dedicated verbal morphology, several strategies are used to express linkage between clauses, and occur in various clause linking constructions.

2.5.1 Long-distance ergative

As a general rule, the converbial clauses are not only subordinate to the main clause, but are even embedded within it. When the verb of the main clause is transitive and requires an A marked with the ergative ku, this ergative postpositional phrase appears before the converbial clause, as in (20) and (115) (the A is indicated in bold to ease parsing of the sentence).

(20) \textit{tyçime numu ku} [\textit{uu-qom sy-hu-lov}] ku nuu
\begin{itemize}
  \item young.lady dem erg 3sg.poss-tear gerund-come.out erg dem
  \item ra t'ui'yi ci puu-kuu-fse ra lonba zo pij-fcvt
  \item pl something pst.ipfv-nmlz:S/A-be.like pl all emph evd-tell
  \item nuu-nu.
  \item testim-be
\end{itemize}

The young lady told everything that had happened, while her tears were flowing. (Die Gänsemagd, adaptation, 202)

However, this type of embedding is not restricted to converbial forms, and also commonly appears with various constructions, including even the temporal succession linking as in (21) and (160). This phenomenon is unexpected, as in such constructions the two clauses do not normally present evidence of a subordinating relationship.

(21) \textit{tcendvre tyçime nuu ku}, [nuu ma uu-kvpa]
\begin{itemize}
  \item LNK young.lady dem erg dem apart.from 3sg.poss-method
  \item pij-me q'e \textit{jiy} jiy
  \item ipfv.evd-not.exist LNK be.possible:fact be.possible:fact
  \item jiy' to-ti nuu-nu.
  \item be.possible:fact evd-say testim-be
\end{itemize}

The young lady had no other way (but to) say “yes, yes, yes”. (Die Gänsemagd, adaptation, 88)

There are several ways of analysing examples such as (21). One could argue that the first clause is really embedded within the main clause as in the case of converbial clauses. However, given the fact that in such constructions, a pause (together with fillers such as \textit{nvkinu} ‘this one’ used when the speaker hesitates) often occurs after
the ergative postpositional phrase, an alternative option would be to consider that the postposition phrase here is topicalized and extracted from the main clause.

Similar phenomena have been reported in other Sino-Tibetan languages, such as Newar (Genetti 1988). We defer the precise syntactic analysis of such constructions, which may require a monograph-size work, to future research.

2.5.2 Tail-head linkage and related phenomena

Tail-head linkage is a type of linking strategy whereby an element (generally the verb) of one clause is repeated in the following clause (see de Vries 2005 for a typological overview). Such constructions are massively attested in languages of Western Sichuan (see for instance Zhang 2013:688–693). In Japhug, they occur predominantly with parataxis and loose temporal succession linking with finite clauses separated by linkers such as tce or q’e. No examples of tail-head linkage involving a converbial subordinate clause have been found.

Tail-head linkage can affect an entire clause without any effect on the verb or on the arguments, as in (22).

(22) nɯ-m-e stu kɯ-xtɕ-i nɯ nʊv-mbi-nɯ, 3pl.poss-daughter most nmlz:S/A-be.small dem evd-give-pl tce nɯ-m-e stu kɯ-xtɕ-i nɯ LNK 3pl.poss-daughter most nmlz:S/A-be.small dem nʊv-mbi-nɯ tce, tce tɕʰ-eme nɯ to-numbrpu, uzo kɯ mbro evd-give-pl LNK LNK girl dem evd-ride he erg horse to-mtsʰi tce lo-ce-n’dзи. evd-lead LNK evd:upstream-go-du

They gave (him) their daughter (in marriage), and as they gave (him) their daughter (in marriage), the girl rode, he lead the horse and they went upstream. (The frog 64)

However, the repeated element in the second sentence generally only includes a fragment of the first clause, removing for instance one of the arguments or an adjunct as in (23).

(23) nɯ tʰyp’tso nɯmu li sungen zu jo-ce. sungen zu jo-ce dem boy dem again forest loc evd-go forest loc evd-go tce tɕnendrə, pʰ’asrgbu nɯ kɯ tʰyp’tso nɯ pa-mto tce, LNK LNK boar dem erg boy dem pfv:3→3-see LNK

The boy went again to the forest, and as he went to the forest, the boar saw the boy. (Das tapfere Schneiderlein, adaptation, 220)

Sometimes the second clause is an elaboration on the first, and contains more element and additional verbal morphology as in (24) where in the second clause
the verb *lu-z-narje* IPFV-CAUS-probe[III] ‘he probes into it’ contains the causative prefix *z-* because of the added instrument *u-jar ku* ‘with its paw’.

(24) *lulu nnu nuteu lu-ce muń-xtɕ’uit ma*

**Cat** **Dem** There IPFV:UPSTREAM-go NEG:TESTIM-fit.in because

*nuu-wx’ti qe’e, tɕɛndre lu-narje qe’e, tće*

TESTIM-be.big LNK LNK IPFV-probe[III] LNK LNK

*u-jaŋ ku ki tu-ste*

3SG.POSS-hand ERG DEM:PROX IPFV-do.like[III]

*lu-z-narje nɯu-ŋu ri,*

IPFV-CAUS-probe[III] TESTIM-be LNK

The cat does not fit in to go inside, because it is (too) big, and it probes (into the hole), it probes with its paw like that. (Weasel, 47)

Cases where nouns are repeated between two clauses, but the verb is changed as in (25) can also be viewed as instance of tail-head linkage.

(25) *u-ku kuɾa tu-ste tće zruŋ ra*

3SG.POSS-head PROX.DEM:PL IPFV-do.this.way[III] LNK louse PL

*pjui-re nɯu-ŋu. tće zruŋ nɯɾa tu-ndze nɯu-ŋu.*

IPFV-remove.lice TESTIM-be LNK louse DEM:PL IPFV-eat[III] TESTIM-be

He does like this with his head and removes lice, and eats lice. (Monkey, 36)

Another construction that can be viewed as a type of tail-head linkage in Japhug is a paratactic construction where one argument is marked by a demonstrative cataphorically referring to a noun phrase in the next sentence with repetition of the verb, as in (26). These sentences have a specific intonation and a pause, and the second clause is a type of afterthought.

(26) *nṳ ki tu-ndze ɲu, sʋjno tu-ndze nɯu-ŋu*


It eats that, it eats plants. (Cricket, 51)

Topicalization by verb fronting as in (27) is similar to tail-head linkage in that the verb of the first clause is repeated in the next one. This type of construction, common in the Sino-Tibetan family (for instance in Sinitic languages, Paris 1981, Matthews and Yip 1994: 76), is well-attested in the Japhug corpus. The topicalized verb is either in the infinitive or in the perfective.

(27) *tɕ’i tv-mbro, bɯu-rtsvŋ cøntar tv-mbro muń-c’a.*

what PFV-be:high two-stairs up.to IPFV-be:high NEG:TESTIM-can

As far as its size is concerned, it cannot grow higher than two stairs. (Apple, 26)
3. Temporal

Japhug presents a considerable variety of temporal and conditional clause linking constructions, summarized in Table 8.9

<table>
<thead>
<tr>
<th>Clause linking type</th>
<th>Construction</th>
</tr>
</thead>
</table>
| **Temporal succession** | Parataxis  
Coordination with \( tče \) or \( q'ě \) |
| **Relative time** | Length  
clause with \( tsu \) ‘spend (a certain time)’ |
| | Succession  
SC with the relator nouns \( u'u-q'u, u'u-mp'ru \) ‘after’ or \( u'u-ndo \) ‘in the end’  
SC with the postposition \( jɪznv \) ‘at the time when’ or \( caŋpe \) ‘henceforth’ |
| Precedence | SC with the postposition \( cʊŋgu \) ‘before’ (requires imperfective in the SC) or with \( mvcṭsa \) ‘until’ |
| Immediate | Succession  
SC with the perfective converb \( tɯ- \) |
| Immediate | Precedence  
verb in factual form + \( pu-ŋu \) in the SC  
prospective/conative \( jɪu- \) in the SC |
| Simultaneity | SC with the relator nouns \( u'u-raj \) ‘time’, \( u'u-k'ɯk'a \) ‘while’ or \( u'u-juja \) ‘along with’  
SC with the gerund \( sɣ- \) |
| Conditional | Iterative coincidence  
Reduplicated perfective verb in the SC |
| Real | Verb with interrogative \( u- \) in the SC + linker \( ṳv \)  
Verb with reduplicated first syllable in the SC + linker \( ṳv \) |
| Alternative | Verb in past imperfective with the autobenefactive in the SC + linker \( ṳv \) |
| concessive | Polar interrogative \( ci \) |
| Scalar | Verb in past imperfective with the autobenefactive in the SC + \( kʊnɣ \) ‘also’ |
| concessive | Polar interrogative \( ci \) |

9. In this table, and all the following charts, converbial forms are indicated in bold.
Table 8. (continued)

<table>
<thead>
<tr>
<th>Clause linking type</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counterfactual</td>
<td>Verb with reduplicated first syllable in the protasis + linker <em>nr</em></td>
</tr>
<tr>
<td></td>
<td>Verb in past imperfective in the apodosis</td>
</tr>
<tr>
<td>Hypothetical</td>
<td>Verb in irrealis in the apodosis</td>
</tr>
</tbody>
</table>

3.1 Temporal succession

Temporal succession is a type of clause linking where the temporal sequence in which the events took place is directly reflected by the order of the clauses describing them.

This meaning can be expressed by simple parataxis as in (28). This construction is rare, and also attested with the Elaboration linking (5.2). It is formally similar to a serial verb construction (such constructions occur in Manner linkings, see (7)).

(28) \( tce \ nuu \ tu-tuu-\text{loc} \quad zo \quad q^e \ c'uu-p'uut-nu \)
\( \text{lnk dem ipfv-conv:imm-come.out emph lnk ipfv-take.out-pl} \)
\( c'u'-\text{de-nu} \quad \text{cti.} \)
\( \text{ipfv-throw.away-pl be.affirmative:fact} \)
As soon as it has grown, people unroot it and throw it away. (ciurngo, 34)

With parataxis, when the two clauses share the same verb, the first can be elided as in (29).

(29) \( tce \ m'v-ky-p'aw \quad nuu \ cuurtum, \)
\( \text{lnk neg-nmlz:P-hack dem non-hacked.firewood} \)
\( nuu-kv-p'aw \quad nuu \ supa \quad rmi \quad tce, \)
\( \text{pfv-nmlz:P-hack dem hacked.firewood be.called:fact lnk} \)
The firewood that is not hacked is called 'non-hacked firewood', and the one that has been hacked is called 'hacked firewood'. (Burden10–1)

The most common way to express temporal succession is the linkers *tce* and *q*e 'then' (and their variants *tcendvre* and *q'endvre*). *tce* and *tcendvre* are by far the most common words in Japhug narratives and conversations, and are often repeated between clauses, as in (30).

(30) \( zuwuwzviri \ tce \ tce \ tu-zba \quad tce \ uu-ci \)
progressively \( \text{lnk lnk ipfv-be.dry lnk 3sg.poss-water} \)
\( nuu-me \quad nuu-nyu \quad tce \ uu-ci \quad nuu-me \quad zo \)
\( \text{ipfv-not.exist testim-be lnk 3sg.poss-water pfv-not.exist emph} \)
there is some evidence of a subordinating relation between the first and the last clause in this construction. When several clauses are in a periphrastic tense (see section 2.1.3) combining the imperfective form of the verb with the auxiliary *puu-ŋu* *pst.ipfv-be*, only the last one (*tu-ti-nu* *ipfv-say-pl* ‘they say’) receives the auxiliary, as in (31). In view of such data, it is legitimate to consider the last clause (the only one with full TAM marking) to be the main clause, and all previous ones to be subordinate. Notice that there is no constraint in this construction on coreference between the core arguments of the final clause and those of the previous clauses.

(31) *kucungwu  tce [βlama ku-fse  nu  ku  numu]
  in.former.times  LNK lama  NMLZ:S/A-be.like  DEM erg  DEM
  ky-kv-mtsuŋ uy-stu  nu  tcu  tu-tcvrt.]
  pfv-nmlz:P-bite  3sg.poss-place  DEM loc  ipfv-take.out
  [tuc-ci  uy-ngu  pjuu-yyle]  tce,  kʰuzypu
  indef.poss-water  3sg-inside  ipfv-soak  LNK  lnk
  kuu-fsu-fse  zo  tu-ti-nu  pui-ŋu
  NMLZ:S/A-be.like  emph  ipfv-say-pl  past.ipfv-be

In former times, lamas would take out (the rabies) from the place that had been bitten, soak it in water, and it looked like a little puppy, people used to say. (Rabies, 13)

The linker *qʰe* is ten times rarer than *tce* in our corpus. It is never repeated, but the combination *qʰe tce* is also attested (32).

