Reading notes of A Grammar of Japhug

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The theoretical orientation is already well-documented in my notes about English, Latin and Mandarin Chinese.

Chapter 1

Grammatical overview

In this chapter we do a round-by-round survey of Japhug grammar. We start with a very rough anatomy of the structure of Japhug clauses (§ 1.1.1), followed by a bottom-up examination of grammatical categories and relations in the clause in the rest of § 1.1. We then do the same for the noun phrase. We finally list points to investigate in the lexicon of Japhug.

Box 1.1: Grammatical sketch TODO list

- NP
- POS list

1.1 Clause structure

1.1.1 The structure template

Clause combining We start our discussion on Japhug grammar by first dividing utterances into simple clauses. Adverbial clauses, like temporal clauses or conditional clauses, seem to always appear before the main clause (Jacques 2021, Ch 25). Coordination may be marked by coordination linker *tɕe* or *qʰe* or simple parataxis (Jacques 2021, § 25.1.6). In both adverbial clause subordination and coordination, clauses involved may share the auxiliary copula if there is any (Jacques 2021, p. 47, (40); p. 1091, (10)). It seems changing the subject in the middle is also possible (Box 1.3).

The simple clause: the nucleus and information packaging A simple clause, which may or may not be a part of aforementioned subordination or coordination constructions, consists of a nucleus clause and possible information packaging devices.

We can say with confidence that the basic order of Japhug nucleus clauses is SOV. Justification of concepts like subject or object is discussed in § 1.1.3 and § 1.1.4. Possible alternations of this order can be explained by information packaging constructions, including right dislocation for afterthought, disambiguation, or emphasis (Jacques 2021, § 22.1.3), left dislocation for topicalization (Jacques 2021, p. 1189), or focalization (Jacques 2021, p. 1190).[1] Topicalization in Japhug may result in a chain of nucleus clauses sharing one topic (Jacques 2021, p. 1190, (11)).

[1] (Jacques 2021, p. 1190) has the OSV order, and Jacques mentions that the subject is focalized. It is possible that this example is a topic-focus-verb construction.

Positions of adverbials Temporal expressions indicating the absolute time usually appear before the subject (Jacques 2021, p. 344, (167); p. 283, (123)). This probably is because the absolute time sets the stage for the event and by default is topical, and their syntactic position is comparable to that of adverbial clauses.[2]

On the other hand, tense, aspect, mood, evidentiality (TAME) adverbs appear after the subject and before the direct object (Jacques 2021, pp. 1200-1201,1210). It seems that locational phases also reside in roughly the same region (Jacques 2021, p. 302). Example (46) in Jacques (2021, p. 1200) suggests that the aspectual adverb precedes the manner adverb.

In some examples the *object* appears before a TAME adverb, but this likely arises from topicalization as a pause can be observed after the object (Jacques 2021, p. 1210, (82)).

Box 1.2: Positions of adverbs

Compare the positions of TAME and locational adverbials.

Also, is it possible to have locational stage-setting adverbials?

Auxiliary verb constructions In periphrastic conjugation constructions, the copula that carries the main TAME information is put at the final position, and the main verb precedes it; when there are several main verbs coordinated in a clause, only one final copula needs to appear (Jacques 2021, pp. 1090-1091).

Box 1.3: Periphrastic conjugation and verb phrase coordination

Note that the subject seems to be changed in the middle (the problem is the meaning of *ɯ-ŋgɯ* '3SG.POSS-inside' and the constituents introduced by it: does it mean 'as three very beautiful girls', and therefore is an adjunct, or is it a new subject? Also verb phrase coordination is related to syntactic ergativity – see the discussion on clause pivot)

If the coordination construction indeed works on the level of clause and not VP and therefore allows changing the subject in the middle, another question arises: sharing TAME markers between two clauses is highly unusual. This can't be a purely realizational process because of the long-range nature of copula sharing. So this has to involve (purely) syntactic coordination, and the syntactic position of the TAME copula is then higher than the subject, which is unusual. Another analysis of the construction is that we are looking at a biclausal construction, and the coordination happens to a series of nonfinite clauses, But then TAME marking can't be biclausal.

