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Clause linking in Japhug^{*}

Guillaume Jacques

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Abstract: 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 converbs, 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 of all competing constructions available for expressing a particular meaning in the target language, and the semantic differences between them.¹

^{*}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, 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.

¹However, 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

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).

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).

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.

Table 1: Directional prefixes in Japhug Rgyalrong

	perfective (A)	imperfective (B)	perfective 3→3' (C)	evidential (D)
up	<i>tx-</i>	<i>tu-</i>	<i>ta-</i>	<i>to-</i>
down	<i>pu-</i>	<i>pju-</i>	<i>pa-</i>	<i>pjɣ-</i>
upstream	<i>lx-</i>	<i>lu-</i>	<i>la-</i>	<i>lo-</i>
downstream	<i>t^hw-</i>	<i>c^hw-</i>	<i>t^ha-</i>	<i>c^hɣ-</i>
east	<i>kɣ-</i>	<i>ku-</i>	<i>ka-</i>	<i>ko-</i>
west	<i>nu-</i>	<i>ɲu-</i>	<i>na-</i>	<i>ɲɣ-</i>
no direction	<i>jɣ-</i>	<i>ju-</i>	<i>ja-</i>	<i>jo-</i>

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 *pu-sat-a*, **imperfective** *pju-sat*, **perfective** 3SG→3’ *pa-sat* and **evidential** *pjɣ-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 *ɣɣzu* ‘exist’ and *maje* ‘not exist’ and the verb *kɣtupa* ‘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

Stem 1	meaning	Stem 2
<i>ɕe</i>	to go (vi)	<i>ari</i>
<i>suxɕe</i>	to sent (vt)	<i>sxyri</i>
<i>yi</i>	to come (vi)	<i>ye</i>
<i>ti</i>	to say (vt)	<i>tut</i>

Table 3: Stem 3 alternation in Japhug Rgyalrong

Stem 1	Stem 3
<i>-a</i>	<i>-e</i>
<i>-u</i>	<i>-e</i>
<i>-w</i>	<i>-i</i>
<i>-o</i>	<i>-xm</i>

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

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

In the case of past imperfective *puw-*, evidential imperfective *pjɣ-*, testimonial *puw-* and present *ku-*, the direction that is lexically selected by the verb is neutralized. Note that the past imperfective marker *puw-* is formally identical to the perfective *puw-* ‘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 *asuw-*).

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

The past imperfective and evidential imperfective forms cannot be used with most dynamic verbs,³ except in several types of conditionals, in par-

²For 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 discussed here; for more information on this topic, see Jacques (2010).

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

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 *tuw-* or *sv-* (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 *kr-* or *kw-* also has converbial uses (especially in the Manner linking, cf section (7)).

The **perfective** converb *tuw-* 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 *tuw-* prefix and the stem 1 of the verb. Since there is a homophonous prefix *tuw-* for second person, the perfective converb is formally identical to the second person singular imperfective form⁵ 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).

Table 5: Examples of the perfective converb *tuw-*

	stem	meaning	imperfective (2SG)	perfective converb
intransitive	<i>sci</i>	to be born (vi)	<i>c^htu-tuw-sci</i>	<i>c^htu-tuw-sci</i>
	<i>ce</i>	to go (vi)	<i>ju-tuw-ce</i>	<i>ju-tuw-ce</i>
	<i>ts^hi</i>	to drink (vt)	<i>ku-tuw-ts^hi</i>	<i>ku-tuw-ts^hi</i>
transitive	<i>ndza</i>	to eat (vt)	<i>tu-tuw-ndze</i>	<i>tu-tuw-ndza</i>
	<i>mto</i>	to see (vt)	<i>pjuw-tuw-mtɔm</i>	<i>pjuw-tuw-mto</i>

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 *mtsuur* 'be hungry' in example (2).

⁵More precisely, the 2SG form of intransitive verbs and the 2SG→3SG form of transitive ones.

- (2) *kutɕu sɣ-ɪtsu~ɪtsur ku-rɣzɪt-a tɕe, jisɲi ndr*
 here GERUND-be.hungry IPFV-remain-1SG LNK today however
tumwukumpɕi kw pú-wɣ-nu-mbi-a ɕti
 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 *sɣ-* has an allomorph *sɣz-* before sonorant derivation prefixes. In the case of verbs that already have a reduplicated stem, such as *nɪqambumbjom* ‘to fly’,⁶ 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 *nɪwɣ-mu* ‘to be afraid of’ has the applicative prefix *nɪwɣ-*, but the *ɣ* part of the prefix participates in the reduplicated form *sɣz-nɪwymu~ɣmu* ‘while being afraid of it’.

Table 6: Examples of the gerund *sɣ-*

stem	meaning	gerund
<i>ɣɣwu</i>	cry (vi)	<i>sɣz-ɣɣwu~wu</i> GERUND-cry
<i>nɪundzɪwɣuz</i>	be sleepy (vi)	<i>sɣ-nɪundzɪwɣuz~ɣuz</i> GERUND-be.sleepy
<i>nɪwymu</i>	be afraid of (vt)	<i>sɣz-nɪwymu~ɣmu</i> GERUND-be.afraid.of
<i>nɪqambumbjom</i>	fly (vi)	<i>sɣ-nɪqambumbjom</i> GERUND-fly

The **purposive** converb, like the gerund is formed by combining a *sɣ-* 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).

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 *kɣ-* (for dynamic verbs) or *kw-* (for stative and non-animate intransitives). This form can be prefixed with the negative *mɣ-* and in the case of transitive verbs

⁶The root *mbjom*, which cannot occur independently with the meaning ‘fly’, is partially reduplicated as *mbu~mbjom* with additional prefixes.

Table 7: Examples of the purposive converb *sr-*

stem	meaning	purposive converb (3SG negative form)	meaning
<i>jmwt</i>	to forget (vt)	<i>ur-mr-nu-sr-jmw~jmwt</i> 3SG-NEG-IPFV-PURP-forget	in order not to forget
<i>ɛndw</i>	to hit (vt)	<i>ur-mr-tu-sr-ɛndw~ɛndw</i> 3SG-NEG-IPFV-PURP-hit	in order not to be beaten / not to beat
<i>acq^he</i>	to cough (vi)	<i>ur-mr-tu-sr-xcqh^hw~cq^he</i> 3SG-NEG-IPFV-PURP-cough	in order not to cough

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: *kw-* for S/A argument, *kr-* for P argument, *sr-* for oblique arguments (including instrument, place and time) and *tu-* for action nominalization. The infinitive is likely to originate from core argument nominalization prefixes *kw-* and *kr-*, 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 *sr-xtci* ‘cleaner’ inside of a relative clause. The direct object of the main verb *nu-wy-nu-p^hut* is *yzwt^hwz* ‘Selaginella’, and the nominalized relative clause *tut^hw sr-xtci* 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) *yzwt^hwz nu kwɕuŋgw tɕe [tut^hw sr-xtci]*
 Selaginella DEM in.the.past LNK pan NMZL:OBLIQUE-wash
nu-wy-nu-p^hut pu-ŋgrɿ
 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 \Rightarrow RELATIVIZATION \Rightarrow 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 postposition, 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 *c^ho*, genitive *yuu* and locatives⁷ *zui*, *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 *sy-* (for all the other ones, including the instrumental). Some verbs such as *amumi* ‘be on good terms’ or *naɣtɕuy* ‘be similar’ select a postpositional phrase with *c^ho*. Example (5) illustrates this use of *c^ho* as well as a relativized postpositional phrase in *c^ho*.

(5) *tɕe* [*uʒo u-sy-ymumi*] *nu*
 LNK it 3SG-NMLZ:OBLIQUE-be.on.good.terms DEM
dʁn ma ca ku-fse qazo
 be.many:FACT because water.deer NMLZ:S-be.like sheep
ku-fse, ts^hʁt ku-fse, uʒo c^ho
 NMLZ:S-be.like goat NMLZ:S-be.like it COMIT
ku-naɣtɕuy sujno, xɕɣj ma mɣ-ku-ndza nu
 NMLZ:S-be.identical herbs grass apart.from NEG-NMLZ:A-eat DEM
ra c^ho nu amumi-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)

⁷The locative *tɕu* is not restricted to spatial reference, but can also be used for temporal reference.

Of the core postpositions enumerated above, only the genitive *yw* 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 *ɕaŋpɕi* ‘since’, *mɾɕtsa* ‘until’, *ɕwŋgu* ‘before’, *ʃɾzɾɾ* ‘at the time when’, *ɕumuma* ‘immediately after’ and *kóɕmuz* ‘only then, only after’.

- (6) *tɕe saɕsw ɕwŋgu pu-nu-ɾɾzi-j, tɕ^ha kɾ-ts^hi-j*
 LNK lunch before PST.IPFV-AUTO-stay-1PL tea PFV-drink-1PL
 We stayed there before lunchtime, and we had breakfast. (Dpalcan story 1, 15)

- (7) *azo ɕwŋgu a-pi ra atu ɾɾzi-nu tɕe,*
 1SG before 1SG.POSS-elder.sibling PL up.there stay:FACT-PL LNK
nunu ra yw nu-rmi tɾ-z-mɾke q^he,
 DEM PL GEN 3PL.POSS-name IMP-CAUS-be.first[III] LNK
 Before me, (choose) first names for my elder brothers, who are staying up there. (Gesar, 123)

- (8) *nu u-q^hu ɕaŋpɕi zo u-ŋgu*
 DEM 3SG-after from EMPH 3SG.POSS-well.off.family
pu-t^hon kɾ-ti ʃu-ŋu 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 *ma* (or *muma*) ‘apart from’ whose postpositional phrases cannot be relativized. It can also appear after pronouns (9), noun phrases and clauses.

- (9) *u-ye u-rwz ʃɾzu*
 3SG.POSS-grandson 3SG.POSS-supernatural.ability exist:SENSORY
u-ku-ti nɾzo ma me tɕe
 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, occur as the head of a postpositional phrase.