(32) *uzo pjuu-sat-nu  qʰe  tce  uu-ndʒi  nu  pjuu-qav-nu*
  3sg  ipfv-kill-pl  lnk  lnk  3sg.poss-skin  dem  ipfv-skin-pl
  People kill it and then skin it. (*spønrvm*, 107)

The linker *tce*, unlike *qʰe*, does not necessarily imply that the events of the two clauses are in succession: it can be used in Unordered Addition linking (5.1). Moreover, *tce* appears in sentences like (33) whose meaning is intermediate between a pure temporal and a conditional construction.¹⁰

¹⁰ Note that the verb *me* ‘not exist’ has two perfective forms, *nuu-me* ‘it does not exist anymore’ as in (30) and the form *tv-me* ‘in cases when there is no’ illustrated by example (33) that only appears in clause linkings.
he handle of the earth clod breaker, when/if there is no oak wood, people can also make it using the xcvj wood (xcvj, 44).

The linker tce, while etymologically related to the locative tcu (with a fossilized locative *-j suffix lost in Japhug, proto-Rgyalrong *tco-j), is commonly used as a topicalizer. A similar polyfunctionality between linker and topic marker has been reported in various languages, in particular Oceanic (see Bril 2010b).

3.2 Relative time

Relative time in Japhug is expressed by means of postpositions, relator nouns (which can also serve to mark noun phrases) on the subordinate clause, which is always placed before the main clause. There are also a few constructions of this type where the subordinate clause has a verb in converbial form.

3.2.1 Length of time

With the verb tsu ‘to pass, to spend (a certain amount of time)’ in the perfective, simple succession of clauses can be used to indicate the length of a period of time during which the state resulting from the event depicted by the preceding perfective sentence has lasted. The first sentence can be either topicalized with the distal demonstrative nɯ as in (34), left unmarked as in (35) or separated by a linker like tce. The clause containing tsu includes a nominal indicating the time period.

(34) numu tv-wyrum nɯ tu-sngi nɯ tu-sngi jamar tv-tsu tce, […]
    dem pfv-be.white dem one-day two-day about pfv-pass lnk ...
    tce numu tu-zga nɯ-nɯ.
    lnk dem pfv-be.ripe testim-be
Once one or two days have passed after it turned white, it ripens. (Pimples, 124)

(35) iзо kv-amuʃe-j kumjy-xpa tv-tsu
we pfv-know.each.other-1pl five-year pfv-pass
We have known each other for five years. (elicitation)

The clause containing tsu normally occurs after the one depicting the event indicating the starting point of the period, but it is possible to reverse the order using the focal clause linker ma.
The auxiliary verb *pa* ‘do’ can also be used instead of *tsu* ‘to pass’, as in example (36).

(36) **syndzuunɔamu c’ondyre tcizo ni kv-amufse-t-ci ny**
Sangndzin.Lhamo COMIT 1DU DU PFV-know.each.other-1DU LNK
jinde kuβdsqi uu-ro to-pa
now forty 3SG.PESS-excess EVD-do
Sangndzin Lhamo and I have known each other for more than forty years.
(Friends, 2–3)

### 3.2.2 Succession

There are three ways of expressing succession in Japhug, either by using possessed relator nouns, a postposition or by means of the converb of immediate succession.

The possessed relator noun *uqʰu* ‘after’ can be postposed to the subordinate clause to express succession between the event depicted in the subordinate clause and that of the main clause. The verb in the subordinate clause has to be in a finite form. In most examples it is in the perfective of evidential forms, but there are no restrictions on its TAM marking and examples in the imperfective are also found (sentence (37)). The locative marker *ri* can optionally be added after these nouns as in example (38). The noun *uqʰu* also has a locative meaning ‘behind’ when used preverbally or following a noun phrase relating to a place.

(37) **[c’u-wy-ta] uqʰu tce, ky-ta t’u-jy tce**
ipfv-inv-weave 3SG.Pess-after LNK INF-weave PFV-finish LNK
tcendyre li nu-wy-χtçi tce li pjú-wy-xtu ra.
LNK again ipfv-inv-wash LNK again ipfv-inv-thrush need:FACT
After one has woven it, when the weaving is finished, one has to wash it and thrush it again. (Gunny bag, 10)

(38) **[smuntsuwy nunumu ty-lox] uqʰu tsa ri tce**
Pleiades DEM PFV-come.out 3SG.Pess-after a.
little LOC LNK
tce, qandže tu-lox ᵃnu.
LNK earthworm PFV-come.out be:FACT
The (constellation of the) earthworm appears a little after the Pleiades have come out. (Pleiades, 23)

Second, the possessed noun *uqʰoru* ‘after’, like *uqʰu*, can express succession between two clauses. The verb of the subordinate clause is in the perfective (39) or in the evidential.

(39) **[tuumu ka-lst] uqʰoru nu u tu.**
sky PFV:3→3-auxiliary 3SG.Pess-after DEM exist:FACT
It is found after it has rained. (*zdumqε*, 73)
Third, *uu-ndo* ‘internal side of a field (the one towards the river)’ can also express succession and has a temporal meaning ‘in the end’ in sentences like (40).

(40)  
\[
\begin{align*}
\text{wzo } \text{ungu} & \quad \text{\textit{jvzn}y } \text{ta\textit{n}do } \quad \text{\textit{k}u-tso} \\
\text{3sg in.the.beginning while instruction nmlz:S/A-understand} \\
ci & \quad \text{pjy-\textit{\textmu}} \quad \text{ri, } \quad \text{\textit{uu-ndo} } \quad \text{\textit{tce ta\textit{n}do } \quad \text{\textit{m}u-\textit{\textmu}-tso}} \\
\text{INDEF EVD.IPfv-be LNK 3SG.POSS-side LNK instruction NEG-EVD-UNDERSTAND} \\
\text{In the beginning, he was an obedient (child), but in the end he became naughty. (elicitation)}
\end{align*}
\]

An alternative construction used to express succession is the postposition *\textit{jvzn}y* ‘at the time when’ which indicates a bounded period of time after the reference point corresponding to the event described in the subordinate clause, as in (41).

(41)  
\[
\begin{align*}
\text{\textit{\textl{\textmu}r\textl{\textmu}-\textl{\textmu}}-\textl{\textmu}ntcx} & \quad \text{\textit{jvzn}y } \text{n\textl{\textmu}-xtci} \quad \text{\textit{l}a\textl{\textmu}ma} \quad \text{n\textl{\textmu}} \\
\text{PFV-come.out while TESTIM-be.small apart.from.the.fact.that DEM} \\
k\text{l\textl{\textmu}-fse} & \quad \text{n\textl{\textmu}-n\textl{\textmu}-n\textl{\textmu}-\textl{\textmu} q\'e} \\
\text{nmlz:S/A-be.like TESTIM-AUTO-be LNK} \\
\text{Apart from the fact that it is small (during the period after) it has come out, it is (already) like that (it has a round shape). (zw\textl{\textmu}\textl{\textmu}q\textl{\textmu}y\textl{\textmu}zv\textl{\textmu}y\textl{\textmu}, 19)}
\end{align*}
\]

To express an unbounded length of time following the reference point (valid up to the present time, unlike in the case of *\textit{jvzn}y*), the postposition *\textit{c}a\textl{\textmu}p\textl{\textmu}ci* ‘since, henceforth’\(^{11}\) can be used instead, and optionally followed by the emphatic linker *zo* and the linkers *tce* or *q\'e*. This usage, although possible, is not attested in our corpus.\(^{12}\)

(42)  
\[
\begin{align*}
\text{\textit{\textl{\textmu}r\textl{\textmu}-\textl{\textmu}}-\textl{\textmu}ntcx} & \quad \text{\textit{c}a\textl{\textmu}p\textl{\textmu}ci } \text{zo tce tce } \text{\textit{\textk\textl{\textmu}}-\textl{\textmu}ntct\textl{\textmu}\textl{\textmu}m } \text{\textit{\textp\textl{\textmu}m}} \text{\textl{\textmu}\textl{\textmu}m} \\
\text{3SG PFV-go[II] since EMPH LNK LNK INF-hear PST.IPfv-NOT.EXIST} \\
\text{We haven’t heard of him since he left. (elicited)}
\end{align*}
\]

### 3.2.3 Precedence

The only way to express neutral temporal precedence in Japhug is a construction with the postposition *\textit{c}u\textl{\textmu}ngu* ‘before’.\(^{13}\) The verb of the subordinate clause must be in the imperfective, regardless of whether the verb of the main clause is in the imperfective (43 and 44) or in the perfective (45).

11. This postposition must be borrowed from Tibetan, since the rhyme -aŋ does not occur in the native non-ideophonic vocabulary, but its exact source is unclear; the second syllable is probably related to the first syllable of Tibetan prin.te\textl{\textmu}d ‘from … on’.

12. All examples of *\textit{c}a\textl{\textmu}p\textl{\textmu}ci* ‘since’ in our corpus occur after noun phrases.

13. This postposition, used with a noun phrase, only has a temporal meaning unlike *\textit{\textl{\textu}-\textl{\textmu}q\textl{\textmu}u* ‘after’
Clause linking in Japhug

(43) [pvjk’u pjuu-si] **cuungu** zo **wu-ca** **wu-ndza**
already IPFV-die before EMPH 3SG.POSS-flesh 3SG-BARE.INF:eat
tu-za-nu **cti**.
IPFV-start-PL be:ASSERTIVE:FACT
They start eating its flesh before it dies. (Lion, 44)

(44) [lyɔzɔŋ ju-nu-yi] **cuungu** stummu **βzu-j** ra
Lobzang IPFV-come.home before marriage make:FACT-1PL need:FACT
We have to organize the marriage before Lobzang comes back. (Lobzang, 32)

(45) [nuu-si] **cuungu** puu-nnu-NGVT-ndzi
IPFV-die before PFV-AUTO-ANTICAUS:separate-DU
They had divorced before she died. (Siblings, 325)

The postposition **cuungu** ‘before’ can be combined with **jvznY** to express a time period ending with the point of reference in the subordinate clause.

(46) *tuu-kuu-myum* **tu-ze** **cuungu** **jvznY**
genr.poss-nmlz.S/A-hurt IPFV-start[III] before while
tu-wy-z-nuṣmym ra
IPFV-INV-CAUS-treat have:TO:FACT
It is necessary to have someone treat it before one’s disease starts. (elicited)

For expressing an event occurring during a period of time with no explicit beginning until the point of reference, the postposition **mvctɔ** ‘until’ is employed, as in (47) and (48). The subordinate clause is almost always in the perfective.

(47) **βzuu nuu ku a-mv-ky-ku-ntswey ra ma**
mouse dem erg irr-NEG-IPFV-GENR:S/P-bite need:FACT LNK
ŋotcu ka-ndo **q’ê**, [muu-nnu-spit] **mvctɔ**
where PFV:3→3-grab LNK NEG-IPFV-be.torn.apart until
nuu-te **mv-ngryl**.
IPFV:put[III] NEG:be.usually.the.case:FACT
One should not be bitten by a mouse, because it does not let go of the place that it has bitten until (the flesh) has been torn apart. (Mouse, 182)

(48) **kuurčsqi uu-ro** **tuuka mu-t’u-azyuut-ndzi** **mvctɔ**
eighty 3SG.POSS-leftover each NEG-IPFV-reach-DU until
muu-nnu-si-ndzi **nv**
NEG-IPFV-die-DU SFP
They did not die before they had reached eighty (years old). (siblings, 38)

In most examples, **mvctɔ** ‘until’ is used with the subordinate clause and the main clause in a negative form as in (47) and (48). We do find examples of **mvctɔ** with
non-negative subordinate clauses (49) or non-negative main clauses (50 and 51), but one of the two has to be with a verb in the negative form.

(49) \[
\begin{align*}
\text{məøt} & \quad \text{tu-w-nt} & \quad \text{ta-z} & \quad \text{myctša} \\
3\text{sg.poss-fruit} & \quad \text{nmlz:action-throw} & \quad \text{pfv:3-begin until} & \quad \text{mù-suqši-} & \quad \text{nnu} \\
\text{neg-recognize:fact-pl} & \\
\end{align*}
\]
They are not able to recognize it before it has born fruit. (Oat, 19)

(50) \[
\begin{align*}
\text{mu-u-fso} & \quad \text{myctša} & \quad \text{puu-rŋgu-a} & \quad \text{puu-ra} \\
\text{neg-pfv-be.clear until} & \quad \text{pst.ipfv-lie-1sg} & \quad \text{pst.ipfv-need} \\
\text{I had to (remain) lying until the day broke.} & \quad \text{(Lhazgron, 37)} \\
\end{align*}
\]

(51) \[
\begin{align*}
\text{mu-ṭu-wx̄t} & \quad \text{myctša} & \quad \text{tv-} & \quad \text{nu} & \quad \text{k} & \quad \text{u-uu} \\
\text{neg-pfv-big until} & \quad \text{indef.poss-mother} & \quad \text{dem erg} & \quad \text{3sg.poss-litter} & \quad \text{ra, u-} & \quad \text{u-} & \quad \text{u-sy-me} & \quad \text{ri} \\
\text{pl 3sg.poss-male} & \quad \text{dem 3sg-nmlz:oblique-not.exist loc} & \quad \text{ju-tsum} & \quad \text{tce,} & \quad \text{ipfv-take.away lnk} \\
\text{Until they grow big, the mother takes her litter away to a place where the male is not found.} & \quad \text{(Lion, 75)} \\
\end{align*}
\]

In the subordinate clause, the polarity is actually semantically neutralized; it is possible to add or remove the negative prefix without influencing the truth value. For instance, the sentence (52) is equivalent to (50).