It seems currently the best option is to analyze this construction as coordination of "small clauses" whose TAME values are then specified by the end-of-sentence copula. Note that this construction seems to be only available for IMPERFECTIVE verbs, which appears frequently in periphrastic conjugation and likely only specifies the aspectual value. The tense and evidentiality categories coded on the copula are then higher than the subject.

Clausal structural template In summary, a Japhug simple clause is a nucleus clause with possible left- or right-dislocations and/or temporal expressions expressing the ab-

[2]The situation is similar to that in English: temporal phrases like *last year* almost always appear at the margin of a clause.

solute time of the event (Box 1.2), an the nucleus clause, from left to right, consists of the subject, tense and aspect adverbs, manner and locational phrases, core arguments, the main verb, and a possible auxiliary copula; all arguments and adjuncts are not obligatory, presumably because enough information has been coded in the verb.

> **Box 1.4: Other forms of the nucleus clause**
>
> Serial verb constructions and nominal predicates; also see fossilized N-V sequences.

Speech fillers One final comment about the clausal template: in spontaneous speeches, Japhug speakers use several speech fillers and not a central vowel to mark pause or earn some time to think about what to say next. The speech fillers have other functions like pronoun or topic marker and should be ignored when reading Japhug texts (Jacques 2021, § 10.3).

1.1.2 The verb

Verbs can be regularly formed by denominal derivations (Jacques 2021, Ch 20). Since an independent adjective class is absent, the only two kinds of denominal derivations are noun-to-adverb derivations and noun-to-verb derivations, the former being relative marginal (Jacques 2021, p. 1011); thus the term *denominal* can be used specifically to refer to noun-to-verb derivations.

1.1.3 Internal complements

Objecthood The concept *object* refers to an internal complement position that is syntactically more active than other internal complements do.

> **Box 1.5: Objecthood in English**
>
> In English, the object always follows the main verb with almost no other constituents being able to appear between the two, and constituents like manner phrases, relative clauses, etc. which have their scopes over the core verb phrase follow the object. This seems to indicate that there is some sort of implicit fronting of both the verb and the object, leaving a swamp of various constituents behind. Therefore the argument after the verb – not necessarily the most patientive argument – is the object.

A property that is possessed by at most one internal argument is indexation on the verb, and this is one object-like property. The P argument of monotransitive verbs regularly triggers object-like indexation (Jacques 2021, § 8.1.3, p. 543). Some arguments, even when being the sole internal complement of the clause, can never trigger indexation, and are known to be *semi-objects* (Jacques 2021, § 8.1.5).

Jacques (2016) proposes to define subjecthood (and also subjecthood) according to relativization constructions:

> **Box 1.6: vP syntax and TP syntax**
>
> vP syntax:
>
> - Government and binding
> - Control

TP syntax:

- Coordination
- indexation
- Relativization (Jacques 2016)

For what Jacques (2021, § 14.4.2) analyzes as the secundative verbs (the valency class where the recipient is more object-like), the theme can be extracted in relativization (Jacques 2021, pp. 581) and be passivized (Jacques 2021, § 18.1.4). but the recipient participates in argument indexation in the same way as the monotransitive object does. This split of object properties is also observed in the English *give sb. sth.* verb frame. although in the latter there is no object argument indexation and the recipient is passivized. What is interesting is that in the resulting verb, the subject (which is the theme) does not trigger any indexation affixes. This may be a case of quirky subject.

Valency alternation Japhug seems to have a construction comparable to the "passive" construction in Mandarin; in this pseudo-passive construction, the deep, animate A argument does not appear, while the inanimate deep P argument is present, and the verb has an inverse marker despite semantically the event happens from an animate participant to an inanimate participant and is therefore semantically in the direct configuration (Jacques 2021, p. 575). The construction only appears in translation of sentences from Mandarin, and yet a native speaker didn't consider them to be ungrammatical; whether the

1.1.4 Syntactic pivot of the core clause, or the subject

Among arguments in a clause, we can easily recognize a more or less external one and the rest ones which are more or less internal: in argument indexation, the most agentive argument plays the "subject" role, while the rest of the arguments compete to play the "object" role (§ 1.1.5), and by default we can observe that the most agentive argument appears at the start of the nucleus clause (§ 1.1.1). These facts however can all be explained by defining a pivot for the *argument structure*, and are not direct evidence for a pivot of *the whole clause*. In particular, these facts do not tell us the alignment type of Japhug, since even in many ergative languages, the argument structure pivot is still always the most agentive argument.