Relator nouns differ from postpositions and linkers in that they bear a obligatory possessive prefix coreferent with the preceding noun phrase (10). In this section, we mark all examples of relator nouns with a preceding hyphen (as in *-ŋgu* ‘inside’ or *-q^hu* ‘after’) to indicate the presence of a possessive prefix.

- (10) *tɕe tuɾgi ku-wxti nu ra nu-ŋgu tu*
 LNK fir NMLZ:S/A-be.big DEM PL 3PL-inside exist:FACT
ma ku-xtɕi nu ra nu-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).

- (11) *a-q^{hu} nɾzo stusti nu ku-fse ky-ɾɾzi*
 1SG-after 2SG alone DEM INF:STAT-be.like INF-stay
mɾ-tu-c^{ha}
 NEG-2-can:FACT
 After I (die), you will not be able to stay like that. (The mute girl,
 4)

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 *-p^{he}*⁸ and *-ts^{hyt}* ‘instead of’. Relator noun phrases with the dative as their head can be relativized, but the other ones cannot (Jacques under review).

- (12) *qusput ɾ-mbri u-q^{hu} ri tɕe, tɕe tuɾ ju-βze*
 cuckoo PFV-sing 3SG-after LOC LNK LNK poison IPFV-make[III]
ju tɕe nu tɕu tɕe ky-ndza mɾ-sna
 be:FACT LNK DEM LOC LNK INF-eat NEG-be.worthy:FACT
tu-ti-nu ju-ju.
 IPFV-say-PL TESTIM-be

After the cuckoo has sung (after the period when cuckoo sing has started), it becomes poisonous and cannot be eaten, people say. (nettle, 33)

Most relator nouns have either a spatial or temporal meaning, as *-q^{hu}* ‘after (temporal or spatial)’, *-taɾ* ‘on’, *-pa* ‘under’, *-ŋgu* ‘inside, in, among’, *-k^huk^{ha}* ‘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).

⁸These two dative markers are semantically equivalent, but some speakers, within Kamnyu village, prefer one or the other.

The linkers *tɕe* and *q^he* ‘then’ can appear directly after a noun phrase or a relative clause, in which case they are topicalizers as in (16) and (17).

- (16) *ma nunu paɕɕɣɣ tɕe ɛnu-tup^hu tu.*
 LNK DEM ephedra LNK:TOP two-sorts exist:FACT
 There are two species (of plants) called *paɕɕɣɣ*. (Ephedra, 93)

- (17) *nur qajɣ, azo a-kr-suz nur tɕe, qajɣ nur*
 DEM fish 1SG 1SG-NMLZ:P-know DEM LNK:TOP fish DEM
u-ŋgu-z tɕe qandzi kr-ti ci tu,
 3SG-inside-LOC LNK:TOP trout NMLZ:P-say INDEF exist:FACT
 <shibazi> *kr-ti ci tu,* <shigangqiar>
 name NMLZ:P-say INDEF exist:FACT name
kr-ti ci tu,
 NMLZ:P-say INDEF exist:FACT
 The fishes, the ones that I know about, among the fishes, there is
 the trout, the shibazi, the shigangqiar... (Fishes, 160-3)

The linker *nr* is mostly restricted to conditionals (3.3) and to alternating or repeated actions 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+*nr*+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.

- (18) *taɕ nr taɕ, taɕ nr taɕ tó-wy-tsum*
 up LNK up up LNK up EVD:UP-INV-take.away
 He was taken away, up and up. (The flood3, 21)

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

- (19) *tr-ŋke tɕe dzaŋ nr dzaŋ zo*
 PFV-walk LNK IDEO:long.and.thin LNK IDEO:long.and.thin EMPH
tu-ŋke ɲu-ŋu
 IPFV-walk 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 *zo* occurs after stative verbs (in finite or non-finite forms), adverbs (expressing degree such as *wuma* ‘really, very’, quantity

such as *t^hamtɕɛt* ‘all’ or place and time such as *avɛndundɛt* ‘everywhere’), ideophones and some clause linking types (especially Temporal and Manner linkings). It also occurs with any element followed by the verb *fse* ‘be like’.

The linker *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 adverbial modifier as an adverbial modifier of the following verb, except in the case of ideophones (which can appear, followed by *zo*, after the verb that they modify, see Jacques 2013b).

Finally, we find correlative linkers *tɕi* and *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) *tvɕime nunu ku [u-qom sv-ɬu~ɬoɕ] ku nu*
 young.lady DEM ERG 3SG.POSS-tear GERUND-come.out ERG DEM
ra t^hut^hɕci pu-ku-fse ra lonba zo pjɕ-fɕɛt
 PL something PST.IPFV-NMLZ:S/A-be.like PL all EMPH EVD-tell
ɲu-ŋu.
 TESTIM-be

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

However, this type of embedding is not 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) *tçendv̄re tvçime nu ku, [nu ma u-kv̄pa*
 LNK young.lady DEM ERG DEM apart.from 3SG.POSS-method
pj̄r-me] q^he ‘j̄rγ j̄rγ
 IPFV.EVD-not.exist LNK be.possible:FACT be.possible:FACT
j̄rγ’ to-ti ju-ŋu.
 be.possible:FACT EVD-say TESTIM-be
 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 *nykinu* ‘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 *tçe* or *q^he*. 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) *nu-me stu ku-xtçi nu j̄r-mpi-nu,*
 3PL.POSS-daughter most NMLZ:S/A-be.small DEM EVD-give-PL
tçe nu-me stu ku-xtçi nu
 LNK 3PL.POSS-daughter most NMLZ:S/A-be.small DEM
j̄r-mpi-nu tçe, tçe tçe^heme nu to-numbr̄ypu, uzo ku mbro
 EVD-give-PL LNK LNK girl DEM EVD-ride he ERG horse
to-mts^hi tçe lo-çe-ndzi.
 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. (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) *nur tɣɣɣtso nunu li sunɣu zu jo-ɕe. sunɣu zu jo-ɕe*
 DEM boy DEM again forest LOC EVD-go forest LOC EVD-go
tɕe tɕendɣre, p^haɣgot nur ku tɣɣɣtso nur pa-mto tɕe,
 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-naɣje* IPFV-CAUS-probe[III] ‘he probes into it’ contains the causative prefix *z-* because of the added instrument *u-jaɣ ku* ‘with its paw’.

- (24) *lulu nur nutɕu lu-ɕe múj-xtɕ^hut ma*
 cat DEM THERE IPFV:UPSTREAM-go NEG:TESTIM-fit.in because
ɣu-wxti q^he, tɕendɣre lu-naɣje q^he, tɕe
 TESTIM-be.big LNK LNK IPFV-probe[III] LNK LNK
u-jaɣ ku ki tu-ste
 3SG.POSS-hand ERG DEM:PROX IPFV-do.like[III]
lu-z-naɣje ɣu-ɣu 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 kura tu-ste tɕe zruɣ ra*
 3SG;POSS-head PROX.DEM:PL IPFV-do.this.way[III] LNK louse PL
pɣu-re ɣu-ɣu. tɕe zruɣ nura tu-ndze
 IPFV-remove.lice TESTIM-be LNK louse DEM:PL IPFV-eat[III]
ɣu-ɣu.
 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 is 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) *nxki tu-ndze ɲu, sujno tu-ndze ɲu-ɲu*
 PROX.DEM IPFV-eat[III] be:FACT plant IPFV-eat[III] TESTIM-be
 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^{hi} tɣ-mbro, ɣnu-rtsɣɣ ɕɔŋtaɕ tu-mbro múj-c^{ha}.*
 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

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) *tɕe nu tu-tu-ɬoɕ zo q^{he} c^{hu}-p^{hu}ut-nu*
 LNK DEM IPFV-CONV:IMM-come.out EMPH LNK IPFV-take.out-PL
c^{hu}-βde-nu ɕti.
 IPFV-throw.away-PL be.AFFIRMATIVE:FACT
 As soon as it has grown, people unroot it and throw it away. (*ɕurngo*, 34)

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

⁹In this table, in all the following charts, converbial forms are indicated in bold.

Table 8: Temporal linking constructions

Clause linking type		Construction
Temporal succession		Parataxis Coordination with <i>tɕe</i> or <i>q^he</i>
Relative time	Length	clause with <i>tsu</i> ‘spend (a certain time)’
	Succession	SC with the relator nouns <i>u-q^hu</i> , <i>u-mp^hru</i> ‘after’ or <i>u-ndo</i> ‘in the end’
		SC with the postposition <i>jvznv</i> ‘at the time when’ or <i>ɕaŋpɕi</i> ‘henceforth’
	Precedence	SC with the postposition <i>ɕuŋɕu</i> ‘before’ (requires imperfective in the SC) or with <i>mvtɕa</i> ‘until’
	Immediate succession	SC with the perfective converb <i>tu-</i> SC with the postpositions <i>ɕumuma</i> ‘immediately’ and <i>kósmuz</i> ‘just after’
	Immediate precedence	SC with the linker <i>ɕk^ha</i> ‘about to’ verb in factual form + <i>pu-ŋu</i> in the SC prospective/conative <i>ju-</i> in the SC
Simultaneity	SC with the relator nouns <i>u-raŋ</i> ‘time’, <i>u-k^huk^ha</i> ‘while’ or <i>u-juja</i> ‘along with’ SC with the gerund <i>sv-</i>	
Conditional	Iterative coincidence	Reduplicated perfective verb in the SC
	Real	Verb with interrogative <i>u-</i> in the SC + linker <i>nv</i>
		Verb with reduplicated first syllable in the SC + linker <i>nv</i>
	Alternative concessive	Verb in past imperfective with the autobenefactive in the SC + linker <i>nv</i> Polar interrogative <i>ɕi</i>
	Scalar concessive	Verb in past imperfective with the autobenefactive in the SC + <i>kumv</i> ‘also’
		Polar interrogative <i>ɕi</i>
	Counterfactual	Verb with reduplicated first syllable in the protasis + linker <i>nv</i>
		Verb in past imperfective in the apodosis
Hypothetical	Verb in irrealis in the apodosis	

- (29) *tɕe mɣ-kɣ-p^haɕ nu ɕurdum,*
 LNK NEG-NMLZ:P-hack DEM non-hacked.firewood
nu-kɣ-p^haɕ nu supa rmi tɕe,
 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 *tɕe* and *q^he* ‘then’ (and their variants *tɕendvɣe* and *q^hendvɣe*). *tɕe* and *tɕendvɣe* are by far the most common words in Japhug narratives and conversations, and are often repeated between clauses, as in (30).