(52) \[
\begin{align*}
\text{ly-fso} & \quad \text{myctša} & \quad \text{puu-rŋgu-a} & \quad \text{puu-ra} \\
\text{pfv-be.clear until} & \quad \text{pst.ipfv-lie-1sg} & \quad \text{pst.ipfv-need} \\
\text{I had to (remain) lying until the day broke.} & \quad \text{(elicited)} \\
\text{(Lion, 75)} \\
\end{align*}
\]

It is possible that pragmatic differences exist between the two constructions, but we defer this topic to future studies.

3.2.4 Immediate succession

The perfective converb *tuw-*_, whose morphology is described in Section 2.1.4, is the main way to express immediate temporal succession (‘as soon as’, ‘just after’) in Japhug. The verb of the focal clause is either in the factual (example (53, 54)) or imperfective forms (55, 56); other TAM categories in the focal clause (in particular perfective or imperative) are not accepted by native speakers.

This non-finite verb form is devoid of person or transitivity marking, but the subordinate clause can include overt arguments, including A (marked with the ergative as in (53)) or S/P (example (54)).
There is often coreference between the arguments of the subordinate clause and those of the main one: A and P in (53), Š in (54) and A of the subordinate clause to the Š of the main clause in (55). This is however not an absolute syntactic constraint, as we also find examples where no coreference occurs (56).

The subordinate clause in this construction is marked by either linkers such as ṇv (54), tce or q’s (55 and 56) or the marker zo (53 and 56) which emphasizes the meaning of immediate temporal succession between the events described by the subordinate and the main clauses.

(53) [turme ra kuu pjuu-tu-mto] zo sat-nu cti.
    people pl erg ipfv-conv:imm-see emph kill:fact-pl be.assertive:fact
    People kill it as soon as they see it. (Dhole, 15)

(54) [u-pu jnu-tu-sab] ny kumpytcwx jamar
    3sg.poss-child ipfv-conv:imm-hatch.out lnk sparrow about ma me.
    apart.from not.exist:fact
    Just after its chick has hatched out, it is just (as big as) a sparrow. (Tetras, 87)

(55) [pjuu-tu-qlut] q’e, mdox q’e, c’wβ zo
    ipfv-conv:imm-break lnk brittle lnk ideo:I:in.pieces emph
    pjuu-nqlut
    ipfv-anticaus:break
    When one breaks (its stalk), as it is very brittle, it breaks at once into two
    pieces. (mdymrm, 37)

(56) [lu-tu-fsox] zo q’e tuu-ryma
    ipfv-begin[III] testim-be
    It starts working as soon as the day breaks. (Bee, 65)

This construction can also be used with first or second person referents as in (57).

(57) [t’amakh’a pjuu-tu-sko] tce tu-oqcq’e-a ŋu
    tobacco ipfv-conv:imm-smoke lnk ipfv-cough-1sg be:fact
    I cough as soon as I smoke tobacco. (elicited)

Another way to express the same meaning is to use the postposition cuumuma ‘just after’ (optionally followed by the locative ri or the emphatic linker zo) after the subordinate clause with the verb in the perfective, as in (58).
When people kill its mate, just after it has died, it weeps a lot and goes everywhere (to look for it), but before three days have passed, it has already found another one. (Chough, 79–81)

The semantic proximity between the two constructions can be illustrated by the fact that in some cases when speakers hesitate as in (59), they can switch between the two.

(59) \[\text{tuurgi-pa}tsa \, \text{nu} \, \text{tv-sci} \] \text{cumumua, \, nuu \, pa}rtsa squirrel \text{dem pfv-be-born immediately after dem piglet ra \, } \text{che} \text{tu,} \text{che nuu \, nunu pfv-conv:imm-be-born lnk lnk lnk dem dem ku-nya } \text{tu,} \text{ku-wyrum nmlz:S/A-be-black completely exist:fact nmlz:S/A-be-white} \\

When a squirrel has just been born… when piglets have just been born, some are completely black, others are completely white. (Black and white fur, 216–7)

The postposition \text{kömuz} ‘only then, only after’ also expresses immediate succession, but its meaning is intermediate between a purely temporal and a condition linking. It implies that the event of the focal clause not only occurs immediately after that of the subordinate clause, but also that the latter is a condition for it to happen, as in example (60).\(^{14}\)

(60) \text{tceri ku-ßraw-nu, \, [u-mi \, ra ku-xtew-nu]} \text{kömuz lnk pfv-tie.up-pl 3sg.poss-foot pl pfv-attach-pl only.after ty-lu \text{puu-tcvt} \text{nuu-ra indef.poss-milk pfv-take.out testim-have.to} \\
It is necessary to milk (the female yak) only after people have tied it up and attached its feet. (Yak, 19)

\(^{14}\) As a postposition, \text{kömuz} also occurs after noun phrases expressing a temporal duration.
More commonly, the phrase \( nɯ kórmuz ny \) and only after that’ is used in texts for expressing this meaning as in (61).

(61) \( nɯ \) \( w-muntɔn \) \( nɯ \) \( pu-ŋgra \) \( kórmuz ny \)
\( \text{DEM 3SG.POSS-flower DEM PFV-ANTICAUS:make.fall only.after LNK} \)
\( wu-jwàk \) \( nɯ-ĺyt \) \( tce \) \( nɯ \) \( kórmuz ny \)
\( 3SG.POSS-leaf IPFV-throw LNK DEM only.after 3SG.POSS-fruit \)
\( wu-mat \) \( ku-tsʰox \( \etau \).
\( \text{IPFV-bear be:FACT} \)
It grows leaves only after its flower has fallen, and only then does it bear fruits. (Apricot, 9–10)

3.2.5 Immediate precedence
There are four constructions expressing immediate precedence between two events in Japhug.

First, the linker \( tvkʰa \) ‘about to’ is used in combination with a verb in the factual form in the subordinate clause, as in (62) and (63). It is generally followed by the linkers \( tce \) and \( q'e \).

(62) \( ñamu \) \( ku \) \[ \text{[yi-ndzi]} \] \( tvkʰa \) \( tce \) \( puwu \) \( u-čki \) \( uzo \)
Lhamo ERG come:FACT-DU about.to LNK donkey 3SG-DAT 3SG
\( ku \) \( ta-tuut \) \( nɯ \) \( to-suβjut \) \( tce, \)
ERG PFV:3→3-say[II] DEM EVD-remember LNK
Lhamo remembered what she had said to her donkey as they were about to depart (to come here). (Raven1, 64–5)

(63) \[ \text{[ambor]} \] \( tvkʰa \) \( tce \) \( tce \) \( nɯ-mu-a \)
\( \text{burst:FACT about.to LNK LNK TESTIM-be.afraid-1SG LNK LNK} \)
\( a-jay \) \( nɯ-munmu \) \( nɯ-cti \)
\( q'e, \)
1SG.POSS-hand IPFV-MOVE TESTIM-be:ASSERTIVE LNK
(When I was aiming), as (the gun) was about to burst, I was afraid and my hand moved. (Guns, 135)

Second, a verb in factual form combined with the copula in the past imperfective or evidential imperfective, as in (64), also expresses the meaning ‘about to’.

(64) \[ \text{[zatsa tsumu qanuu]} \] \( pʃy-\etau \), \( tcei nɯ \) \( tce \) \( puwu \)
soon sky be:dark:FACT EVD.IPFV-be but DEM LOC LNK donkey
\( nɯ \) \( tu-tuupu \) \( kʰa \) \( u÷pʰaʁ \) \( ntsi \)
DEM one-family house 3SG.POSS-side one.of.a.pair
\( puu-kłu-mbut \) \( u÷pʰaʁ \) \( ntsi \)
PFV-NMLZ:S/A-collapse 3SG.POSS-side one.of.a.pair
It was about to be dark, but the donkey stayed in front of a house, one half of which had collapsed and the other half was good. (Raven1, 52–3)

This construction, unlike the two previous ones, can have a frustrative meaning, expressing an action in its initial stage that eventually fails (65).

(65) \[tce \ yu-tcʰ\underline{u}] \ puu-\underline{n}u \ ri, \ ci \ nu

Three-turn almost three-turn CONATIVE-EVD-go EMPH LNK DEM

As he was about to finish the third turn, he could not (run) anymore. (The prince, 109–110)

Fourth, the locative \(tcu\) following a verb in the perfective indicates almost exact simultaneity, as in (67).

(67) \[pri \ nu \ ku \ nunu \ qormbu \ nuu \ u-\underline{lo}k \ nuu \ beg \ DEM \ erg \ DEM \ anthill \ DEM \ 3SG.POSS-nest \ DEM \ tʰ-a-slo\underline{k}] \ nuu \ tce, \ uu-\underline{my}k \ uu-\underline{n}gw \ ku-\underline{ce}, \

When bears root out ant-hills, they go inside their eyes and urinate in them. (Bear, 26)

3.2.6 Simultaneity

There are four main constructions expressing simultaneity between the events of two clauses. First, we find cases whereby the subordinate clause is a relative clause with the possessed noun \(uu-\underline{ray} \) ‘time’ in a locative form as its head noun. Second,
the subordinate clause is marked with the relator nouns \( u\text{-}k^*\text{-}uk^*a \) ‘while’ and \( u\text{-}ju\text{ua} \) ‘while, along with’. Third, the verb of the subordinate clause is in a converbial form. Fourth, to indicate an exact moment, one can combine the perfective with the locative \( t\text{cu} \).

The construction involving \( u\text{-}ray \) ‘time’ is formally a non-nominalized prenominal relative clause. The noun \( u\text{-}ray \) ‘time’ is the head noun, and bears a locative marker (\( r\text{i} \), \( z\text{uu} \) or \( n\text{uu} \ \( t\text{cu} \)). This construction corresponds to English ‘In the time when…’. It is generally used to indicate a long time period.

(68) \[ n\text{-}cy\text{a} \ \ x\text{tc}\text{i} \] \( u\text{-}ray \) \( r\text{i} \ \ n\text{uu} \)
\( 2\text{sg.poss-tooth small:fact 3sg.poss-time loc dem} \)
\( tu\text{-}w\text{y}-n\text{vzd}a \ \ n\text{u} \ \ r\text{i} \)
\( 2\text{-inv-accompany be.with:fact but} \)
While you are young, she will be with you. (Slobdpon2, 60)

Like \( u\text{-}ray \) in the previous construction, the marker \( u\text{-}k^*\text{-}uk^*a \) ‘while’ is used to express that the event of the focal clause occurs during (or that its entire duration is embedded within) that of the subordinate clause. This construction is much more common that the previous one, and does not imply a long time period. The verbs of both clauses are finite, and need to be in the imperfective, as in (69) and (70). There are no coreference restrictions on the arguments of the clauses.

(69) \( tc\text{en}d\text{y}\text{r}e \ [t\text{u}-n\text{us}m\text{yn}] \ u\text{-}k^*\text{-}uk^*a \ \ tu\text{-}r\text{yma-nuu} \).
\( \text{lnk ipfv-treat 3sg-the.same.time ipfv-work-pl} \)
(The lepers) worked (there) while he treated them. (Leprosy, 61)

(70) \( n\text{mu}u \ [j\text{u}\text{-}r\text{ju}\text{y}] \ u\text{-}k^*\text{-}uk^*a \ \ u\text{se} \ \ ku\text{-}ts\text{\text{'}}i \)
\( \text{dem ipfv-run 3sg-the.same.time 3sg.poss-blood ipfv-drink} \)
\( n\text{ju}-c\text{ti} \).
\( \text{testim-be:assertion} \)
It drinks its blood while (its prey is still) running. (Lion, 50)

The marker \( u\text{-}ju\text{ua} \) ‘while, along’ differs from \( u\text{-}k^*\text{-}uk^*a \) in that it implies a gradual change of state in both events occurring simultaneously and progressively. The verb of the subordinate clause is generally in the perfective (though examples with imperfective forms are also attested), while that of the focal clause can be in any TAM form:

(71) \[ u\text{zo} \ \ t\text{v}\text{-}w\text{x}\text{ti} \] \( u\text{-}ju\text{ua} \ \ t\text{ce} \ \ u\text{-}j\text{wa}b \ \ n\text{mu}u \)
\( 3\text{sg} \ \ \text{ipfv-be.big 3sg-along lnk 3sg.poss-leaf dem} \)
\( n\text{nu}\text{-}n\text{nu}-n\text{du}\text{b} \ \ z\text{o} \ \ n\text{nu}-n\text{u} \).
\( \text{increase~ipfv-be.tiny emph testim-be} \)
As it grows big, its leaves become more and more tiny. (Poplar, 18)
As the day was breaking, looking down, he (progressively realized that) what he was riding was a tiger. (Tiger, 20)

The gerund converb *st-*s, generally followed by the marker *zo* (see (2.1.4) for the morphological structure of this non-finite form) semantically overlaps with the *uu*-kʰu*kʰa* ‘while’ construction, as illustrated by this pair of sentences which follow each other within the same text:

(73) [nuu-nuqambumbjom] *uu*-kʰu*kʰa*  ri  ju-βji  tce
ipfv-fly  3sg-the.same.time loc ipfv-catch lnk
tu-ndze  ngrvl.
3sg-the.same.time loc ipfv-catch emph
ipfv-eat[III] be.usually.the.case:fact gerund-fly
ku-ndm  tce,  pju-sat  ngrvl  ipfv-take lnk ipfv-kill be.usually.the.case:fact
It catches them while it flies and eats them, it catches them while flying and kills them. (The buzzard1, 6–7)

It differs syntactically in that the gerund converb requires identity between the S/A of the subordinate and the main clause. (74) is an example where the A and P of the SC are coreferent with those of the FC.