The usual criteria for syntactic ergativity are not viable in Japhug, as we do not have uncontroversial verb phrase-level coordination (Jacques 2014). There are coordination constructions in which the two branches share one auxiliary, but the branches may have different subjects (see Box 1.3). This is likely to be a peculiarity of Japhug, as Prins (2011, p. 549) mentions coordination of two verb phrases sharing the same subject in Jiaomuzu, a language close to Japhug.

If we restrict ourselves to Japhug, then subjecthood seems to be most clearly defined by relativization (Jacques 2016; see § 1.1.3 for the relation between relativization and objecthood). Relativization happens only after the whole clause is finished and a pivot position definable by relativization is definitely a clausal pivot – hence the *subject*.

Additionally, the fact that one argument may be separated from the verb and other arguments by TAME adverbs (§ 1.1.1) may also be taken as evidence for subjecthood

in Japhug.

We also observe that the A argument (with ergative marking) can be separated from the object and the verb by an intransitive clause (Jacques 2021, p. 306) in which a gap coreferential with the A argument exists. This may also be understood as evidence for the pivot status of A and S, and therefore neutralization of S and A as the clause-level pivot.

With facts above, we find that there exists a well-defined clausal pivot in Japhug and it is identical to the pivot of the argument structure. Japhug therefore has a nominative-accusative pivot.

The subjecthood defined alone the lines above does not entail anything about case marking. In prototypical monotransitive constructions we observe morphological ergativity. The existence of a direct-inverse argument indexation system (§ 1.1.5) means rules about argument indexation cannot be summarized as "the verb agrees with the subject", and therefore the subject cannot be defined according to verb morphology (Jacques 2016), and in certain circumstances even leads to neutralization of S and P (§ 1.1.5).

1.1.5 The direct-inverse system

The typology of direct-inverse system in Japhug According to Oxford (2023), what is known as a direct-inverse device may be (a) the change of clausal grammatical function of the arguments, i.e. "deep inverse", in which the patient in a way or another gets some subject-related properties and hence some sort of ergativity is observed in inverse configurations, with effects like alternations of the surface word order, scope of noun phrase (NP)s, and reflexive pronouns (e.g. see Bruening 2005), or (b) a "shallow inverse" which is mostly about argument indexation, for example a requirement that only agreement with a speech act participant (SAP) is morphologically permissible leading to a direct-inverse system based on the distinction between 1/2 and 3.[3] The deep inverse can be optional and in this case it is essentially a voice construction; the shallow inverse should be obligatory or otherwise verbal agreement is arbitrary. The two of course can be combined and we get a particularly strong inverse system.

In Japhug we can observe certain phenomena that may be described as "deep inverse". In the inverse configuration of Japhug, the A argument receives an ergative marker. Properties other than case marking are however not observed (§ 1.1.4). Therefore, in the inverse configuration, we cannot say that the patient is rendered the clausal pivot. The ergative marking of the A argument in the inverse configuration should be analyzed as inverse-triggered morphological ergativity, in which the only subject-like

[3]The deep inverse is also known as "syntactic" inverse or "inverse voice", and the shallow inverse is also known as "morphological" inverse, or "inverse alignment". This terminology however is sometimes misleading. For example, if we stipulate that in Italian, person clitics are agreement formatives and first/second person clitics belong to an agreement system only targeting SAPs, while the third person clitic belongs to another agreement system, then the impossibility of co-appearance of a first/second person direct object clitic and a third person indirect object clitic Italian can be argued to be due to locality constraints (Bianchi 2006). The existence of a speech-act only agreement system is comparable to "morphological inverse", but the phenomena related to this system usually will not be called morphology.

On the other hand, "syntactic inverse" covers both syntactic ergativity and morphological ergativity. This confusion is seen in the case of Japhug: in the inverse configuration of Japhug we see morphological ergativity, but this is deep inverse and therefore "syntactic inverse" in Oxford (2023).

property that the P argument gets is that it has the same case marking with the intransitive subject.