- (30) *zuruzvɣi tɕe tɕe tu-zbaɕ tɕe u-ci*
 progressively LNK LNK IPFV-be.dry LNK 3SG.POSS-water
nu-me nu-ŋu tɕe u-ci nu-me zo
 IPFV-not.exist TESTIM-be LNK 3SG.POSS-water PFV-not.exist EMPH
tɕe, tɕendvɣe ku-mar-nu
 LNK LNK IPFV-smear-PL

Progressively, it becomes dry, its moisture disappears, and when there is no moisture any more, they smear it (with butter). (Red leather, 8-9)

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 *pu-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) *kuɕuŋgu tɕe [βlama ku-fse nu ku numu*
 in.former.times LNK lama NMLZ:S/A-be.like DEM ERG DEM
ky-ky-mtsuy u-stu nu tɕu tu-tɕɛt]
 PFV-NMLZ:P-bite 3SG.POSS-place DEM LOC IPFV-take.out
 [*tu-ci u-ŋgu pju-ɣɣle*] *tɕe, k^hwzɣpu*
 INDEF.POSS-water 3SG-inside IPFV-soak LNK puppy
ku-fsu~fse zo tu-ti-nu pu-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) 13

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

- (32) *wzo pju-sat-nu q^he tɕe u-ndzi nu pju-qax-nu*
 3SG IPFV-kill-PL LNK LNK 3SG.POSS -skin DEM IPFV-skin-PL
 People kill it and then skin it. (*spoŋsrɣm*, 107)

The linker *tɕe*, unlike *q^he*, 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, *tɕe* appears in sentences like (33) whose meaning is intermediate between a pure temporal and a conditional construction.¹⁰

- (33) *sump^hu u-ɣɣl, ɕkrɣz tɣ-me*
 tool.for.breaking.earth.clouds 3SG.POSS-handle oak PFV-not.exist
tɕe numu xɕɣj ju-βzu-nu sna.
 LNK DEM tree.species IPFV-make-PL be.appropriate:FACT

¹⁰Note that the verb *me* ‘not exist’ has two perfective forms, *nu-me* ‘it does not exist anymore’ as in (30) and the form *tɣ-me* ‘in cases when there is no’ illustrated by example (33) that only appears in clause linkings.

The handle of the earth clod breaker, when/if there is no oak wood, people can also make it using the *xɕɣj* wood (*xɕɣj*, 44).

The linker *tɕe*, while etymologically related to the locative *tɕu* (with a fossilized locative *-*j* suffix lost in Japhug, proto-Rgyalrong **tɕo-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 Brill 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 *nw* as in (34), left unmarked as in (35) or separated by a linker like *tɕe*. The clause containing *tsu* includes a nominal indicating the time period.

- (34) *nunw tɣ-wyrum nw tu-sɣi ɛnw-sɣi jamar tɣ-tsu tɕe*, [...]
 DEM PFV-be.white DEM one-day two-day about PFV-pass LNK ...
tɕe nunw tu-zga jw-ŋu.
 LNK DEM IPFV-be.ripe TESTIM-be

Once one or two days have passed after it turned white, it ripens. (Pimples, 124)

- (35) *izo kɣ-amufse-j kumŋu-xpa tɣ-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) *syndzuntamu c^hondɣre tɕizo ni kɣ-amufse-tɕi nɣ*
 Sangndzin.Lhamo COMMIT 1DU DU PFV-know.each.other-1DU LNK
jinde kuβdɣsqi u-ro to-pa
 now forty 3SG.POSS-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 *w-q^hu* ‘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 *w-q^hu* also has a locative meaning ‘behind’ when used preverbally or following a noun phrase relating to a place.

- (37) [*c^hú-wy-taɣ*] *w-q^hu* *tɕe, kɣ-taɣ* *t^hu-jɣɣ* *tɕe*
 IPFV-INV-weave 3SG.POSS-after LNK INF-weave PFV-finish LNK
tɕendɣre li *ɲú-wy-ɣtɕi* *tɕe li* *pjú-wy-xtsuw*
 LNK again IPFV-INV-wash LNK again IPFV-INV-thrush
ra.
 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) [*smuwtɕuwɣ nuɲuɲ tɣ-ɬoɣ*] *w-q^hu* *tɕa* *ri* *tɕe*
 Pleiades DEM PFV-come.out 3SG.POSS-after a.little LOC LNK
tɕe, qandɕe *tɣ-ɬoɣ* *ɲu.*
 LNK earthworm IPFV-come.out be:FACT

The (constellation of the) earthworm appears a little after the Pleiades have come out. (Pleiades, 23)

Second, the possessed noun *w-mp^hru* ‘after’, like *w-q^hu*, can express succession between two clauses. The verb of the subordinate clause is in the perfective (39) or in the evidential.

- (39) [*tumwɲ ka-lɣt*] *w-mp^hru* *nw* *tu.*
 sky PFV:3→3-auxiliary 3SG.POSS-after DEM exist:FACT
 It is found after it has rained. (*zdumqe*, 73)

Third, *w-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) *uʒo uŋgu jʒznʁ taʁndo ku-tso*
 3SG in.the.beginning while instruction NMLZ:S/A-understand
ci pjʁ-ŋu ri, u-ndo tʒe taʁndo
 INDEF EVD.IPFV-be LNK 3SG.POSS-side LNK instruction
mu-jʁ-tso
 NEG-EVD-understand
 In the beginning, he was an obedient (child), but in the end he became naughty. (elicitation)

An alternative construction used to express succession is the postposition *jʒznʁ* ‘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) [*tr-ʁoʁ*] *jʒznʁ nu-xtʒi laʁma nu*
 PFV-come.out while TESTIM-be.small apart.from.the.fact.that DEM
ku-fse nu-nu-ŋu~ŋu q^he
 NMLZ:S/A-be.like TESTIM-AUTO-be LNK
 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). (*zwxrq^hxjmxʁ*, 19)

To express an unbounded length of time following the reference point (valid up to the present time, unlike in the case of *jʒznʁ*), the postposition *ʒaŋpʒi* ‘since, henceforth’¹¹ can be used instead, and optionally followed by the emphatic linker *zo* and the linkers *tʒe* or *q^he*. This usage, although possible, is not attested in our corpus.¹²

- (42) [*uʒo jʁ-ari*] *ʒaŋpʒi zo tʒe tʒe kʁ-mts^hʁm*
 3SG PFV-go[II] since EMPH LNK LNK INF-hear
pu-me.
 PST.IPFV-not.exist
 We haven’t heard of him since he left. (elicited)

3.2.3 Precedence

The only way to express neutral temporal precedence in Japhug is a construction with the postposition *ʒuŋgu* ‘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).

¹¹This 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 *p^hin.tʒ^had* ‘from ... on’.

¹²All examples of *ʒaŋpʒi* ‘since’ in our corpus occur after noun phrases.

¹³This postposition, used with a noun phrase, only has a temporal meaning unlike *u-q^hu* ‘after’.

- (43) [*pɣjk^hu pjw-si*] *ɕwŋgu zo w-ɕa w-ndza*
 already IPFV-die before EMPH 3SG.POSS-flesh 3SG-BARE.INF:eat
tu-za-nw ɕti.
 IPFV-start-PL be:ASSERTIVE:FACT
 They start eating its flesh before it dies. (Lion, 44)
- (44) [*lɣβzaŋ ju-nuyi*] *ɕwŋgu stummw βzu-j*
 Lobzang IPFV-come.home before marriage make:FACT-1PL
ra
 need:FACT
 We have to organize the marriage before Lobzang comes back. (Lobzang, 32)
- (45) [*ɲw-si*] *ɕwŋgu pu-nw-NGYT-ndzi*
 IPFV-die before PFV-AUTO-ANTICAUS:separate-DU
 They had divorced before she died. (Siblings, 325)

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

- (46) *tu-kw-mɣɣm tu-ze ɕwŋgu ɣzɲɣ*
 GENR.POSS-NMLZ.S/A-hurt IPFV-start[III] before while
tú-wy-z-nusmɣn 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 *mɣɕtɕa* ‘until’ is employed, as in (47) and (48). The subordinate clause is almost always in the perfective.