(74) nunu  nuu-nuq-me  ri  tce  nuu  kuimentary  ku-χse
3sg-the.same.time loc ipfv-apply-fear[III] lnk lnk also ipfv-feed[III]  
ku-ra,  tce  [syu-nuqumu-ymu]  zo  ku-χse  nuu-ra
3sg-poss-tear lnk gerund-apply-fear emph ipfv-feed[III] testim-have.to
Although (the ‘stupid bird’) fears (the little buzzard), it still has to feed it, and has to feed it while being afraid of it. (The buzzard2, 104)

The gerund can be optionally followed by the ergative marker *kuu* as in (75).

(75) tvzi  nunu  kuu  [uu-qom  sy-hu-lo]  kuu  ny-mya  tce,  
young.lady dem  erg 3sg.poss-tear gerund-come.out erg evd-take lnk
The young lady took it, while her tears were flowing. (Die Gänsemagd, adaptation, 29)

Apart from these four constructions, simultaneity can be expressed by simple parataxis (with optional addition of the marker *zo*) of two clauses in the imperfective, as in the first clause indicated between square brackets in (76). This example is useful for the parallelism it offers with the *uu*-kʰu*kʰa* ‘while’ construction.
3.3 Conditional

Conditional constructions indicate that the event in the main clause (apodosis) takes place if the condition depicted in the subordinate clause (protasis) is fulfilled. Depending on whether the protasis is a fact or a hypothetical situation, several types of conditionals can be distinguished.

We distinguish in this work four main types of conditional constructions: recurrent implication, real, counterfactual and hypothetical. As in many languages (Dixon 2009: 14), there is some degree of overlap between temporal and conditional clause linking in Japhug in the case of the first two subtypes.

3.3.1 Iterative coincidence

The construction expressing iterative coincidence or recurrent implication is semantically intermediate between temporal and conditional clause linking. It describes that whenever the event depicted in the protasis is fulfilled, the one of the apodosis necessarily always occurs, and that this has taken place several times in the past. It can be generally translated as ‘each time A then B’.

In this construction, we find a reduplicated verb in the perfective in the protasis, and a verb in the imperfective followed by the auxiliary ŋu ‘be’ in the apodosis. The protasis generally ends with the emphatic linker zo or the conditional linker ŋu, but parataxis is also possible.

(77) [cʰa cwi~c-ky-tsʰi-t-a] (zo)
alcohol cond~transloc-pfv-drink-pst:tr-1sg emph
lu-βzi-a ŋu
ipfv-be.drunk-1sg be:fact
Each time I drink alcohol, I get intoxicated. (elicited)

15. A semantically similar construction was described by Valentine (2009: 204)
Each time it rains, snails come out. (elicited)

A similar meaning can be expressed with non-reduplicated perfective in the protasis, as in (79).

(79) $t\text{ce} \ [l-y-zo-nu]\kun\text{n}t\text{tu}\text{turca}$

$\text{lnk pfv:upstream-land-pl also together}$

$lu-zo-nu, \ [t'\text{u-nuqambumbjom-nu}]\kun\text{n}t\text{tu}\text{turca}$

$\text{ipfv:upstream-land-pl pfv:downstream-fly-pl also together}$

$c'\text{u-nuqambumbjom-nu}$

$\text{ipfv:downstream-fly-pl}$

Whenever they perch (on something) they perch together, whenever they fly down, they fly together. (Pigeon, 9)

### 3.3.2 Real

Real conditionals express that the event described in the apodosis occurs whenever the condition expressed in the protasis is fulfilled, but unlike the recurrent implication type described above, it does not imply that the events in question have already taken place several times in the past.

For this type of conditionals, the protasis can be either in the irrealis (80), in any other TAM form but the interrogative prefix $u\text{-}$ (83) or with reduplication of the first syllable (81).

The linker $n\nu$ is more generally used in such type of conditionals (81, 85, 83), though $t\text{ce}$ is also found.

Some real conditionals (implicative conditionals) are used to express general truths, as in (80), (81) or (82); these constructions, as with the recurrent implication conditionals presented above, are semantically very close to temporal clause chaining.

(80) $[a-nu-pat-nu] \ t\text{ce} \ tu-te'a n\nu \ tuu-te'a \ n\nu, <\text{dianxian}>$

$\text{irr-pfv-be.tired-pl lnk one-pair lnk one-pair dem electric.wire}$

$u-tak, \ q'e \ suku \ uu-tak \ n\nu \ t\nuu \ tuu-nuu-nu \ t\text{ce}$,

$3\text{sg.poss-on lnk treetop 3sg.poss-on dem loc ipfv-rest-pl lnk}$

If/Whenever (the swallows) are tired, they rest in pairs on electric wires or on trees. (Swallows 55)

(81) $m\nu-nu\text{yu\text{-}mto} \ t\text{ce} \ [wuma zo}$

$\text{neg-facilitative-see:fact lnk very emph}$
It is not easy to spot, and unless one is not very knowledgeable already, one will not see it. (Onions, 7)

As long as one has not touched it, it remains there. (Wasps, 44)

An interrogative imperfective form in the protasis followed by an imperfective one in the apodosis can also be used to express a mild order or suggestion (83, 84).

This conditional construction is used to build linker-like phrases such as *nû mab nû* ‘otherwise’ (see Section 4.3) and *tɕʰi mab nû* ‘at least’ which can be analyzed as in (87).

The clause *tɕʰi mab nû* commonly occurs before another clause ending with the linker *tsab* ‘at least’, as in (88).
Please, at least let us go to tell my parents, otherwise they would be worried about me. (The fox, 70–1)

3.3.3 Alternative concessive conditional

To express the meaning that an outcome will occur whether or not the condition in the protasis is fulfilled, there is a specific construction in Japhug, in which we find a pair of conditional clauses. In the first pair, the protasis is in an affirmative form, while in the second it is in a negative form. The verb (or more generally, the copula) in the protasis is in the past imperfective with the autobenefactive/spontaneous prefix nuu-, which is often geminated. Unlike other conditionals, the verb of the protasis is not reduplicated. It receives past imperfective ‘down’ marking puu- regardless of whether it is stative or dynamic, as shown by the examples (89) and (90).

(89) tce [tu-sum puu-a<nuu>ri] ny ju-ku-ce,
    LNK INDEF.Poss-mind pfv-<auto>go[II] LNK IPFV-GENR:S/P-go
    [muu-puu-a<nuu>ri] ny ju-ku-ce puu-ra
    NEG-pfv-<auto>go[II] LNK IPFV-GENR:S/P-go pst.ipfv-have.to
Whether one liked it or not, one had to go. (Relatives, 212)

The verb nyla ‘agree’ normally receives the prefix tv- ‘up’, but when used in the protasis of such constructions, it is marked with the puu- ‘down’ prefix of past imperfective (in (90) in the direct 3→3 form pa-).

(90) [pa-n-nyla] ny ce-a,
pst.ipfv:3→3-auto-agree LNK IPFV:go-1SG
[muu-paa-n-nyla] ny ce-a ra
NEG-pst.ipfv:3→3-auto-agree LNK IPFV:go-1SG have.to:fact
I will go whether he agrees or not. (elicited)

An alternative construction is to have a complex predicate in the protasis with the main verb in a finite form followed by the copula in the past imperfective with the nuu- prefix (puu-nnu-ŋu with the affirmative copula and puu-nuu-ʁa with the negative one). For instance, (90) can be reformulated as (91) with the main verb ta-nyla in the perfective without autobenefactive-spontaneous prefix.

(91) ta-nyla puu-nnuŋu puu-nnuraith
    pfv:3→3-agree pst.ipfv-auto-be pst.ipfv-auto-not.be
It is possible to have several protases followed by a single apodosis, as in (92).

(92) [\textit{tuu-cya puu-kuu-ngruu}] [\textit{puu-nnu-\textnu},] [\textit{puu-k\-ytsur puu-nnu-\textnu,}] [\textit{q\textprime;e}, \\
\textit{pst.\textit{ipfv-auto-be}} \textit{pfv-nmlz:S/A-crack} \textit{p\textit{st.\textit{ipfv-auto-be}} lnk} [\textit{qaju k\textit{u tu-ndze puu-nnu-\textnu,}] [\textit{n\textnu fse} \\
\textit{bug} \textit{erg ipfv-eat[III]} \textit{p\textit{st.\textit{ipfv-auto-be}} dem be:like:fact} \textit{tu-k\textit{u-m\textit{ympuu-nnu-\textnu,}] n\textnu ku w\textnu m\textnu zo n\textnu smyn.} \\
\textit{ipfv-nmlz:S/A-hurt} \textit{p\textit{st.\textit{ipfv-auto-be}} dem erg very emph heal:fact} Whether one’s tooth is broken, cracked, whether one has a decayed tooth or whether it simply hurts, he (a particular dentist) treats it very well.

(Toothache, 133)

This type of construction is related to, but different from, the complement clauses expressing an alternative between two possibilities, as in (93).

Here there is no apodosis, and the first two clauses are treated as the \textit{P argument} of the verb \textit{\textit{myxsi}}.

(93) [[\textit{nuu ra puu-nnu-\textnu}] [\textit{puu-nnu-\textit{ma}}]] \textit{\textit{myxsi ri}} \\
\textit{dem pl \textit{p\textit{st.\textit{ipfv-auto-be}}} \textit{p\textit{st.\textit{ipfv-auto-not.be genr:A:neg:know lnk}}} I don’t know whether this is true or not, (\textit{k\textprime;uli}, 60)

Another way of forming alternative concessive conditionals in Japhug is to use the polar interrogative sentence-final particle \textit{ci}, as in (94) and (95).

(94) [\textit{nuuja \textnu}] \textit{ci}, \textit{mbro \textnu ma, puu-\textit{n\textnu ndiy}} \\
cow be:fact intrg horse be:fact lnk ipfv-be:poisoned \textit{puu-ngryl} \\
testim-be.usually.the.case Whether it is a cow or a horse, they get poisoned. (bat, 19)

(95) [\textit{t\textprime;orzi k\textit{u-wxti ra}] \textit{ci}, \\
alcohol.jar nmlz:S/A-be.big have.to:fact interrg k\textit{u-x\textit{ci}} ra \textit{ci t\textprime;i yu} \\
nmlz:S/A-be.small have.to:fact interrg what gen k\textit{u-fse}, nyki, uu-ts\textit{\prime}u\textnu ya uu tu-b\textit{\textnu ze} \\
nmlz:S/A-be:like this 3sg.poss-shape dem ipfv-make[III] \textit{ra ny nun\nu k\textnu jutpa y\textnu znu} \\
have.to:fact lnk dem idea exist:sensory
Whether one needs a big jar or a small one, whatever the shape he needs to make, he has a clear idea in his heart and makes it. (Potter, 14)

3.3.4 Scalar concessive conditional

Scalar concessive conditionals express that regardless of whether or not the condition in the protasis is fulfilled, the event/situation in the apodosis will be true, as in English ‘even if’ or ‘even when’.

In Japhug, to express this meaning, it is possible to use the past imperfective in combination with the autobenefactive in the protasis as in alternative concessive conditionals, but followed by kuny ‘also, too’, as in (96).

(96) nu li uu-qa nuu-βze nuu-cti ma
    dem again 3sg.poss-foot ipfv-do[III] testim-be:affirm lnk
    [uu-muntuvo puu-nnu-tu] kuny, uu-r̃y ra
    3sg.poss-flower pst.ipfv-auto-exist also 3sg.poss-seed pl
    ky-mto mange.
    inf-see not.exist:sensory

This one also grows by its root, as even if it has flowers, (I) have never seen its seeds. (paentsa rna, 155)

Multiple protases are also attested for this construction, as in example (97).