The empathy hierarchy The relative positions of the A argument and the P argument in the empathy hierarchy control the direct-inverse configuration. Roughly, the hierarchy in Japhug is SAP > human > animal > inanimate > generic argument. Note that this hierarchy means that if the A argument of a clause is generic, while the P argument is not, the clause is in inverse configuration, while when the P argument is generic the clause is in direct configuration. This means neutralization of S and P can be observed in the generic indexation (Jacques 2012; Jacques 2021, § 14.3.2.5). This, of course, cannot be interpreted as ergativity.

Box 1.7: Empathy hierarchy: diachronic or synchronic?

The empathy hierarchy may be analyzed as a synchronic device. Wiltschko (2014, § 7.4), for example, stipulates that the clause first decides its point of view in the empathy hierarchy, and then this piece of information controls what argument is to agree with the verb, and further notices that this process is formally comparable to how the aspect value (c.f. the direct/inverse value) dictates what is the time that is to be compared with the speech time to decide the tense (c.f. the argument indexed on the verb).

Alternatively, the empathy hierarchy may be treated as a *diachronic tendency* that languages with polypersonal indexation will likely be trapped into, possibly because a direct-inverse system reduces misunderstanding in discourses by highlighting less likely configurations. The synchronic analysis of shallow inverse then is merely some morphological manipulations of the person features received by the verb, and obligatory deep inverse can be analyzed as incompatibility between direct verb morphology and the inverse voice construction, probably because there simply is no verb form expressing both of them and therefore co-appearance of the two is blocked.

Inverse argument indexation on the verb In the verb morphology part of the Japhug inverse system, the subject in the direct configuration and the object in the inverse configuration are indexed on the verb. The personal affixes on the verb are only about person and number, and tell us nothing about the argument position of the argument from which they originate.

Argument indexation in the indirective construction The indirective valency class, which usually has a meaning of

Argument indexation in the causative construction In causative constructions, the "object" that determines verbal agreement can be the causee or the object. Which argument is chosen depends on the persons of the arguments. First, among internal arguments, if one is first or second person and another is third person, then the first/second person one is indexed. Thus both 2→3→1 and 2→1→3 are equivalent to 2→1 in argument indexation (Jacques 2021, p. 584), and both 3→3→1 and 3→1→3 are equivalent to 3→1 in argument indexation (Jacques 2021, p. 310). On the other hand, 3→1→2 becomes 3→1, and 3→2→1 becomes 3→2, which means if the causee and the object are in a local configuration, the causee is indexed on the main verb.

We can therefore say that the argument playing the role of object in polypersonal indexation therefore is always the most salient argument, either according the standard of speech act participation or according to the standard of agentivity. Whether

this is due to the existence of a synchronic saliency hierarchy or due to historical evolution (grammars that encode information the speakers deem important survive) is not clear.

Deviations from the ideal inverse system The ability for an argument to trigger argument indexation depends on the animacy of the argument. Inanimate arguments rarely trigger number indexation (Jacques 2021, § 14.6.1.1).

An interesting phenomenon is the theme of secundative verbs cannot be indexed and it cannot be first or second person. This again seems to suggest some relation between the ability to trigger argument indexation and animacy.

1.1.6 TAME categories

Decomposition of TAME categories in the same way English *he [is playing] football* is analyzed as "present (imperfect) progressive" is not necessary if there is no need for cross-linguistic comparison: although we are able to distinguish between e.g. the present tense and the past tense, or the progressive aspectuality v.s. the non-progressive one, not every combination of attested tense, aspect, modality and evidentiality values in Japhug can be morphologically realized.

The morphological realization of these categories is remarkable Their main exponents are the alternation of the orientation prefix. Some TAME categories insert a fixed prefix into the orientation prefix slot; others choose one of the four prefixes that have the same directional meaning in Jacques (2021, Table 15.1).

> **Box 1.8: Interaction between TAME and orientation**
>
> Does the TAME marking override the lexically determined orientation prefix or the semantically significant orientation prefix of a orientable prefix?