- (47) *βzu nu kw a-mɣ-kɣ-kw-mtsuy ra ma*
 mouse DEM ERG IRR-NEG-PFV-GENR:S/P-bite need:FACT LNK
ŋotɕu ka-ndo q^he, [mu-nw-spɣt] mɣɕtɕa
 where PFV:3→3-grab LNK NEG:PFV-be.torn.apart until
ɲw-te mɣ-ŋgɣl.
 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) [*kuɣɣsqi w-ro*] *tuɕa mu-t^hw-azywt-ndzi mɣɕtɕa*
 eighty 3SG.POSS-leftover each NEG-PFV-reach-DU until
mu-nw-si-ndzi nɣ
 NEG-PFV-die-DU SFP

They did not die before they had reached eighty (years old). (Siblings, 38)

In most examples, *mɣɛtʂa* ‘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 *mɣɛtʂa* 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) [*w-mat* *tu-lɣt* *ta-za*] *mɣɛtʂa*
 3SG.POSS-fruit NMLZ:ACTION-throw PFV:3→3-begin until
mɣ-swɣsɣl-nu
 NEG-recognize:FACT-PL
 They are not able to recognize it before it has born fruit. (Oat, 19)

- (50) [*mu-lɣ-fsoɸ*] *mɣɛtʂa pu-rɣgu-a* *pu-ra*
 NEG-PFV-be.clear until PST.IPFV-lie-1SG PST.IPFV-need
 I had to (remain) lying until the day broke. (Lhazgron, 37)

- (51) [*mu-t^hu-wxti*] *mɣɛtʂa tɣ-mu* *nu ku w-pu*
 NEG-PFV-big until INDEF.POSS-mother DEM ERG 3sg.poss-litter
ra, w-p^hu *nu w-sɣ-me* *ri*
 PL 3sg.poss-male DEM 3SG-NMLZ:OBLIQUE-not.exist LOC
ju-tsum *tɕe*,
 IPFV-take.away LNK
 Until they grow big, the mother takes her litter away to a place
 where the male is not found. (Lion, 75)

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) [*lɣ-fsoɸ*] *mɣɛtʂa pu-rɣgu-a* *pu-ra*
 PFV-be.clear until PST.IPFV-lie-1SG PST.IPFV-need
 I had to (remain) lying until the day broke. (elicited)

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 *tu-*, whose morphology is described in (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), S in (54) and A of the subordinate clause to the S 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 *ny* (54), *tɕe* or *q^he* (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 ku pju-tu-mto*] *zo sat-nur*
 people PL ERG IPFV-CONV:IMM-see EMPH kill:FACT-PL
ɕti.
 be.ASSERTIVE:FACT
 People kill it as soon as they see it. (Dhole, 15)
- (54) [*u-pu ju-tu-vaβ*] *ny kumpyɾtɕu 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) [*pju-tu-qlut*] *q^he, mdoβ q^he, c^huβ zo*
 IPFV-CONV:IMM-break LNK brittle LNK IDEO:I:in.pieces EMPH
pju-nɕlut
 IPFV-ANTICAUS:break
 When one breaks (its stalk), as it is very brittle, it breaks at once
 into two pieces. (*mɾɾmɾm*, 37)
- (56) [*Iu-tu-fsoβ*] *zo q^he tu-rɾma*
 IPFV-CONV:IMM-be.clear EMPH LNK NMLZ:ACTION-work
tu-ze ju-ɲu.
 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^hamak^ha pju-tu-sko*] *tɕe tu-oɕq^he-a ɲu*
 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 *ϕumuma* ‘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).

- (58) *nunuw w-χti* *nw pjw-sat-nw q^he [pw-si]*
 DEM 3SG.POSS-mate DEM IPFV-kill-PL LNK PFV-die
ϕumuma *nw ra wuma zo* *c^hw-γrwu aβyndundyt*
 immediately.after DEM PL really EMPH IPFV-weep everywhere
ju-nxϕuϕe *ju-ηu* *ri, χsu-sji*
 IPFV-go.in.all.directions TESTIM-be LNK three-day
mγ-ku-tsu *q^he li* *kumaβ ci* *ju-ywt*
 NEG-INF:NON.HUMAN-pass LNK again other INDEF IPFV-bring
q^he,
 LNK

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) [*turgipaβtsa nw tγ-sci*] *ϕumuma,* *nw paβtsa*
 squirrel DEM PFV-be.born immediately.after DEM piglet
ra *c^hw-tu-sci tϕe, tϕe nw nunuw*
 IPFV-CONV:IMM-be.born LNK LNK LNK DEM DEM
ku-ηaβ *ηja* *tu,* *ku-wyrum*
 NMLZ:S/A-be.black completely exist:FACT NMLZ:S/A-be.white
ηja *tu,*
 completely exist:FACT

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 *kóβmuz* ‘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

¹⁴As a postposition, *kóβmuz* also occurs after noun phrases expressing a temporal duration.

- (60) *tçeri ku-βraβ-nu*, [*u-mi ra ku-xtçyr-nu*] *kóβmuuz*
 LNK IPFV-tie.up-PL 3SG.POSS-foot PL IPFV-attach-PL only.after
ty-lu pjw-tçyt ju-ra
 INDEF.POSS-milk IPFV-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)

More commonly, the phrase *nu kóβmuuz ny* ‘and only after that’ is used in texts for expressing this meaning as in (61).

- (61) *nu u-muuntov nu pu-ηgra kóβmuuz ny*
 DEM 3SG.POSS-flower DEM PFV-ANTICAUS:make.fall only.after LNK
u-jwaβ ju-lxt tçe nu kóβmuuz ny
 3SG.POSS-leaf IPFV-throw LNK *nu* only.after 3SG.POSS-fruit
u-mat ku-ts^hov ηu.
 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 *tyk^ha* ‘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 *tçe* and *q^he*.

- (62) *lamu ku [yi-ndzi] tyk^ha tçe puwuw u-çki uzo*
 Lhamo ERG come:FACT-DU about.to LNK donkey 3SG-DAT 3SG
ku ta-twt nu to-swujut tçe,
 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) [*amboβ*] *tyk^ha tçe tçe ju-mu-a tçe, tçe*
 burst:FACT about.to LNK LNK TESTIM-be.afraid-1SG LNK LNK
a-jaβ ju-munmu ju-çti q^he,
 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) [*zatsa tumwu qanwu*] *pjɣ-ŋu*, *tɕeri nuw tɕu tɕe puwuw*
soon sky be.dark:FACT EVD.IPFV-be but DEM LOC LNK donkey
nuw tuw-tupuw k^ha u-p^haɣ ntsi
DEM one-family house 3SG.POSS-side one.of.a.pair
puw-kuw-mbut u-p^haɣ ntsi
PFV-NMLZ:S/A-collapse 3SG.POSS-side one.of.a.pair
kuw-pe ci yuw u-ɣɣi zuw ko-ɣɣi
NMLZ:S/A-be.good INDEF GEN 3SG-before LOC EVD-stay
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. (The
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) [*tɕe yuw-tɕ^hw*] *puw-ŋu ri, ci nuw*
LNK INV-gore:FACT PST.IPFV-be LNK INDEF DEM
mɣ-wy-suy-c^ha puw-ŋu jamar zo qarts^haz nuw
NEG-INV-CAUS-can PST.IPFV-be about EMPH deer DEM
jɣ-nuw-ɬoɣ ndɣre,
PFV-AUTO-come.out LNK

As the (muntjac) was about to gore him, as he was about to fail, the deer appeared and... (Lobzang1.70)

Third, the conative prefix *ju-*, combined with a finite verb in perfective or evidential form, also expresses conative and frustrative meaning as the factual+past imperfective construction, as in (66).

- (66) *χsuw-ɣɣuw zuumi*, [*χsuw-ɣɣuw ju-ko-ɕe*] *zo tɕe, nuw*
three-turn almost three-turn CONATIVE-EVD-go EMPH LNK DEM
ma muw-ɣɣ-c^ha tɕe,
a.part.from NEG-EVD:PERM-can LNK

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

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

- (67) [*pri nuw ku nunuw qrormbuw nuw u-loɣ nuw*
bear DEM ERG DEM anthill DEM 3SG.POSS-nest DEM
t^ha-sloɣ] *nuw tɕu tɕe, u-mɣaɣ u-ŋguw ku-ɕe,*
PFV:3→3'-root.out DEM LOC LNK 3SG.POSS-eye 3SG-inside IPFV-go
u-mɣaɣ u-ŋguw u-rmbi ku-ɣɣt tɕe
3SG.POSS-eye 3SG-inside 3SG.POSS-urine IPFV-throw LNK

When bears_i root out ant_jhills, they_j go inside their_i eyes_k and urinate in them_k. (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 *u-raŋ* ‘time’ in a locative form as its head noun. Second, the subordinate clause is marked with the relator nouns *u-k^huuk^ha* ‘while’ and *u-juja* ‘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 *tɕu*.

The construction involving *u-raŋ* ‘time’ is formally a non-nominalized prenominal relative clause. The noun *u-raŋ* ‘time’ is the head noun, and bears a locative marker (*ri*, *zu* or *nu tɕu*). This construction corresponds to English ‘In the time when...’. It is generally used to indicate a long time period.

- (68) [*ny-ɕya* *xtɕi*] *u-raŋ* *ri* *nu*
 2SG.POSS-tooth small:FACT 3SG.POSS-time LOC DEM
tú-wy-nyzda *ŋu* *ri*
 2-INV-accompany be.with:FACT but

While you are young, she will be with you. (Slob.dpon2, 60)

Like *u-raŋ* in the previous construction, the marker *u-k^huuk^ha* ‘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 than 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) *tɕendɣre* [*tu-nusmɣn*] *u-k^huuk^ha* *tu-rɣma-nu*.
 LNK IPFV-treat 3SG-the.same.time IPFV-work-PL

(The lepers) worked (there) while he treated them. (Leprosy, 61)

- (70) *nunu* [*ju-rɣuy*] *u-k^huuk^ha* *u-se* *ku-ts^hi*
 DEM IPFV-run 3SG-the.same.time 3SG.POSS-blood IPFV-drink
ɲu-ɕti.
 TESTIM-be:ASSERTION

It drinks its blood while (its prey is still) running. (Lion, 50)

The marker *u-juja* ‘while, along’ differs from *u-k^huuk^ha* 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) [*uzo tɣ-wxti*] ***u-juja*** *tɕe* *u-jwaɁ* *numu*
 3SG PFV-be.big 3SG-along LNK 3SG.POSS-leaf DEM
ɲu~ɲu-ndwβ *zo* *ɲu-ɲu*.
 INCREASE~IPFV-be.tiny EMPH TESTIM-be
 As it grows big, its leaves become more and more tiny. (Poplar, 18)