(97) [tuu-ci puu-nnu-dyn,] [zum
    indee.poss-water pst.ipfv-auto-be.many bucket
    puu-nnu-rzi] kuny, tuu-mt̃ry
    pst.ipfv-auto-heavy also indee.poss-waist
    mnu-pa-cu-emy
    neg-pst.ipfv:3→3-caus-hurt
    (this way), even when there was a lot of water, even when the bucket was very heavy, it would not hurt one’s waist. (zgr̃i, 188)

Alternatively, we also find cases where the verb in the protasis does not receive any special morphological marking, as in (98).

(98) [cu-wu-wy-nuβlu] kuny, tu-mut bo ṣu
    ipfv-inv-burn also ipfv-be.ignited contrast:foe be:fact
    ri, uu-urvt nuu nak zo q̃e, maka
    lnk 3sg.poss-charcoal dem be.black:fact emph lnk at.all
    nuu-γvu-mpjε my-c̃a.
    ipfv-caus-be.warm[III] neg-can:fact

Even when one burns it, although it does ignite, its charcoal is black and it does not warm anything. (t̃ṽum, 8–10)
3.3.5 Counterfactual

Counterfactuals express the meaning that, had the condition in the protasis been verified (which it has not), the event in the apodosis would have occurred.

There are several constructions in Japhug to express counterfactual meaning. It is possible to use the same construction as that of real conditionals, as in (99).

(99) \[ku-ngo nuu smmmba ku
  nmlz:S/A-be.sick dem doctor erg
  muu~my-č-ta-nusmyn] ny, si cti.
  cond~neg-transloc-pfv:3→3’-treat lnk die:fact be.affirmative:fact

If the doctor had not gone to treat the patient, he would have died (elicitation).

Alternatively, there is another construction with the verb in the apodosis in the past imperfective with the prefix puu-, as in (100).

(100) \[smmn za tsu tu-ndze-a a-puu-ŋu] tce
  medicine early a.little ipfv-eat[III]-1sg irrr-pfv-be lnk
  muu-puu-ngo-a
  neg-pst:ipfv-be.sick-1sg

If I had taken my medicine earlier, I would not have gotten sick. (elicited)

While dynamic verbs do not appear in the past imperfective in independent clauses, they do in the apodosis of this counterfactual construction. This phenomenon is detectable only for verbs whose intrinsic directional prefix is not the ‘down’ direction (see Section 2.1.1). For instance, the verb rpu ‘bump into’ receives the kv- ‘toward east’ direction marker when used in meaning ‘bump one’ head’.

(101) \[ny-kʰa lv-yə-a ri, a-ku
  2sg.poss-house pfv:upstream-come[II]-1sg lnk 1sg.poss-head
  ky-nuu-rpu-t-a
  pfv-auto-bump.into-pst:tr-1sg

When I came to your house, I bumped my head. (elicitation based on real events)

Used in the apodosis of the counterfactual as in (102) however, we find the ‘down’ prefix puu- instead of kv-, indicating that this is a past imperfective, not a perfective form.

(102) \[ny-kʰa lv-yə-a ri, [a-ku
  2sg.poss-house pfv:upstream-come[II]-1sg lnk 1sg.poss-head
  pjuu-pʰaβ-a a-puu-ŋu] tce
  ipfv-lower-1sg irrr-pst:ipfv-be lnk
When I came to your house, if I had lowered my head, I would not have bumped it. (elicitation)

3.3.6 Hypothetical

Hypothetical conditionals refer to a future hypothetical situation, unlike counterfactuals which refer to a potential situation in the past which did not occur. It can also express the hypothetical nature of the causal relation between the two events. This construction differs from all other conditionals in that the verb of the apodosis is in the irrealis as in (103).

(103) \[ a-z\text{o} a-s\text{um} tçè, nuu-sruu zo ëyzu \]
\[ 1\text{sg 1sg.poss-thought lnk 3sg.poss-horn emph exist:sensory} \]
\[ çtì tçè [k\text{uu}-\text{dùu}-\text{dyn} k\text{u}] \]
\[ \text{be.affirmative:fact lnk nmlz:S/A-emph~be.many erg} \]
\[ a-k\text{y}-\text{nuutsǐ-yf-nui}] tçè [a-ty-č\text{u}-nuu] tçè, \]
\[ \text{irr-pfv-attack.together-pl lnk irr-pfv-gore-pl lnk} \]
\[ a-pu-sat-nui k\text{u} nuu-sas\text{am}-a ri nuu ra \]
\[ \text{irr-pfv-kill-pl hypothetical ipfv-think[III]-1sg lnk dem pl} \]
\[ mùj-stu-nuu \]
\[ \text{neg:testim-do.like-pl} \]
In my opinion, they have horns, I think that if they attacked together and gored the leopards, they would kill them, but they don’t do that. Instead… (Wild yak, 60–3)

Example (104) illustrates a hypothetical conditional (with both the verb in the protasis and the apodosis in the irrealis) followed by a predictive conditional.

(104) \[ [a-pu-tuu-č\text{a}] \]
\[ n\text{v}, nuu \]
\[ \text{irr-pst:ipfv-2-can lnk dem} \]
\[ a-tu-tuu-su-su-jyrv \]
\[ \text{irr-pfv:downstr-2-caus-turn.around have.to:fact otherwise} \]
\[ [nuu uu-mv-pu-tuu-č\text{a}] q\text{e} tçè azo \]
\[ \text{dem interrog-neg-pst:ipfv-2-can lnk lnk 1sg} \]
\[ m\text{v}-\text{wuy-suuy-č\text{a}-a} \]
\[ \text{neg-inv-caus-can:fact-1sg} \]
If you are strong enough, you will have to cause him to go back, otherwise if you are not able to do that, I will be unable (to retrieve the water). (Stealing the water1, 40)

It is also possible to have a non-irrealis verb in the protasis, with a reduplicated first syllable as in (105), even in the case of very speculative conjectures.
If you succeed (in becoming rich and) organizing a banquet, may it be that I will arrive there at the rear of your banquet. (Raven4, 114)

4. Consequence

In Consequence clause linkings, one clause expresses the cause and the other one its effect. However, while in some constructions the subordinate clause corresponds to the cause and the main clause to the effect, the opposite situation is also attested.

Dixon (2009: 17, 44) distinguishes three subtypes (Cause, Result and Purpose), but we collapse here the first two categories for ease of presentation. Table 9 summarizes the attested constructions.

Table 9. Consequence linking constructions

<table>
<thead>
<tr>
<th>Clause linking type</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause / result</td>
<td>SC with linker matci or ma ‘because’</td>
</tr>
<tr>
<td></td>
<td>MC with linker nindza ‘for this reason’</td>
</tr>
<tr>
<td>Purpose</td>
<td>Purposive converb in the SC</td>
</tr>
<tr>
<td></td>
<td>linker utce’uβ ‘in order to’ in the SC</td>
</tr>
<tr>
<td>Possible consequence</td>
<td>linker ma + verb in factual form in the MC</td>
</tr>
<tr>
<td></td>
<td>subordinate clause with the verb suso ‘think’ expressing the consequence</td>
</tr>
</tbody>
</table>

4.1 Cause-Result

There are two main constructions in Japhug explicitly expressing a causal relationship between two clauses.

The most common construction involves the linker matci ‘because’, which is prosodically associated with the clause expressing the cause. The placement of the
linker is the evidence for considering this clause to be subordinate and the clause expressing the result to be the main clause.\textsuperscript{16}

This construction can be used to express strong causality as in (106) or (107).

(106) \textit{tce nunu t\-wy\-y\_uckat tce [uu-sno y\_u-ta LNK DEM IFPV-INV-pack.on LNK 3SG.POSS-saddle INV-put:FACT mu\_j-ra] mat\_ci, uu\_\_ri nuu t\_cu NEG:TESTIM:have.to because 3SG.POSS-body DEM LOC ty-sno ku-fse y\_y\langle nuu\rangle zu INDEF.POSS-body NMLZ:S/A-be.like <AUTO>exist:SENSORY cti tce, be:ASSERTIVE:FACT LNK}

When one puts packs on (camels), there is no need to put a saddle, because they already have something like a saddle on their body. (Camel, 210)

(107) [paw y\_u uu-yli d\_y\_n] mat\_ci, pig GEN 3SG.POSS-manure be:many:FACT because mv-ndze zo me q\_e uu-yli d\_y\_n NEG-eat[III]:FACT EMPH not.exist:FACT LNK 3SG.POSS-manure be:many:FACT Pigs have a lot of manure, because they eat anything, so they have a lot of manure. (Pig, 101)

One finds it also in examples such as (108) or (109), where there is no necessary causal implication between the event/situation of the subordinate clause and that of the main clause.

(108) [mu\_to-k\_\_u] q\_e mat\_ci, tumu ku-\_r\_\_ji NEG-EVD-agree LNK because sky NMLZ:S/A-blue uu-me pjv-cti-nu_\_ tce 3SG.POSS-daughter EVD.IPFV-be:ASSERTIVE-PL LNK She did not agree, as they were daughters of the heavens, (Flood3, 60)

(109) [wuma zo pjv-sycit] mat\_ci k\_ndz\_vts\_i ri very EMPH EVD.IPFV-nice because food also pjv-d\_\_n, tce kv-\_n\_\_\_ak ri \_ja zo EVD.IPFV-many LNK INF-have.a.good.time also entirely EMPH pjv-cti EVD.IPFV-be:ASSERTIVE It was very nice, as there was a lot of food and they were having a good time all the time. (Flood3, 87)

\textsuperscript{16} This is a case where Dixon’s terms ‘supporting’ vs ‘focal’ clause may be more appropriate, but we keep the traditional terminology for consistency.
A variant of this construction with the linker *ma* is also attested as in (110). Unlike *matci*, this linker presents many other uses (in particular, possible consequence (4.3)).

(110) *tcendyre awndoundvt zo c-tu-nyryama-nuu ri lnk everywhere emph transloc-ipv-pray.for.rain-pl lnk [kuu-p\yn pju-me] ma zuβdas nuu nmlz:S/A-efficient evd.ipv-not.exist because mountain.god dem ra tu-ci uu-ku-yro pju-me pl indefinite:poss.water 3sg-nmlz:S/A-possess evd.ipv-not.exist People went everywhere to pray for water, but it was for nothing, because none of the mountain gods had water. (Kamnyu mountains1, 17)

An alternative construction expressing a causal relationship between two clauses is built by using the noun *ndza* ‘reason’ or its derived form *nündza* ‘for this reason’ in the main clause. The adverb *nündza* can appear either between the subordinate and the main clause (as in (111)) or after it (as in (112)). It is used to focalize the causal relationship between the events/ situations of the two clauses.

(111) [tce uu-mt\u yzyu] tce, tce nündza lnk 3sg:poss-crest sensory:exist lnk lnk for.this.reason qapymtumtuu tu-ti-nuu nuu-ju hoopoe ipvf-say-pl testim-be It has a crest, and this is the reason why it is called ‘hoopoe’. (Hoopoe, 20)

(112) k'\u nuu sqamu\u-xpa muu-tv-tsu mvc\tsa mv-rypu tiger dem fifteen-year neg-ipv-reach until neg-bear.young:fact tu-ti-nuu nuu-ju tce, tce nündza nuu, k'\u nuu ipvf-say-pl testim-be lnk lnk for.this.reason dem tiger dem n\u-rukun. k'\u nuu n\u-rukun tce nündza testim-be.rare tiger dem testim-be.rare lnk for.this.reason n\u-ju tu-ti-nu n\u-ju testim-be ipvf-say-pl testim-be They say that the tiger does not bear young until it has reached fifteen years, and for this reason tigers are rare. Tigers are rare for this reason, they say. (Mule 46)

In answer to questions, it is common for the main clause to be elided and to only have the subordinate clause with the markers *ndza* or *nündza*, as in (113).\textsuperscript{17}

(113) ma\w n\u-yvk\u uu ndza cti

\textsuperscript{17} This is the response to the question *a-tv-cime, te'i ku-tu-yyru? mv-ku-\pe yzyu uβvru? ‘My lady, why are you crying? Are you feeling unwell?’
4.2 Purpose

Purposive clause linking, unlike the previous constructions, indicates that the causal relationship between the two clauses is intentional. There are two main constructions in Japhug expressing this meaning: the purposive converb and the linker uutç’uʃβ ‘in order to’. In Japhug, as in most languages, the semantic relationship between the main and the subordinate clause is the opposite of that of other consequence linkings: the cause is expressed in the main clause (which corresponds to Dixon’s ‘supporting clause’ in this case) and the effect in the subordinate clause (the ‘focal clause’).

The purposive converb marking the verb of the subordinate clause (the purpose of the action described in the subordinate clause), is formed by combining a possessive prefix, an imperfective prefix, the prefix sy/-syz/-z- and a reduplicated form of the verb. The imperfective prefix is sometimes elided (114), and there are examples of the purposive converb without reduplication (115).