- (72) [*lɣ-fsoβ*] ***u-juja*** *nu* *ɲu-ru* *tɕe*
 PFV-be.clear 3SG-along DEM IPFV:DOWN-look LNK
u-kɣ-numbrɣpu *nu* *k^hu* *pu-ɕti* *ɲu-ɲu*,
 3SG-NMLZ:P-ride DEM tiger PST.IPFV-be.ASSERT TESTIM-be
 As the day was breaking, looking down, he (progressively realized that) what he was riding was a tiger. (Tiger, 20)

The gerund converb *sɣ-*, generally followed by the marker *zo* (see (2.1.4) for the morphological structure of this non-finite form) semantically overlaps with the *u-k^huk^ha* ‘while’ construction, as illustrated by this pair of sentences which follow each other within the same text:

- (73) [*ɲu-nuqambuɓjom*] ***u-k^huk^ha*** *ri* *ju-βji* *tɕe*
 IPFV-fly 3SG-the.same.time LOC IPFV-catch LNK
tu-ndze *ɲgɣɣl*. [*sɣ-nuqambuɓjom*] *zo*,
 IPFV-eat[III] be.usually.the.case:FACT GERUND-fly EMPH
ku-ndɣm *tɕe*, *ɲju-sat* *ɲgɣɣl*
 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 from it syntactically in that it 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) *numu* *ɲu-nuɣ-me* *ri* *tɕe* *nu* *kumɣ* *ku-χse*
 DEM IPFV-APPL-fear[III] LNK LNK DEM also IPFV-feed[III]
ɲu-ra, *tɕe* [*sɣz-nuɣmu~ɣmu*] *zo* *ku-χse*
 TESTIM-have.to LNK GERUND-APPL-fear EMPH IPFV-feed[III]
ɲu-ra
 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 *ku* as in (75).

- (75) *tyzi nunuw ku [u-qom sv-ɬw~ɬoɸ] ku*
 young.lady DEM ERG 3SG.POSS-tear GERUND-come.out ERG
ɲɣ-mja tɕe,
 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 *u-k^hwk^ha* ‘while’ construction.

- (76) *βɣɲno yw u-pɕi ri pjw-rmbi ɲu*
 lower.millstone GEN 3SG-outside LOC IPFV-pile.up[III] be:FACT
tɕe, [ku-su-fskɣr] zo pjw-rmbi ɲu matɕi
 LNK IPFV-CAUS-go.around EMPH IPFV-pile.up[III] be:FACT because
[ku-mtɕuw] u-k^hwk^ha pjw-tɕɣt
 IPFV-turn 3SG-the.same.time IPFV-take.out
 (The mill)_i accumulates (the flour)_j outside of the lower millstone_k,
 it_i makes it_j revolve around it_k while it_i accumulates it_j, because it_i
 turns around while it_i takes it_j out. (The mill, 210)

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.¹⁵ 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’.

¹⁵A semantically similar construction was described by Valentine (2009: 204).

Unless you take me (with you), I won't give it to you. (flood1, 62)

- (86) [*ɕu-kɣ-ru* *mu~mɣ-pu-tu-c^ha* *ɣu*] *nɣ*
 TRANSLOC-INF-bring COND~NEG-PST.IPFV-2-can be:FACT LNK
nɣ-srɣm *nɣ-sroɕ* *lɣt-i*
 2SG.POSS-root 2SG.POSS-life throw:FACT-1SG

If you are not able to bring (the treasure) here, we will kill you.
 (Slobdpon1, 9)

This conditional construction is used to build linker-like phrases such as *nu maɕ nɣ* 'otherwise' (see section (4.3)) and *tɕ^hi maɕ nɣ* 'at least' which can be analyzed as in (87).

- (87) *nu maɕ* *nɣ* / *tɕ^hi maɕ* *nɣ*
 DEM not.be:FACT LNK what not.be:FACT LNK

The clause *tɕ^hi maɕ nɣ* commonly occurs before another clause ending with the linker *tsaɕ* 'at least', as in (88).

- (88) *wortɕ^hiwojɣr zo,* *tɕ^hi maɕ* *nɣ,* [*a-ɣi* *ra*
 please EMPH what not.be:FACT LNK 1SG.POSS-relative PL
nu-p^he *ɕu-rɣ-fɕɣt-tɕi*] *tsaɕ ma,*
 3PL-DAT TRANSLOC-ANTIPASS-tell:FACT-DU at.least apart.from
ɣu-nuzduɣ-a-nu
 INV-worry.about:FACT-1SG-PL

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 *nu-*, which is often geminated. Unlike other conditionals, the verb of the protasis is not reduplicated. It receives past imperfective 'down' marking *pu-* regardless of whether it is stative or dynamic, as shown by the examples (89) and (90).

- (89) *tɕe* [*tu-sum* *pu-a <nu>ri*] *nɣ ju-kw-ɕe,*
 LNK INDEF.POSS-mind PFV-<AUTO>go[II] LNK IPFV-GENR:S/P-go
 [*mu-pu-a <nu>ri*] *nɣ ju-kw-ɕe* *pu-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)

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

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

- (97) [*tu-ci pu-nnu-dʒn,*] [*zum*
 INDEF.POSS-water PST.IPFV-AUTO-be.many bucket
pu-nnu-rʒi] *kunx, tu-mt^hx*
 PST.IPFV-AUTO-heavy also INDEF.POSS-waist
mu-pa-ɕu-mjɣm
 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. (*zgrɪ*, 188)

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

- (98) [*c^hu-wy-nuβlu*] *kunx, tu-nut* *ko* *ɲu*
 IPFV-INV-burn also IPFV-be.ignited CONTRAST:FOC be:FACT
ri, u-brɣt nu ɲak zo q^he, maka
 LNK 3SG.POSS-charcoal DEM be.black:FACT EMPH LNK at.all
ɲu-ɣx-mpje mɣ-c^ha.
 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. (*t^hxwum*, 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 nu smɣnba ku*
 NMLZ:S/A-be.sick DEM doctor ERG
mu~mɣ-ɕ-ta-nusmɣn] *nɣ, si*
 COND~NEG-TRANSLOC-PFV:3→3[?]-treat LNK die:FACT
ɕti.
 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 *pu-*, as in (100).

- (100) [*smɣn za tsa tu-ndze-a a-pu-ŋu tce*
 medicine early a.little IPFV-eat[III]-1SG IRR-IPFV-be LNK
mu-pu-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 *kɣ-* ‘toward east’ direction marker when used in meaning ‘bump one’ head’.

- (101) *nɣ-k^ha lɣ-ye-a ri, a-ku*
 2SG.POSS-house PFV:UPSTREAM-come[II]-1SG LNK 1SG.POSS-head
kɣ-nu-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 *pu-* instead of *kɣ-*, indicating that this is a past imperfective, not a perfective form.

- (102) *nɣ-k^ha lɣ-ye-a ri, [a-ku*
 2SG.POSS-house PFV:UPSTREAM-come[II]-1SG LNK 1SG.POSS-head
pju-p^haβ-a a-pu-ŋu tce
 IPFV-lower-1SG IRR-PST.IPFV-be LNK
mu-pu-nu-rpu-t-a.
 NEG-PST.IPFV-AUTO-bump.into-PST:TR-1SG
 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) *azo a-sum tce, nu-bru zo ɣɣzu*
 1SG 1SG.POSS-thought LNK 3SG.POSS-horn EMPH exist:SENSORY
cti tce [ku-du~dɣn ku
 be.AFFIRMATIVE:FACT LNK NMLZ:S/A-EMPH~be.many ERG

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

Clause linking type	Construction
Cause / result	SC with linker <i>matci</i> or <i>ma</i> ‘because’ MC with linker <i>núndza</i> ‘for this reason’
Purpose	Purposive converb in the SC linker <i>utɕ^huβ</i> ‘in order to’ in the SC
Possible consequence	linker <i>ma</i> + verb in factual form in the MC subordinate clause with the verb <i>suso</i> ‘think’ expressing the consequence

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.¹⁶

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

- (106) *tɕe nunu tú-wy-ywɕkat tɕe [ur-sno yú-ta*
 LNK DEM IPFV-INV-pack.on LNK 3SG.POSS-saddle INV-put:FACT
múj-ra] *matci, ur-βri nu tɕu*
 NEG:TESTIM:have.to because 3SG.POSS-body DEM LOC
tr-sno ku-fse yr<nu>zu
 INDEF.POSS-body NMLZ:S/A-be.like <AUTO>exist:SENSORY
ɕti tɕe,
 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)

¹⁶This is a case where Dixon’s terms ‘supporting’ vs ‘focal’ clause may be more appropriate, but we keep the traditional terminology for consistency.

- (107) [*paʁ ɣw u-ɣli* *dɣn*] *matɕi*,
 pig GEN 3SG.POSS-manure be.many:FACT because
mɣ-ndze zo me q^he u-ɣli
 NEG-eat[III]:FACT EMPH not.exist:FACT LNK 3SG.POSS-manure
dɣn
 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^hu*] *q^he matɕi, tumw ku-ɣrŋi*
 NEG-EVD-agree LNK because sky NMLZ:S/A-blue
u-me pɣɣ-ɕti-nw tɕe
 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 pɣɣ-sɣsci*] *matɕi kyndzɣts^hi ri*
 very EMPH EVD.IPFV-nice because food also
pɣɣ-dɣn, tɕe kɣ-nɣbaʁ ri kɣa zo
 EVD.IPFV-many LNK INF-have.a.good.time also entirely EMPH
pɣɣ-ɕti
 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. (The flood3, 87)

A variant of this construction with the linker *ma* is also attested as in (110). Unlike *matɕi*, this linker presents many other uses (in particular, possible consequence (4.3)).

- (110) *tɕendɣre aɣnduundɣt zo ɕ-tu-nɣɣama-nw ri*
 LNK everywhere EMPH TRANSLOC-IPFV-pray.for.rain-PL LNK
 [*ku-p^hɣn pɣɣ-me*] *ma zuβdaʁ nw*
 NMLZ:S/A-efficient EVD.IPFV-not.exist because mountain.god DEM
ra tu-ci u-ku-ɣro pɣɣ-me
 PL INDEF.POSS-water 3SG-NMLZ:S/A-possess EVD.IPFV-not.exist
 People went everywhere to pray for water, but it was for nothing, be-
 cause 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 *núndza*

‘for this reason’ in the main clause. The adverb *núndza* 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) [*tɕe w-mtuw ɣɣzu*] *tɕe, tɕe núndza*
 LNK 3SG.POSS-crest SENSORY:exist LNK LNK for.this.reason
qapɣɣmtuwtu tu-ti-nw ɲw-ɲu
 hoopoe IPFV-say-PL TESTIM-be
 It has a crest, and this is the reason why it is called ‘hoopoe’.
 (Hoopoe, 20)

- (112) *k^hu nu sqamnu-xpa mu-tɣ-tsu mɣɕtɕa mɣ-rɣpu*
 tiger DEM fifteen-year NEG-PFV-reach until NEG-bear.young:FACT
tu-ti-nw ɲw-ɲu tɕe, tɕe núndza nu, k^hu nu
 IPFV-say-PL TESTIM-be LNK LNK for.this.reason DEM tiger DEM
ɲw-rkuw. k^hu nu ɲw-rkuw tɕe núndza
 TESTIM-be.rare tiger DEM TESTIM-be.rare LNK for.this.reason
ɲw-ɲu tu-ti-nw ɲw-ɲu
 TESTIM-be IPFV-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 *núndza*, as in (113).¹⁷

- (113) *maɕ ɲw-ɣɣk^hw ndza ɕti*
 not.be:FACT TESTIM-be.smoky reason be:ASSERTIVE:FACT
 No, (I am crying) because there is smoke. (The three sisters, 222)

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 con-verb and the linker *utɕ^hwɔβ* ‘in order to’.¹⁸ 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

¹⁷This is the response to the question *a-tɣ-ɕime, tɕ^hi ku-tu-ɣɣwu? mɣ-kw-pe ɣɣzu wɔβɣɲu?* ‘My lady, why are you crying? Are you feeling unwell?’.

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

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 *sr-/srz-/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-lxy acyβ nu ku u-my-sr-jmu~jmut,*
 NMLZ:S/A-herd Askyabs DEM ERG 3SG-NEG-PURP:CONV-forget
u-p^huŋgu nu tɕu rdystaβ-puɔpu tɕ^hurdu ci
 3SG.POSS-inside.clothes DEM LOC stone-little pebble INDEF
ɲy-rku,
 EVD-put.in

The cowboy Askyabs put a little pebble inside his clothes so that he would not forget it. (The frog, 166)

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

- (115) *tɕe nu u-pa nunu li k^hyxtu nunu,*
 LNK DEM 3SG.POSS-under DEM again platform DEM
tu-ci, tuftsaβ ku pju-su-spoβ
 INDEF.POSS-water leaking.water ERG IPFV-CAUS-have.a.hole
ŋgrɹl tɕe, tɕe
 be.usually.the.case:FACT LNK LNK
 [*u-my-pju-sr-su-spoβ,* *nunu tɕu [...]*
 3SG-NEG-IPFV-CONV:PURP-CAUS-have.a.hole DEM LOC [...]
cupa ku-fse ɲu-wy-ta tɕe,
 flat.stone nmlz:S/A-be.like IPFV-INV-put LNK

Under the top platform, the water, the leaking water can leak through (the roof), and 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) *maβ ma [a-my-ɲu-sr-jmu~jmut]*
 not.be:FACT because 1SG-NEG-IPFV-CONV:PURP-forget
nu-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). (The frog, 172)

In (117), it would alternatively be possible to use the first singular form of the purposive converb *a-mɣ-tu-sɣ-rpu-rpu* without changing the meaning.

- (117) *kum ɲu-mbɣr tɕe, [a-ku*
 door TESTIM-low LNK 1SG.POSS-head
u-mɣ-tu-sɣ-rpu~rpu] *pu-p^haβ-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 tɕe [a-tu-sɣ-numtɕu~mtɕi]* *za*
 tomorrow LNK 1SG-IPFV-CONV:PURP-get.up.early early
ku-nu-rɲgu-a 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 *utɕ^huβ* ‘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. *mɣ-kɣ-nɣndzo utɕ^huβ,* /
 IRR-NEG-PFV-2-feel.cold in.order.to
 b. *a-mɣ-nu-tu-nɣndzo utɕ^huβ,* /
 IRR-NEG-PFV-2-feel.cold in.order.to
 c. *nɣ-mɣ-ɲu-sɣ-nɣndzu~ndzo,* /
 2SG-NEG-IPFV-CONV:PURP-feel.cold
 d. *tu-ɲga ku-jak tsa tɣ-ɲge*
 INDEF.POSS-clothes NMLZ:S/A-thick a.little IMP-wear[III]
 Wear thick clothes, so that you don’t get cold. (elicitation)

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. *tu-ɲga ku-jak tsa tɣ-ɲge tɕe*
 INDEF.POSS-clothes NMLZ:S/A-thick a.little IMP-wear[III] LNK
 b. *a-mɣ-nu-tu-nɣndzo utɕ^huβ a-pu-ɲu*
 IRR-NEG-PFV-2-feel.cold in.order.to IRR-IPFV-be

- c. *ny-mx-nw-sx-nyndzu~ndzo* *a-pw-ŋu*
 2SG-NEG-IPFV-CONV:PURP-feel.cold IRR-IPFV-be
 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 *t^ha* or its variant *tçet^ha* 'later, in a moment' often appear in the main clause of possible consequence linking (123, 124, 128).

- (121) [*turme ra ku a-mx-ty-ndo-nw*] *ma*
 people PL ERG IRR-NEG-PFV-TAKE-PL LNK
yw-z-nyndxy-nw
 INV-CAUS-be.poisoned:FACT-PL
 People should not touch it, otherwise they would get poisoned. (False matsutake, 26)
- (122) [*ty-rundzaxspa*] *ma tu-atyr*
 IMP-be.careful LNK 2-fall.down:FACT
 Be careful not to fall down. (conversation, 2010)
- (123) [*tç^hi c^hw-tw-nyŋkuŋke* *ŋu*] *ma t^ha*
 what IPFV:DOWNSTREAM-2-walk.around be:FACT LNK in.a.moment
βduut ku t^u-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) [*nw k^hramba ma-ty-βze-a* *ra*] *ma tçe*
 DEM lie NEG-IMP-make[III]-1SG have.to:FACT LNK LNK
 <lishi> <jizai> *pju-tw-βze* *çti* *tçet^ha*
 history record IPFV-2-make[III] be:AFFIRMATIVE:FACT later
 <zuzubeibei> *ku yw-nyŋqe-a-nw*.
 generations 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. (*kikakçi*, 217)

When they are about to have a child, women have to work a lot and be active, otherwise childbirth is difficult, they say. (Conversation, Chenzhen, 2013)

Another construction attested for possible consequence involves a clause with ergative (similar to the Manner linking) of the verb *suso* ‘to think’. It can be a finite verb as (129) or the infinitive *ky-suso* 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 *ky-suso*.

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.

- (129) [*a-mi* *numw a-ty-mna* *ɲw-susam-a*] *tɕe*,
 1SG.POSS-foot DEM IRR-PFV-feel.better IPFV-think[III]-1SG LNK
nuw ra ku-z-nusman-a *ŋu*.
 DEM PL PRES-CAUS-treat-1SG be:FACT
 I would like my feet to feel better, and so I treat them with (these medicine). (conversation, 2013)

- (130) [*nuwɕe*] *ky-suso ku, u-mbro* *numw taqaβ*
 go.back:FACT INF-think ERG 3SG.POSS-horse DEM needle
ɕ^hɣ-z-nuwtɕ^hab-nw, u-k^huna *nuw rkorsa u-pa*
 EVD-CAUS-eat-PL 3SG.POSS-dog DEM toilet 3SG.POSS-down
lo-ja-nw
 EVD-pen-PL
 Thinking that he (was about to) go back, they fed his horse with needles and penned his dog in the toilets. (Gesar 250-1)

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).

- (131) *ny-wa* *kuw [nyzo nuwɣ]* *ky-suso ku k^ha*
 2SG.POSS-father ERG 2SG come.back:FACT INF-think ERG house
u-rkuw *ɣmaβ ɣsu-tyxur pa-sui-lyt*
 3SG.POSS-side soldier three-circle PFV:3→3'-CAUS-throw
ɕti *tɕe*
 be.AFFIRMATIVE:FACT LNK
 Your father, thinking that you would come back, put three circles of soldiers around the house. (The fox, 154)

In (131), there are three referents involved, the father (A), the addressee (B) and the speaker (C). We see that the verb *nuɣi* ‘he will come back’ is in third person singular form and reflects the point of view of referent A, while the overt pronoun *nyzo* ‘2SG’ reflects the addressee. This mismatch could be paraphrased in English as ‘thinking of you ‘he will come back’...’.

Despite the agreement mismatch, [*nyzo nuɣi*] 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 extra-position is possible.

Although Japhug does have an apprehensive marker (see example (154)), unlike Aguaruna this form is not used in Possible Conquence 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 converbs.

Table 10: Addition linking constructions

Clause linking type	Construction
Unordered addition	Parataxis
	Coordination with <i>tɕe</i>
Elaboration	Parataxis
	Comitative postposition <i>c^ho</i>
	Correlative linkers <i>tɕi</i> or <i>ri</i> in both clauses
Alternating actions	verb + <i>ny</i> + verb
Contrast	Parataxis
	Contrastive linker <i>ri</i>
	Contrastive focalizers <i>bo</i> and <i>ndɣre</i>
	Adversative linker <i>mɣɣɣɣz</i> ‘instead’
	Linker <i>labma</i> ‘only, just’ at the end of the MC
	Linker <i>jinbala</i> ‘although’

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 *tɕendɤre* as in (132). Unlike the temporal succession linking (3.1), unordered addition is not expressed by the linker *q^he*, which always implies a temporal order between two events.