When the arguments of the subordinate and the main clause are coreferent, the subordinate clause with purposive converb can be embedded within the main clause as an adjunct as in (115).

(114) [ku-lyγ acyβ nu ku u-my-sy-jmuu-jmut,]
NMLZ:S/A-herd Askaysb dem erg 3sg-NEG-PURP:CONV-forget
u-pʰamygu nu tcu rdystab-pupuu tc’uurd ci
3sg.poss-inside.clothes dem loc stone-little pebble indef
jy-rku,
evd-put.in
The cowboy Askaysb put a little pebble inside his clothes so that he would not forget it. (Frogs, 166)

Alternatively, it can occur before the main clause as in (115) or after it (120b).

(115) tce nu u-pa numu li kʰyxtu numu,
LNK dem 3sg.poss-under dem again platform dem
tu-ci, tuftsar ku jju-su-spoə
indef.poss-water leaking.water erg IPFV-CAUS-have.a.hole
ŋgrl tce, tce
be.usually.the.case:FACT LNK LNK

18. The purposive clause of motion verbs will not be treated here (see Jacques (2013a) for more details).
Clause linking in Japhug

In order to prevent it from leaking through, people put flat stones there. (Water jar, 11)

In the case of transitive verbs, the possessive prefix can refer either to the agent (as in 116) or the patient (117).

(116) maʁ ma [a-my-ŋu-śny-jmu-ũm̥u̥]
   not.be:FACT because 1SG-NEG-IPFV-CONV:PURP-forget
   nua-rku-t-a ɕti ma
   PFV-put.in-PST:TR-1SG be:AFFIRMATIVE:FACT because
   No, I put it there so that I would not forget (to tell you). (Frogs, 172)

In (117), it would alternatively be possible to use the first singular form of the purposive converb a-my-tu-śy-rpu-u-ru without changing the meaning.

(117) kum ŋu-mbHo tce, [a-ku
   door TESTIM-low LNK 1SG.POSS-head
   uu-my-tu-śy-rprü-ru] pu-pʰaβ-a
   3SG-NEG-IPFV-CONV:PURP-bump PFV-lower-1SG
   As the door is low, I lowered my head so as not to bump it.

Although all examples of the converb in our corpus are negative, it is possible to elicit affirmative forms as in (118) without restriction.

(118) fso tce [a-tu-śny-nmmtyu-nmtɕi,] za
   tomorrow LNK 1SG-IPFV-CONV:PURP-get.up.early early
   ku-nu-ŋu-ru-ɕa ra
   IPFV-AUTO-lie.down-1SG have.to:FACT
   In order to get up early tomorrow, I have to go to bed soon. (elicited)

An alternative way of expressing purposive meaning is to use the linker uțićʰuβ 'in order to' after the purposive clause. The verb can be either in a finite form or in the infinitive. Thus, the main clause in (119d) can be preceded by any of (a)–(c).

This construction is extremely rare in the corpus (only one example was found).

(119) a. my-ky-nuŋdzo uțićʰuβ, /
    irr-NEG-PFV-2-feel.cold in.order.to
b. a-my-nu-tu-nuŋdzo uțićʰuβ, /
    irr-NEG-PFV-2-feel.cold in.order.to
The reverse order between main and subordinate clauses is also attested, as illustrated by (120b) and (120c), which follow the same main clause (120a).

(120) a. *tuuŋga kuaŋ tsa tveŋge
   indefinite poss clothes nmlz:S/A-thick a little imp wear[III]
   Wear thick clothes, so that you don’t get cold. (elicitation)

This construction is used in particular for expressing contrastive focus in the purposive clause.

4.3 Possible consequence

Possible consequence is a type of clause linking expressing that the event in one clause should be undertaken in order to prevent that of the other clause to take place, as the latter is viewed as an unfavourable result.

There is no dedicated construction expressing possible consequence in Japhug. The linker *ma* is used with a verb in the irrealis (121), imperative (122, 124) or other TAM categories (123) in the subordinate clause and a verb in the factual in the main clause (expressing the unfavourable result). The adverb *tʰa* or its variant *tɛtʰa* ‘later, in a moment’ often appear in the main clause of possible consequence linking (123, 124, 128).

(121) *tuurme ra kua a-my-tv-ndo-nuu*  *ma*
    people pl erg irr neg pfv take pl lnk
    yuu-z-nvndvy-nuu
    inv caus be poisoned:fact pl
    People should not touch it, otherwise they would get poisoned. (False matsutake, 26)

(122) *tv-rundzanspa ma tuv-attr*
    imp be careful lnk 2 fall down fact
    Be careful not to fall down. (conversation, 2010)
(123) \((t⁹i c'⁹u-tu-nv̂j_kuⁿkẹ⁹) ma t⁶a\)  
what ipfv:downstream-2-walk.around be:fact lnk in.a.moment  
βduto kuu tuú-wy-ndza  
demon erg 2-inv-eat:fact  
Why are you walking around (you should not be walking around), the  
demon will eat you. (The demon, 92–3)

(124) \((n[u k]⁹ramba ma-tv-βze-a ra] ma tce\)  
dem lie neg-imp-make[III]-1sg have:to:fact lnk lnk  
history record ipfv-2-make[III] be:AFFIRMATIVE:fact later  
gegenerations erg inv-scold:fact-1sg-pl  
I cannot tell lies, as you are making a historical record, and previous and  
future generations would scold me. (kikakci, 217)

The phrase \(ma m[v-ji]y\) 'otherwise it is not possible', although syntactically a particular  
 caso of this construction, has a specific modal meaning 'must', as in example  
(125).

(125) \((n[v]zo p[u-lok] ma m[y-ji]y,\)  
you pfv:down-come.out lnk neg-be.possible:fact  
[a-k'ₙ a ma-tu-rvzi] ma m[y-ji]y  
2sg.poss-house neg:imp-2-stay lnk neg-be.possible:fact  
You have to leave, you cannot stay in my house. (Raven4, 21–2)

The phrases \(nuu m[v-ʃa] 'until that' (= 'otherwise') or \(nuu ma 'apart from that' or \(nuu ma[k n] 'otherwise' can also appear in addition to the linker \(ma\) in possible  
consequence linking (examples (126), (127), (128)). The form \(nuu m[a]k nv\) (DEM  
not.be:FACT LNK), which is originally the protasis of conditional linking meaning 'if  
it is not that', is very similar to an equivalent structure in Kham (Watters 2009: 112)

(126) \((koŋla zo tuu-jar tuu-xᵛrt tsa)\)  
really EMPH INDEF.poss-hand INDEF.poss-strength a.little  
γuú-lyt ra] ma nuu m[v-ʃa k̄y-p'ut  
inv-throw:fact have.to:fact lnk dem until inf-take.out  
my-sv-cʰ-a  
NEG-DEEXPERIENCER-can:FACT  
One has to exert all of one's strength with one's hand, otherwise it is not  
possible to pull it out. (stobtsa, 150)

(127) \(k⁶a tce luulu kuu tu-ndze ḋu tce, [nuu kuu\)  
house lnk cat erg ipfv-eat[II] be:FACT LNK DEM erg
In the house, the cats eat them, they destroy them, otherwise the mice are harmful to people. (The mice, 165)

Another construction attested for possible consequence involves a clause with ergative (similar to the Manner linking) of the verb *susos* 'to think'. It can be a finite verb as (129) or the infinitive *kv-susos* as in (130) and (131), but in both cases it takes a finite complement clause. In this case the subordinate clause expresses the unfavourable result.

There is necessary coreference between the A of the infinitival clause and the S/A of the main clause, but not with the complement clause of the *kv-susos*.

Constructions involving reported speech are also attested in the possible consequence clause linking of Galo and Kham (Post 2009: 86, 88 and Watters 2009: 110), but their semantics are quite different from this construction.
An interesting aspect of the complement clause embedded within the infinitival clause is the fact that, it reflects in some cases hybrid reported speech (on this concept see Tournadre 2008 and Aikhenvald 2008).

In (131), there are three referents involved, the father (A), the addressee (B) and the speaker (C). We see that the verb nuzzo ‘he will come back’ is in third person singular form and reflects the point of view of referent A, while the overt pronoun nuzzo ‘2sg’ reflects the addressee. This mismatch could be paraphrased in English as ‘thinking of you ‘he will come back’...’ Despite the agreement mismatch, [nuzzo nuzzo] can be assumed to be monoclausal and to form a single constituent for two reasons. First, in this example as well as all examples exhibiting hybrid reported speech in the corpus, there is no pause between the noun phrase or pronoun and the verb form. Second, the noun phrase / pronoun can only appear in the same position as it would have in an independent clause, and no extraposition is possible.

Although Japhug does have an apprehensive marker (see example (154)), unlike Aguaruna this form is not used in Possible Consequence linkings (compare with Overall 2009: 187).

5. Addition

The Addition clause linkings are defined negatively in Dixon (2009: 26) as all those which cannot be included in the other categories that he distinguishes. In Japhug, there are specific constructions expressing the meanings associated with several categories of addition clause linkings, in particular Elaboration and Contrast. Moreover, as in Kham (Watters 2009: 113), we find an ‘alternating actions’ clause linking.

As shown in Table 10, no addition clause linking construction involves con-verbs.
Table 10. Addition linking constructions

<table>
<thead>
<tr>
<th>Clause linking type</th>
<th>Construction</th>
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<td>Unordered addition</td>
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<tr>
<td></td>
<td>Coordination with <em>tɕ</em></td>
</tr>
<tr>
<td>Elaboration</td>
<td>Parataxis</td>
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<tr>
<td></td>
<td>Comitative postposition <em>cʰo</em></td>
</tr>
<tr>
<td></td>
<td>Correlative linkers <em>tɕi</em> or <em>ri</em> in both clauses</td>
</tr>
<tr>
<td>Alternating actions</td>
<td>verb + <em>nɾ</em> + verb</td>
</tr>
<tr>
<td>Contrast</td>
<td>Parataxis</td>
</tr>
<tr>
<td></td>
<td>Contrastive linker <em>ri</em></td>
</tr>
<tr>
<td></td>
<td>Contrastive focalizers <em>sr</em> and <em>ndɾre</em></td>
</tr>
<tr>
<td></td>
<td>Adversative linker <em>miɾɾrz</em> instead’</td>
</tr>
<tr>
<td></td>
<td>Linker <em>laɾma</em> ‘only, just’ at the end of the MC</td>
</tr>
<tr>
<td></td>
<td>Linker <em>jinbala</em> ‘altough’</td>
</tr>
</tbody>
</table>

5.1 Unordered addition

The Unordered Addition linkings describe two distinct events that are related but for which neither a temporal sequence nor a causal relationship can be assumed.

In Japhug, this type of minimal semantic link between two clauses is expressed by using two finite clauses with the linkers *tɕe* and *teɾndɾre* as in (132). Unlike the temporal succession linking (3.1), unordered addition is not expressed by the linker *qʰe*, which always implies a temporal order between two events.

(132) *ʑara ϱsɯm ma pjv-me-nu u tɕe teɾndɾre*

they three apart.from evd.ipfv-not.exist-pl lnk lnk

nuu-ᵻnᵻna ci pjv-tu. 3pl.poss-cow indef evd.ipfv-exist

They were only three (brothers), and had a cow. (The flood3, 3)

5.2 Elaboration

In the Elaboration clause linking, the second clause provides addition information on the event or situation described in the first clause. In Japhug, we observe two distinct constructions depending on the locus of the additional information (predicate vs arguments).
When the additional information is on the predicate, the Elaboration linking is expressed by two constructions. First, simple parataxis, with optional pause between the two predicates, can convey this meaning as in (133).

(133) ɯ>pʰoŋbu ra nɯu-wxṭi, nɯu-tsʰu zo.
3sg.poss-body pl testim-big testim-fat emph
Its body is big and fat. (Bees, 12)

Second, the comitative postposition cʰo or its compound form cʰondyre can be used to link the two clauses. The syntactic structure of this clause linking, despite superficial resemblance to the Unordered Addition, is quite different: whereas the linkers tɕe and qʰe are not syntactically anchored either in the clause preceding or following it (see (2.4)), cʰo is actually the syntactic head of the clause preceding it. The elaboration linking is thus not a flat syntactic structure.

Example (134) illustrates the use of cʰo in elaboration clause linking, connecting two finite clauses with stative verbs sharing the same S without any overt noun phrase.

(134) qambru ɯ-ɾme nɯu-fʃe qʰe, nɯu-dvn
yak 3sg.poss-hair testim-be.like lnk testim-be.many
cʰo nɯu-rʃʃi.
comit testim-be.long
(The camel’s hairs) are like that of the yak, there are many and they are long. (Camel, 77)

(135) nɯnɯ u-mdzu rcanu, wuma zo mʧɔv
dem 3sg.poss-thorn to:emph really emph be:sharp:fact
,cʰondyre ʃcu
comit be:hard:fact
As for its thorns, they are very sharp and hard. (ngolo, 2)

Although in most examples one of the clauses is limited to a verb, this is not necessarily the case, as shown by examples (136) and (137).

(136) nɯu ma tɕʰi sna cʰo tɕʰi cʰa ra myxsɨ
dem apart.from what be:good:fact comit what can:fact pl neg:genr:know
Apart from that, I don’t know what it is good for and what it can do. (little leech, 153)

Clause linkings in cʰo can occur as protasis of a conditional linking. In this case, each of the conditions expressed by a distinct clause in the protasis must be fulfilled for the event in the apodosis to take place, as in (137).
(137) \textit{tce nuu u-ryi a-mv-pui-ce ra lnk dem 3sg.poss-grain irr-NEG-pfv:down-go have.to:fact ma pjui-tyi mv-c’a tce tce ndre [a-nu-vci lnk ipfv-be.rotten neg-can:fact lnk lnk irr-pfv-get.wet zo q’e c’o ftcar a-ky-ndzo zo q’e li emph lnk comit summer irr-pfv-be.attached emph lnk again tu-fo c’ti ipfv-come.out be.affirmative:fact}

One should not let its grains go into (the ground), because they cannot rot, and when they get wet and spring comes, they grow again. (Rye, 46–7)

On the other hand, when the additional information is on the arguments, the correlative linkers \textit{tci} and \textit{ri} ‘also’ are used. This construction is used either when the predicates are identical in all clauses in the linking (139) or belong to the same semantic field (138, 140).

(138) \textit{ca tci nuu-ndze, cvc i tci nuu-t’si meat also testi-m-eat[III] meat.stew also testi-m-drink tv-lu ta-mar tci nuu-ndze indef.poss-milk indef.poss-butter also testi-m-eat[III] (Pigs) eat meat, drink meat stew, and also eat butter. (Pigs, 29–30)}

(139) \textit{cvmu nmnu u-bru tci me, female.muskdeer dem 3sg.poss-horn also not.exist:fact uu-ndzi y i tci me. 3sg.poss-tusk also not.exist:fact The female musk deer has neither horns nor tusks. (muskdeer, 34)}

(140) \textit{nmnu u-p’u ri ku-wxiti uzo ri dem 3sg.poss-price also nmlz:S/A-be.big 3sg also ku-sna nu. nmlz:S/A-be.worthy be:fact That one (silver) is expensive and precious. (Metals, 191)}

The correlative linker \textit{ri} found in (140) must be distinguished from the phrasal adversative linker \textit{ri} used in Contrast linking (Section 5.4).

5.3 Alternating or repeated actions

In order to express two actions occurring one after the other repeatedly, we find finite verb forms with the linker \textit{ny}, as in (141).

(141) \textit{tce’eme nmnu tce k’rxtu nuu tce, [ku-ce] ny girl dem lnk platform dem lnk ipfv:east-go lnk}
The linker *nv*, used with the same verb, indicates an action that either takes a long period of time or occurs repeatedly (142).

(142) *kʰa nu tu-pci ri tu-nur(ho)ba [tu-ce] nv*

       house gen 3sg-outside loc ipfv-climb ipfv:up-go lnk
       tu-ce    tce, nuunu <wulou> <liulou> jamar tu-zyut
       ipfv:up-go lnk dem 5th.floor 6th.floor about ipfv:up-reach
       nuu-cʰa.

The girl would come and go on the platform and look around, as she did not have any work to do. (Raven4, 134)

Constructions with similar semantics involving nouns or ideophones are also attested (see Section 2.4).

5.4 Contrast

The Contrast linking expresses that the information contained in one clause strongly contrasts with or is unexpected in view of the other clause. Japhug has seven distinct constructions for expressing this meaning, some of which are shared with the rejection linking (6.2).

First, we find paratactic clause linkings with predicates of opposite meaning (such as *tn* ‘many, a lot’ and *rkun* ‘few’¹⁹ in example (143) without any overt linker, adverb or postposition marking contrast.

(143) *sunugu tce tnm tsa, kumar nuu ra rkun*

       forest lnk be.many:fact a.little other dem pl be.few:fact

There are a lot in the forest, fewer in other places. (*pa-tsas rna*, 133)

Second, the contrastive linkers *ri* ‘but’ and its compound form *tce* can be used between two finite clauses. This is the most common construction used to express contrast.

¹⁹. The stative verb *rkun* ‘be few’ is often used as a euphemism for ‘non-existent’ in Japhug.
He made a joke, but he was scolded. (The naughty boy, 22)

It is a big tree, but it grows very small flowers. (t’rwum, 29)

Third, the contrastive focalizers *ndyre* and *bo* ‘on the other hand’ can appear after a noun phrase or an infinitival clause to insist on a difference with a previously mentioned referent.

There is one which is grown by people, but that one is not tasty (unlike the previous one). (Edible black mushroom 17–8)

Pigs eat it, cows eat it, but it is not good for people to eat. (tc’emekvtsa 120)

The focalizer *bo* differs from *ndyre* in that it implies that the content of the sentence is self-evident (like Chinese *dào* 倒); it is often used together with the adverb *luski* ‘of course’.

There is (an animal) called the weasel, this one on the other hand (by contrast with the wolf, which was discussed before) is small, though not as small as a mouse. It is bigger than a mouse. (Weasel, 1)
Fourth, the adversative adverb mí’ryrz ‘instead’ (Chinese fán’ér 反而) is used to express a result contrary to expectations, as in (149).

(149)    m̕-kɯ-nda   t̕-w̕-tc̕-a’k   q’e,   m̕í’ryrz
    NEG-NMLZ:S/A-be.time IPFV-INV-squeeze.out LNK instead
ty-se   tu-ɬov   n̕u-ŋu.
    INDEF.Poss-blood IPFV:UP-come.out TESTIM-be
If one squeezes (the pimple) too early, blood comes out instead (not pus).
(Pimples, 133)

Fifth, the postposition ma ‘apart from’ between two clauses of opposite polarity is used to insist on the semantic opposition between them. It is superficially similar to the causal linker ma ‘because’, but examples such as (150) show no causal relationship between the two clauses. This construction also occurs with the Rejection linking (6.2).

(150)    tce [kuu-ɕcu   ra n̕u-ɕ’a-n̕u]   ma
    LNK NMLZ:S/A-be.strong PL TESTIM-can-PL apart.from
m̕-kɯ-ɕcu   ra muargins’a-n̕u.
    NEG-NMLZ:S/A-be.strong PL NEG:TESTIM-can-PL
Those who are strong are able to do it, and those who aren’t can’t do it.
(Parasitic larva, 22)

The linker laisma ‘apart from the fact that, only, just’ is placed at the end of the main clause. Its meaning is slightly similar to ma ‘apart from’, but differs from it in that it adds the additional meaning that of two related events/situations, only that of the main clause is fulfilled (as in (151)). It can also indicate that the event/situation of the subordinate clause is basically true except for the minor counter evidence in the main clause (as in (151)). The main clause can either follow (151) or precede (152) the subordinate clause in this construction.

(151)    [u-ku   n̕u   ra ɕ’q’a   qartz’a-z u-ku]
    3SG.Poss-head DEM PL the.aforementioned deer 3SG.Poss-head
wuma zo  fse,]   u-ɬuu   manye   laisma.
    really EMPH be.like:FACT 3SG.Poss-horn not.exist:Sensory apart.from
Its head is like that of a deer, apart from the fact that it has no horns. (Water
deer, 24)

(152)    tce  Ɋotcu kuu-tu   n̕u   ra ɕu-s’a   laisma,
    LNK where NMLZ:S/A-exist DEM PL know:FACT-1SG apart.from
ju-ce-a   muargins’a-a.
    IPFV-go-1SG NEG:TESTIM-can-1SG
I only know where they are, I cannot go there. (zmbulium, 63)
Sixth, the negative copula *maʁ* ‘not be’ followed by the ergative *kɯ* can be used to focus on the opposition between two predicates as in (153). The same construction also appears as a type of Rejection linking (6.2).

(153) \[kɯ-mpcu\]  
\[\text{maʁ} \ kɯ \ nuu-kɯ-rxom}\]  
\[\text{nmlz:S/A-be.smooth not.be:fact pfv-nmlz:S/A-be.rough}\]  
\[\text{kɯ-fse brvbrʃβ} \ \eta u \ \text{tce,}\]  
\[\text{nmlz:S/A-be.like ideo:II:coarse.and.irregular be:fact lnk}\]  
It is not smooth, it is rough, coarse and irregular. (Mill, 172)

Finally, there is a complex linker *jinbala zuu* ‘although’ comprising the locative *zuu* and the form *jinbala* borrowed from Tibetan *jìn.pal* (be-nmlz-all). This form is not used in colloquial Japhug, and appears only in a few stories told by elders as in (154).

(154) \[tʃe \ [ŋylpu \ nu \ nuu-rga]\]  
\[\text{jinbala zuu, ē, a-tcu}\]  
\[\text{lnk king dem pfv-be.happy although loc interj 1sg.poss-son}\]  
\[\text{ki stʃɪtsʰv mɯ-cɯ-cʰa} \ \kɯ \ \eta v-suṣo}\]  
\[\text{dem:prox contest neg-apprehensive-can:fact possibility evd-think}\]  
Although the king was pleased, he thought ‘Ah, I fear that my son will not succeed in this contest.’ (The prince, 91–92)

6. Alternatives

Alternative linkings are used when the situation/event in both clauses are mutually exclusive. They include two subcategories, Disjunction and Rejection linking.

Table 11. Alternative linking constructions

<table>
<thead>
<tr>
<th>Clause linking type</th>
<th>Construction</th>
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<tbody>
<tr>
<td>Disjunction</td>
<td><em>nuu maʁ ny</em> ‘otherwise’</td>
</tr>
<tr>
<td></td>
<td>polar interrogative <em>ci</em></td>
</tr>
<tr>
<td>Rejection</td>
<td>postposition <em>ma</em> ‘apart from’</td>
</tr>
<tr>
<td></td>
<td>negative copula <em>maʁ</em> ‘not be’ in the SC</td>
</tr>
</tbody>
</table>

6.1 Disjunction

There is no linker specialized for expressing disjunction in Japhug like English *either ... or*. We find two distinct strategies for disjunction linking.

First, in the case of affirmative sentences, the phrase *nuu maʁ ny* ‘otherwise (literally ‘if it is not’), which is also used in Possible Consequence linking (4.3) is
repeated in both alternative clauses as in (155). Ellipsis of the verb in the second clause is not possible.

(155) \( \text{nū māk ny \ tvt'u, nū} \) 
\( \text{DEm not.be:FACT LNK woollen.clothes IPFV-GENR-say DEm} \)
\( \text{māk ny \ tuŋgar \ tu-ku-ti.} \)
\( \text{not.be:FACT LNK woollen.clothes IPFV-GENR-say} \)
(Woollen clothes) are either called \( tvt'u \) or \( tuŋgar \) (mbo, 40)

Second, in the case of interrogative sentences, the polar interrogative sentence final particle \( ɕi \) is employed (example (156)).

(156) \[ \text{χsvr \ t'vjo \ uu-tak \ tu-mu-ce] \ ɕi, \ rnyu] \)
gold palanquin 3SG-on 2-AUTO-GO:FACT INTRG:POLAR silver
\( t'vjo \ uu-tak \ tu-mu-ce? \)
Will you go on the gold palanquin or on the silver one? (The three sisters, 198)

6.2 Rejection

The rejection linking indicates that the event/situation in the two clauses are competing alternatives, and only one of them takes place, while the other one does not. This linking is not well represented in Japhug, and the constructions attested in this meaning are also used for the Contrast linking (5.4). We find two possibilities to express the rejection meaning.

First, the postposition \( mā ' \) apart from’ can be used to express a contrast between two radically opposed alternatives. As in the case of the Contrast linking, it is not the causal linker \( mā \): example (157) shows that there is no causal relationship between the two clauses. In this construction, the main clause (preceding \( mā ' \) apart from’) and the subordinate clause are of opposite polarity; in general, the main clause is positive and the subordinate clause negative.

(157) \( \text{nū-ku-vtuuy \ tce, [tu-ku-nxlielie} \)
\( \text{PFV-GENR:S/P-meet LNK IPFV-GENR:S/P-be.frolicsome} \)
\( \text{cti]} \)
\( \text{ma \ tu-ku-nu-vndzut} \)
\( \text{be.AFFIRMATIVE:FACT apart.from IPFV-GENR:S/P-APPL-bark} \)
\( \text{muįj-ngryl} \)
\( \text{NEG:TESTIM-be.usually.the.case} \)
When it meets you (again, after several years), it jumps at you wagging its tail instead of barking at you. (Dogs, 17)
Second, semantic opposition can be expressed by using the negative copula *maʁ* 'not to be' in one clause, and one of the affirmative copulas *ŋu* or *ɕti* 'to be' in the other one. The verbs in the clauses can either be finite or non-finite. The negative copula can be sufficient to express this meaning, as in example (158).