- (132) *zara χsum ma pjɣ-me-nur tɕe tɕendɤre*
 they three apart.from EVD.IPFV-not.exist-PL LNK LNK
nu-nurɣa ci pjɣ-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) *u-p^hoŋbu ra ɲu-wxti, ɲu-ts^hu zo.*
 3SG.POSS-body PL TESTIM-big TESTIM-fat EMPH
 Its body is big and fat. (Bees, 12)

Second, the comitative postposition *c^ho* or its compound form *c^hondɤre* 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 *q^he* are not syntactically anchored either in the clause preceding or following it (see (2.4)), *c^ho* 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 *c^ho* in elaboration clause linking, connecting two finite clauses with stative verbs sharing the same S without any overt noun phrase.

- (134) *qambruw u-rme nu-fse q^he, nu-dɣn*
 yak 3SG.POSS-hair TESTIM-be.like LNK TESTIM-be.many
c^ho nu-rɣji.
 COMMIT TESTIM-be.long
 (The camel's hairs) are like that of the yak, there are many and they are long. (Camel, 77)

- (135) *nunuw u-mdzu rcanuw, wuma zo mtɕov*
 DEM 3SG.POSS-thorn TOP.EMPH really EMPH be.sharp:FACT
c^hondɣre ɣɕu
 COMMIT be.hard:FACT
 As for its thorns, they are very sharp and hard. (olo, 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) *nu ma tɕ^hi sna c^ho tɕ^hi c^ha ra*
 DEM a.part.from what be.good:FACT COMMIT what can:FACT PL
mɣxsi
 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 *c^ho* 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) *tɕe nu u-rɣi a-mɣ-pu-ɕe ra*
 LNK DEM 3SG.POSS-grain IRR-NEG-PFV:DOWN-go have.to:FACT
ma pju-tɕi mɣ-c^ha tɕe tɕendɣre [a-nu-ɣci
 LNK IPFV-be.rotten NEG-can:FACT LNK LNK IRR-PFV-get.wet
zo q^he c^ho ftɕar a-kɣ-ndzov zo q^he] li
 EMPH LNK COMMIT summer IRR-PFV-be.attached EMPH LNK again
tu-ɬov ɕti
 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 *tɕi* and *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) *ca tci ju-ndze, exci tci ju-ts^{hi}*
 meat also TESTIM-eat[III] meat.stew also TESTIM-drink
ty-lu ta-mar tci ju-ndze
 INDEF.POSS-milk INDEF.POSS-butter also TESTIM-eat[III]
 (Pigs) eat meat, drink meat stew, and also eat butter. (Pigs, 29-30)
- (139) *cymu nunu u-bru tci me,*
 female.muskdeer DEM 3SG.POSS-horn also not.exist:FACT
u-ndzyi tci me.
 3SG.POSS-tusk also not.exist:FACT
 The female musk deer has neither horns nor tusks. (muskdeer, 34)
- (140) *nunu u-p^{hu} ri ku-wxti 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 *ri* found in (140) must be distinguished from the phrasal adversative linker *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 *ny*, as in (141).

- (141) *t^heme nunu tce k^hxtu nu tce, [ku-*ce*] ny*
 girl DEM LNK platform DEM LNK IPFV:EAST-go LNK
ju-yi tce ju-nyrua ma nu ma
 IPFV:WEST-come LNK IPFV-look.around because DEM apart.from
ryma mu-pj^x-ra.
 work:FACT NEG-EVD:IPFV-have.to

The girl would come and go on the platform and look around, as she did not have any work to do. (The raven4, 134)

The linker *ny*, used with the same verb, indicates an action that either takes a long period of time or occurs repeatedly (142).

- (142) *k^ha yu u-pci ri tu-nurwurba [tu-*ce*] ny*
 house GEN 3SG-outside LOC IPFV-climb IPFV:UP-go LNK
*tu-*ce* tce, nunu <wulou> <liulou> jamar tu-zyut*
 IPFV:UP-go LNK DEM fifth.floor sixth.floor about IPFV:UP-reach
ju-c^ha.
 TESTIM-can

It climbs on the (wall) outside of the house all the way up and can reach the fifth or sixth floors. (Slugs, 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 *dɣn* ‘many, a lot’ and *rkun* ‘few’¹⁹ in example (143) without any overt linker, adverb or postposition marking contrast.

- (143) *suŋguw tɕe dɣn tsa, kumaɁ nu 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. (*paɁtsa ma*, 133)

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

- (144) [*tɕe kɣ-nɣre pɣɣ-tɕɣt*] *ri u-mqɣj*
 LNK INF-laugh EVD-take.out LNK 3SG.POSS-scolding
pɣɣ-tu
 EVD.IPFV-exist
 He made a joke, but he was scolded. (The naughty boy, 22)

- (145) [*wzo si wxti*] *ri, u-muntɔɁ ku-ndur~nduβ*
 3SG tree be.big:FACT LNK 3SG.POSS-flower NMLZ:S/A-EMPH~small
zo ɲu-lɣt ɲu
 EMPH IPFV-throw N.PSt:be
 It is a big tree, but it grows very small flowers. (*t^hɣwum*, 29)

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

- (146) *zara ku pu-kɣ-nu-ji ci ɣɣzu tɕe, nu*
 they ERG PFV-NMLZ:P-AUTO-plant INDEF exist:SENSORY LNK DEM
ndɣre múj-mum.
 CONTRAST:FOC NEG:TESTIM-be.tasty
 There is one which is grown by people, but that one is not tasty (unlike the previous one). (Edible black mushroom 17-8)

¹⁹The stative verb *rkun* ‘be few’ is often used as a euphemism for ‘non-existent’ in Japhug.

- (147) *paβ kw tçi ndze, nuŋa kw tçi ndze. tçe* [*turme*
 pig ERG too eat[III]:FACT cow ERG too eat[III]:FACT LNK people
kʸ-ndza] *ndʸre mʸ-sna.*
 INF-eat CONTRAST:FOC NEG-be.good:FACT
 Pigs eat it, cows eat it, but it is not good for people to eat. (*tç^hemekʸtsa*
 120)

The focalizer *βo* 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’.

- (148) *xçiri kʸ-ti ci tu tçe, nuβ βo*
 weasel NMLZ:P-say INDEF exist:FACT LNK DEM CONTRAST:FOC
ku-xtçu~xtçi ci çti, [...] *βzu*
 NMLZ:S/A-EMPH~small INDEF be.AFFIRMATIVE:FACT [...] mouse
ndʸre mʸ-zu. βzu sʸz ndʸre
 CONTRAST:FOC NEG-be.just:FACT mouse COMP CONTRAST:FOC
wxti ŋu,
 be.big:FACT be:FACT

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 *mʸʸʸʸz* ‘instead’ (Chinese *fǎn’ér* 反而) is used to express a result contrary to expectations, as in (149).

- (149) *mʸ-ku-mda tú-wʸ-tçʸaβ q^he, mʸʸʸʸz*
 NEG-NMLZ:S/A-be.time IPFV-INV-squeeze.out LNK instead
tʸ-se tu-ʔoβ nu-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) *tçe [ku-ççu ra nu-c^ha-nu] ma*
 LNK NMLZ:S/A-be.strong PL TESTIM-can-PL apart.from
mʸ-ku-ççu ra múj-c^ha-nu.
 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 *laɣma* ‘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 (152)). 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 nu ra iɕq^ha qarts^haz u-ku*
 3SG.POSS-head DEM PL the.aforementioned deer 3SG.POSS-head
wuma zo fse,] u-bru maɣe
 really EMPH be.like:FACT 3SG.POSS-horn not.exist:SENSORY

laɣma.

apart.from

Its head is like that of a deer, apart from the fact that it has no horns. (Water deer, 24)

- (152) *tɕe ɲotɕu ku-tu nu ra suz-a laɣma,*
 LNK where NMLZ:S/A-exist DEM PL know:FACT-1SG apart.from
ju-ɕe-a múj-c^ha-a.
 IPFV-go-1SG NEG:TESTIM-can-1SG

I only know where they are, I cannot go there. (*zmbulum*, 63)

Sixth, the negative copula *maɣ* ‘not be’ followed by the ergative *ku* 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) [*ku-mɕɕu maɣ ku nu-ku-rɔm*
 NMLZ:S/A-be.smooth not.be:FACT ERG PFV-NMLZ:S/A-be.rough
ku-fse brɣbrɣβ ɲu tɕe,
 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 zu* ‘although’ comprising the locative *zu* and the form *jinbala* borrowed from Tibetan *jin.pa.la* (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) *tɕe [ɣɣlpu nu nu-rga] jinbala zu, ‘e, a-tɕu*
 LNK king DEM PFV-be.happy although LOC INTERJ 1SG.POSS-son
ki stɣβts^hɣt mu-ɕu-c^ha ku
 DEM:PROX contest NEG-APPREHENSIVE-can:FACT POSSIBILITY
ɲɣ-suuso
 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

Clause linking type	Construction
Disjunction	<i>nu maŋ ny</i> ‘otherwise’ polar interrogative <i>ci</i>
Rejection	postposition <i>ma</i> ‘apart from’ negative copula <i>maŋ</i> ‘not be’ in the SC

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 *nu maŋ 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) *nu maŋ ny tɣt^hu tu-kur-ti, nu*
 DEM not.be:FACT LNK woollen.clothes IPFV-GENR-say DEM
maŋ ny tunggar tu-kur-ti.
 not.be:FACT LNK woollen.clothes IPFV-GENR-say
 (Woollen clothes) are either called *tɣt^hu* or *tunggar* (mbo , 40)

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

- (156) [*χsɣr t^hɣjco u-taŋ tu-nu-ɕe*] *ci, ŋɣul*
 gold palanquin 3SG-on 2-AUTO-go:FACT INTRG:POLAR silver
t^hɣjco u-taŋ tu-nuɕe?
 palanquin 3SG-on 2-AUTO-go:FACT
 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 *ma* ‘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 *ma*: example (157) shows that there is no causal relationship between the two clauses. In this construction, the main clause (preceding *ma* ‘apart from’) and the subordinate clause are of opposite polarity; in general, the main clause is positive and the subordinate clause negative.