(158) \[ų-ci k-y-ce maʁ kuu, kumptɕ u-pɔq jo-pʰyo. \]
3sg-DAT INF-go not.be:FACT ERG other 3SG.Poss-direction EVN-flee
He did not go towards him, but ran in the opposite direction instead. 
(Tshobdun and Kamnyu, 14)

7. **Manner**

Manner linking in Japhug can be expressed by parataxis as temporal succession, addition or alternative linkings, but also allows specific constructions such as infinitival clauses or manner deixis verbs, as shown in Table 12.

<table>
<thead>
<tr>
<th>Clause linking type</th>
<th>Construction</th>
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</thead>
<tbody>
<tr>
<td>Real manner</td>
<td>Parataxis</td>
</tr>
<tr>
<td></td>
<td><strong>Infinitival</strong> SC (optionally with ergative)</td>
</tr>
<tr>
<td></td>
<td>manner deixis verb <em>fse</em> 'be like' and <em>stu</em> 'do like'</td>
</tr>
<tr>
<td></td>
<td>degree nominalization + ergative</td>
</tr>
<tr>
<td>Hypothetical manner</td>
<td>manner deixis verb <em>fse</em> 'be like'</td>
</tr>
</tbody>
</table>

7.1 **Real manner**

In this type of clause linking, one clause describes the manner in which the action/situation of another clause takes place. There are four basic ways to express this meaning in Japhug.

First, the simplest construction to express manner is parataxis, with two verbs in the same TAM category and sharing the same arguments, as in (159)

(159) \[ju-ṃtsaʁ nja zo ma nu ma [u-mi pju-su-vtse tu-ŋke miųj-cʰa, ipfV-caus-be.inserted[III] ipfV-walk neg: testim-can ] \]
Ipfv-jump completely EMPH LNK DEM apart.from 3SG.Poss-foot
It only jumps, as it is not able to walk by treading with its feet. (Frogs, 4)
This construction is particularly common with the transitive verb of manner de-
ixis *stu* ‘do like this’ as in (160). Note that in this example the subordinate clause in
embedded within the main clause.

(160) *tɕe* *wu-jak* *kuw* [ki *tu-ste*
  LNK 3SG.POSS-hand ERG DEM:PROX IPFV-do.like[III]
  *lu-z-nakje* *nuu-ŋu* *ri,*
  IPFV-CAUS-probe TESTIM-be LNK
(The cat) probes with its paw like that (into the hole). (Weasel, 47)

A formally similar construction appears with deideophonic verbs, as in example
(161) which illustrates a verb derived from the ideophone *ɕpvr* ‘loud noise’ (see
Jacques 2013b).

(161) [nuu-*v-cpvrlyr*] *juu-ruemti*
  TESTIM-DERIVATION-IDEO:DISORDERLY:loud.noise TESTIM-speak
  She speaks loudly (without paying attention to the situation). (elicited)

It also occurs with a specific set of verbs such as *tɕʰom* ‘be in excess’ for instance,
as an alternative to complement clauses (162).

(162) [nuju *ra nuu-tak tu-dyn*] *tu-tɕʰom*
  cow pl 3PL-on IPFV-be.many IPFV-be.in.excess
  *muŋj-pe* *ma*
  NEG:TESTIM-be.good LNK
  It is not good when there are too many of them (ticks) on the cows,
because… (Ticks, 30)

Sun (2012) analyzes the Tshobdun constructions corresponding to that of (161)
and (162) as monoclausal serial verb constructions, since in that language no linker
is inserted between the two verbs. In Japhug, adding the linker *tɕe* between
the two verbs is possible in the case of (160) and (161), but not in (162), which
suggest that we have here several distinct underlying constructions: genuine serial
verb constructions when adding a linker is not possible, and biclausal parataxis in
the other cases.

Second, it is possible to use the infinitive *kjr*- (for dynamic verbs) or *kuu*- (for
stative verbs or dynamic verbs with non-animate arguments) in the subordinate
clause, to express manner as in (163) and (164).

(163) [kjr-ŋke] *juv-ari* *puu-ra*
  INF-walk PFV-go[II] PST.IPV-have.to
  He had to go on foot. (elicited)
In the case of stative verbs, whose infinitive is in *kɯ*- instead of *ky*- , there is some surface ambiguity between infinitive and S-nominalization serving as a nominal attribute. In (165) this ambiguity is resolved by the presence of the emphatic linker *ʑo* which rules out the alternative parsing of *kɯ-duu-dvn* 'numerous' as the S of the sentence (in which case we would have glossed it as NMLZ:S/A-be.many).

(165)  

`kɯ-duu-dvn`  

inf:stat-emph~be.many emph  
mv-ngryl.  

neg-be.usually.the.case:fact  

They don’t usually walk together in big groups. (ɕɣpɣa 40)

In (166), apart from *ʑo*, the presence of the demonstrative *nuu* between the noun and the stative verb *kɯ-qarŋurune* ‘yellow’ indicates that they do not form a constituent, and that *kɯ-qarŋurune* cannot therefore be analyzed as the attribute of *nuu-qe* 'their excrement'.

(166)  

`nuu-qe`  

3pl.poss-excrement  

dem inf:stat-emph~be.yellow emph  
cʰɯ-lvt-nuu  

tce,  

ipfv-throw-pl lnk  

They shit yellow. (*kʰud*, 112)

Apart from stative verbs of quantity and quality (as in (165) and (166)), many other types of verbs appear in this construction, for instance verbs expressing spatial relations and distances as in (167).

(167)  

`lu-olɣɯu`  

`nuu-cti`  

qʰe, `kɯ-yrqʰi`  

ipfv-be.connected testim-be:affirm lnk inf:stat-be.far  

ju-kɯ-ru  

qʰe  uɯ-bar  

`nuu-fse.`  

ipfv-genr:S/P-look lnk 3sg.poss-wing testim-be.like  

(The skin between its limb) is connected, and when one looks from afar, it looks like wings. (Flying fox, 134)

Third, it is possible to use the infinitive *kɯ-fse* of the manner deixis stative verb *fse* 'be like' to mark the subordinate clause, as in (168) and (169). The verb marked by *kɯ-fse* can itself be in the infinitive (170).

(168)  

`murummbju nuu`  

[nuu-zyy-su-yyr]  

kɯ-fse  

swallow  

dem ipfv-refl-caus-be.slanted inf:stat-be.like
The semantic scope of the verbal negative prefix can be on the manner rather than on the verbal action as in (170). In this construction, both the disjunct and the conjunct interpretation of negative scope are possible (unlike some languages that restrict one interpretation in some or in all constructions, see Bickel 2010: 61).

Although they do not lie in nice lines like the geese, they always lie (in groups) together. (Pigeons, 10–11)

It is possible to combine an infinitival clause with the ergative $ku$, as in (172) and (171). This construction can express a slight concessive meaning as in (171) (‘without turning it off’ = although he should have turned it off’).

Alternatively, the infinitival clause with the ergative can be semantically intermediate between a manner and a purposive clause, as in (172).
Fourth, in the case of stative verbs, the degree nominalization *tu* can be combined with a clause describing the degree, circumstance or consequence of the state in question. The ergative *ku* can be inserted between the stative verb and the degree clause; its presence is optional when the degree clause is short, but obligatory in the case of long clauses, as in (173) and (174).

(173)  
\[
\text{a-pu-kw-su-ncvr} \quad q^{e} \quad [u-tu-rzi]
\]
\[
\text{tlr-ipv-genr:S/P-caus-press lnk 3sg-nmlz:degree-heavy}
\]
\[
\text{ku tce nu ky-jor muij-kw-c^{a}}
\]
\[
\text{erg lnk dem inf-lift neg:testim-genr:S/P-can}
\]
If (an elephant) presses one (with one of its feet), it is so heavy that one cannot free oneself. (Elephant, 39–40)

(174)  
\[
lulu a-pu-me \quad rcnu, \quad bzu \quad u-k^{a} \quad tce
\]
\[
\text{cat tlr-ipv-not.exist top:emph mouse 3sg.poss-house lnk}
\]
\[
[uu-tu-ruunjwim] \quad kuu \quad tv-mt^{b}um
\]
\[
3sg-nmlz:degree-cause.damage erg indef.poss-meat
\]
\[
tu-ndze, \quad tuumgo \quad tu-ndze, \quad tuipu \quad tu-ndze, \quad tce
\]
\[
\text{ipv-convert[III] food ipfV-convert[III] food ipfV-convert[III] lnk}
\]
\[
uu-my-kv-ndza \quad ra \quad kuwn \quad tv-fkum \quad nu \quad ra \quad ku-susrop\]
\[
3sg-neg-nmlz:P-eat pl also indef.poss-bag dem pl ipv-make.a.hole
\]
If there is no cat, mice cause a lot of damage in the house as they eat meat and food, and even the things that they cannot eat, (like bags), they make holes in them. (Cat, 27–29)

The ergative is also used in clause linkings involving the verb *fse* ‘be like’ in the subordinate clause, as in (175).

(175)  
\[
ri \quad [u-jwa� \quad nimu \quad kutaw \quad cy \quad nu \quad ra
\]
\[
\text{lnk 3sg.poss-leaf dem other juniper dem pl}
\]
\[
muij-fse] \quad kuu \quad nju-ϕuwurbu \quad zo \quad q^{e}
\]
\[
\text{neg:testim-be.like erg testim-be.wrinkled emph lnk}
\]
\[
nju-ndundo \quad zo.
\]
\[
\text{testim-be.clustered.together emph}
\]
Its leaves differ from other junipers in that they are wrinkled and clustered together. (Ephedra, 71)
7.2 Hypothetical manner

The hypothetical manner linking differs from the real manner linking in that the subordinate clause does not describe the actual manner of the action / situation, but compares it to a similar event.

There is no specific construction in Japhug for expressing this meaning. Examples of Hypothetical Manner linkings in our data all use constructions involving the verb *fse* 'be like' as a main verb and a nominalized relative clause.

(176) \( nyzo \ ki \ jamar \ tce, \ ny-nci \ l\-ky-sti \)
\( 2SG \ DEM:PROX \ about \ LNK \ 2SG.POSS-mouth \ PFV-NMLZ:P-plug \)
\( nuu-tu-fse \ cti \)
\( TESTIM-2-be.like \ be.AFFIRMATIVE:FACT \)
You look like your mouth has been plugged. (conversation 2002, 81)

(177) \( uu-skvt \ uu-tu-wxti \ ku \ maka \ mbyurlor \)
\( 3SG.POSS-voice \ 3SG-NMLZ:DEGREE-big \ ETH \} \) \text{thunder}
\( ty-ky-\betazu \ zo \ pfv-fse. \)
\( PFV-NMLZ:P-make \ EMPH \ EVD.IPfv-be.like \)
Its sound was as loud as thunder. (Daihao)

(178) \( numu \ tf-myym \ q'e, \ t'uuci \ tumnu \)
\( DEM \ PFV-hurt \ LNK \ something \ awl \)
\( ky-ky-su-ysa \ zo \ nuu-fse \)
\( PFV-NMLZ:P-CAUS-be.inserted \ EMPH \ TESTIM-be.like \)
When it hurts, it feels like an awl has been planted (in one’s lungs). (Lung disease, 8)

8. Conclusion

This article is the first step towards a description of clause linking in Japhug. Further research is particularly needed on the issue of syntactic pivots and cataphora in clause linking. At the present stage of our research, we have not been able to detect any strict syntactic pivot, either accusative or ergative, in the constructions studied in the present work. Such research proved difficult in the case of Japhug, as the grammaticality judgments offered by our consultants on constructions not attested in the corpus are often inconsistent.

Japhug clause linking is uncommon in the context of verb final languages of Eurasia. While several converbial constructions are attested (immediate precedence, gerund, purposive and infinitive), none of them is required to express a
particular meaning, as in each of the four cases a semantically similar competing finite construction is available.

Japhug has a strong distinction between finite and non-finite verb forms, but non-finite forms are essentially used for relativization and complementation, not for clause linking. Chains of clauses in non-finite forms, which are common in languages such as Classical Tibetan or Turkic, are completely absent. This is due to the fact that converbs in Japhug are restricted to relatively less common constructions, and are not found for expressing Temporal sequence, Consequence or Condition linkings. There is no converb marking switch reference either; finite forms with inverse marking are used instead for that purpose (see Jacques 2010).

The most common type of clause linking in Japhug involves finite clauses with a linker (or a postposition / relator noun between them). Parataxis is rare, but available for expressing Temporal or Manner linkings. It appears that cases of parataxis require distinct analyses depending on the construction: some of them may be cases of serial verb constructions.

A typological feature distinguishing Japhug from most Sino-Tibetan languages is the fact that some clause linking constructions require a subordinate or a main clause in a particular finite TAM form. In particular, the temporal precedence linking (3.2.3) requires a verb in the imperfective form in the subordinate clause regardless of the TAM marking of the main clause, and several types of conditional (including counterfactual, scalar concessive and alternative concessive) requires the past imperfective.

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