- (157) *nu-kw-rtuy* *tce*, [*tu-kw-nxlielie*
 PFV-GENR:S/P-meet LNK IPFV-GENR:S/P-be.frolicsome
cti] *ma* *tu-kw-nu-rndzuit*
 be.AFFIRMATIVE:FACT apart.from IPFV-GENR:S/P-APPL-bark
múj-ηgrv
 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 *maβ* ‘not to be’ in one clause, and one of the affirmative copulas *ηu* or *cti* ‘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) [*u-cki* *kr-ce*] *maβ* *ku*, *kuβaβ u-pcov*
 3SG-DAT INF-go not.be:FACT ERG other 3SG.POSS-direction
jo-p^hγo.
 EVD-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 12: Manner linking constructions

Clause linking type	Construction
Real manner	Parataxis Infinitival SC (optionally with ergative) manner deixis verb <i>fse</i> ‘be like’ and <i>stu</i> ‘do like’ degree nominalization + ergative
Hypothetical manner	manner deixis verb <i>fse</i> ‘be like’

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-mtsav* *ɣja* *zo* *ma nu ma* [*u-mi*
 IPFV-jump completely EMPH LNK DEM apart.from 3SG.POSS-foot
pju-su-ɣtse] *tu-ŋke* *múj-c^ha*,
 IPFV-CAUS-be.inserted[III] IPFV-walk NEG:TESTIM-can
 It only jumps, as it is not able to walk by treading with its feet.
 (Frog, 4)

This construction is particularly common with the transitive verb of manner deixis *stu* ‘do like this’ as in (160). Note that in this example the subordinate clause is embedded within the main clause.

- (160) *tce* *u-jav* *ku* [*ki* *tu-ste*]
 LNK 3SG.POSS-hand ERG DEM:PROX IPFV-do.like[III]
lu-z-naxje *ju-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 *ɣpɣɣ* ‘loud noise’ (see Jacques 2013b).

- (161) [*ju-ɣɣ-ɣpɣɣ*] *ju-ruɕmi*
 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 *te^hom* ‘be in excess’ for instance, as an alternative to complement clauses (162).

- (162) [*nwŋa ra nu-tax tu-dɣn*] *tu-tɕ^hom*
 cow PL 3PL-on IPFV-be.many IPFV-be.in.excess
múj-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 can be 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 *kr-* (for dynamic verbs) or *ku-* (for stative verbs or dynamic verbs with non-animate arguments) in the subordinate clause, to express manner as in (163) and (164).

- (163) [*kr-ŋke*] *ɟɣ-ari* *pu-ra*
 INF-walk PFV-go[II] PST.IPFV-have.to
 He had to go on foot. (elicited)
- (164) [*w-ɣi* *ra nu-mɣ-kr-suɰ*] *nu rŋwɩ nu ɟɣ-mbi*.
 3SG.POSS-relative PL 3PL-NEG-INF-know DEM silver DEM EV-D-give
 She gave him silver without her relatives knowing. (The Raven4,
 161)

In the case of stative verbs, whose infinitive is in *ku-* instead of *kr-*, 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 *zo* which rules out the alternative parsing of *ku-du-dɣn* ‘numerous’ as the S of the sentence (in which case we would have glossed it as NMLZ:S/A-be.many).

- (165) [*ku-du~dɣn*] *zo* *tuturca tu-ŋke-nu*
 INF:STAT-EMPH~be.many EMPH together IPFV-walk-PL
mɣ-ŋgrɩ.
 NEG-be.usually.the.case:FACT
 They don’t usually walk together in big groups. (*ɕɣpɣa* 40)

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

- (166) *nur-qe* *nur* [*ku-qarɲu~rɲe*] *zo*
 3PL.POSS-excrement DEM INF:STAT-EMPH~be.yellow EMPH
c^hu-lɣt-nur *tɕe*,
 IPFV-throw-PL LNK
 They shit yellow. (*k^huɖi*, 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-olɣu* *ɲu-ɕti* *q^he*, *ku-ɣrɣ^hi*
 IPFV-be.connected TESTIM-be:AFFIRM LNK INF:STAT-be.far
ju-ku-ru *q^he* *u-ɓar* *ɲu-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 *ku-fse* of the manner deixis stative verb *fse* ‘be like’ to mark the subordinate clause, as in (168) and (169). The verb marked by *ku-fse* can itself be in the infinitive (170).

- (168) *murmumbju nur* [*ɲu-zɣɣ-su-ɣɣɣ*] *ku-fse*
 swallow DEM IPFV-REFL-CAUS-be.slanted INF:STAT-be.like
tɕe *ɲɣmk^ha zu* *ku-ɕe* *ɲɣ* *ɲu-ɣi* *tɕe*
 LNK sky LOC IPFV:EAST-go LNK IPFV:WEST-come lnk
 The swallow comes and goes flying in a slanted way in the sky. (Swallow, 38)

- (169) *βyaza tu-ndze* *ɲu* *tɕeri* [*ɕ-tu-mtsəβ*]
 fly IPFV-eat[III] be:FACT LNK TRANSLOC-IPFV-jump
ku-fse *ɕ-ku-ndɣm* *múj-c^ha* *tɕe*,
 INF:STAT-be.like TRANSLOC-IPFV-catch[III] NEG:TESTIM-can LNK
 It eats flies, but it cannot catch them by jumping. (frogs, 6)

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).

- (170) *nunuw wuma zo* *qomdroɲ* *ku-fse*
 DEM really EMPH white.goose INF:STAT-be.like
 [*ku-ɣzɯrja* *ku-βdi*] *ku-fse*
 INF:STAT-be.lined.up INF:STAT-be.well INF:STAT-be.like

múj-nuqambumbjom-nu ri tuturca ʒja zo
 NEG:TESTIM-fly-pl LNK together completely EMPH
ɲu-nuqambumbjom-nu ɲu tʒe,
 TESTIM-fly-PL be:FACT LNK

Although they do not fly in nice lines like the geese, they always fly (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').

(171) *tʒe u-ɲgu nu tʒu paʒndza ɲɻ-raʒ tʒe, tʒendɻre*
 LNK 3SG-inside DEM LOC pig.fodder EVD-be.stuck LNK LNK
 [<dian> <guan> *mɻ-kr-βzu*] *ku mɻ-kr-pa ku*
 electricity turn.off NEG-INF-make ERG NEG-INF-close ERG
u-jaʒ lo-tsum
 3SG.POSS-hand EVD:UPSTREAM-take.away

Some pig fodder got stuck inside (the machine) he reached his hand into it without turning it off, (Relatives, 372-3)

Alternatively, the infinitival clause with the ergative can be semantically intermediate between a manner and a purposive clause, as in (172).

(172) *tu-xtsa nunu u-βzuɻ*
 INDEF.POSS-shoe DEM 3SG.POSS-shape
 [*mɻ-ɲu-ku-ɲɻur*] *ku*
 NEG-IPFV-INF:NON.HUM-ANTICAUS:change ERG
ɲu-z-rɻsta-nu
 IPFV-CAUS-be.fixed

They wedge the shoes (with a shoe tree) in such as way that their shape does not change. (Red leather, 109)

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) *a-pu-ku-su-ɲɻr q^he [u-tu-rzi]*
 IRR-PFV-GENR:S/P-CAUS-press LNK 3SG-NMLZ:DEGREE-heavy
ku tʒe nu kr-joʒ múj-ku-c^ha
 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) *luulu a-pu-me rcanu, βzu u-k^ha tce*
 cat IRR-IPFV-not.exist TOP:EMPH mouse 3SG.POSS-house LNK
 [*u-tu-rujujujn*] *ku ty-mt^hum*
 3SG-NMLZ:DEGREE-cause.damage ERG INDEF.POSS-meat
tu-ndze, tumgo tu-ndze, tuju tu-ndze, tce
 IPFV-eat[III] food IPFV-eat[III] food IPFV-eat[III] LNK
u-mx-ky-ndza ra kumx ty-fkum nu ra
 3SG-NEG-NMLZ:P-eat PL also INDEF.POSS-bag DEM PL
ku-suspoβ
 IPFV-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 [u-jwaβ nunu kumaβ cɣɣ nu ra*
 LNK 3SG.POSS-leaf DEM other juniper DEM PL
múj-fse] ku ju-γβuɣβu zo q^he
 NEG:TESTIM-be.like ERG TESTIM-be.wrinkled EMPH LNK
ju-γndundo zo.
 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-mtɕ^hi Iɣ-ky-sti*
 2SG DEM:PROX about LNK 2SG.POSS-mouth PFV-NMLZ:P-plug
ju-tu-fse ɕti
 TESTIM-2-be.like be.AFFIRMATIVE:FACT

You look like your mouth has been plugged. (conversation 2002, 81)

- (177) *w-skɣt* *w-tu-wxti* *kuɣ maka mbyuɣloɣ*
 3SG.POSS-voice 3SG-NMLZ:DEGREE-be.big ERG at.all thunder
ɣɣ-kɣ-βzu *zo* *pjɣ-fse.*
 PFV-NMLZ:P-make EMPH EVD.IPFV-be.like
 Its sound was as loud as thunder. (Daihao)
- (178) *nunuɣ ɣɣ-mɣɣm q^he, t^huci* *tumnɣu*
 DEM PFV-hurt LNK something awl
kɣ-kɣ-suɣ-ɣtsa *zo* *ɣuɣ-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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