1.2 Noun phrase

Compounds

> **Box 1.9: Compounds: phrasal, or stem-level?**
>
> Japhug seems to have "real" compounds and not just the nominal attributive construction in English:[a] inalienable nouns, if appearing as the second element in a compound, have no possessive marker (Jacques 2021, p. 15). This however can be analyzed as a realizational effect as well: we need other proofs to show that the inalienable noun loses its subcategorization in the compounding process and therefore appears purely as a stem.
>
> [a] As in *noun phrase*.

Counting words

> **Box 1.10: Counted noun constructions: what's the head?**
>
> In Jacques (2021, p. 10), it is mentioned that counted nouns correspond to classifiers in Chinese grammar. An interesting problem is in a counted noun construction in Japhug, which element is the head of the NP. In English, the head of

> the *one of* construction is likely *one*, because it can undergo modifications: *this specific one of …*, so the partitive reading is merely semantic. If no direct modification is possible to the counted noun, maybe the counted noun has already collapsed into a classifier in this usage.

Noun valency class Japhug has the distinction between alienable and inalienable nouns. An inalienable noun has to have a possessor which is indexed on the noun, and this possessor can be understood as a core argument of the head noun (Jacques 2021, p. 116).

Coordination One interesting feature of the Japhug comitative is it's also considered when deciding the number of an NP (Jacques 2021, p. 332); but it's still not prototypically a conjunction (Jacques 2021, p. 420): the NP following the comitative marker may be omitted, agreeing with the fact that the head noun of an NP can also be dropped (Jacques 2021, p. 425). (In English this is only possible for clauses: in informal writing and speech people may start with a sentence with *and*, i.e. a conjunction construction without the first branch, but they never do so to an NP.) The NP after the comitative marker can also be relativized. Thus the comitative suffix is still recognized as a type of modification.

1.3 Ideophones

The category of ideophone occupies mainly manner adverbial positions (Jacques 2021, § 10.1.7). Its main difference with the adverb class is its morphology (Jacques 2021, § 10.1.2) and phonology (Jacques 2021, § 10.1.5).

1.4 Analyzed examples

The sentence final stative verb *ŋu* be.FACT is listed as a stative verb in the dictionary and seems to take the constituents before it as a finite complement clause (TODO: or report speech? see the condition on p. 1317), which is without any explicit complementizer. But also see pp. 1081,

Chapter 2

The verb

Japhug is a heavily inflected language, and most grammatical categories in the clause have something to do with the verb. The structure of the verb can be divided into the outer prefix chain (Jacques 2021, Table 11.1), the extended stem, and the suffix chain (Jacques 2021, § 11.3); the extended stem contains the stem, which may undergo stem alternation (Jacques 2021, Ch 12), and inner prefixes related to valence alternation (Jacques 2021, § 11.2.2).

Whether this complex is to be regarded as one *morphological* or *phonological* word is discussed in § 11.6 in the reference above. Recognition of wordhood, expectedly, is not self-evident; Prins (2011) provides an analysis of another rGyalrong language, Jiaomuzu, and in this thesis the term *verb phrase* (i.e. verbal complex in this note) is used, skipping the discussion on what is a word. In Jacques (2021, Table 11.3) four domains are defined using various criteria.

Domain A is defined according to both syntactic and morphological reasons. What's shown in Table 11.3 contains all formatives that are relevant to verb inflection, and they have non-adjacent dependencies, so strong dependencies exist between them: these formatives are realized in the same batch in clause building. Now syntactically, the formative *-ci* in slit +4 is selected by some modal prefixes in slot -6, so the two slots belong to the same system; on the other hand, outside the +4 and -6 slots we only have clitics which clearly belong to systems with higher positions (Jacques 2021, § 11.6.2), and thus all – and only – formatives in Table 11.3 constitute a syntactic word, with the same *syntactic* status of a verb-plus-auxiliary verbal complex or a "verb phrase" in Dixon's definition (i.e. without internal complements). Morphologically, no element is able to intervene between two slots in the template, so we say this batch is realized as a single morphological word instead of a verbal complex.

Domain B is about *obligatoriness*: thus the +4 slot is not included. Domain C is defined according to prosodic reasons.

Chapter 3

Verb frames

In this chapter we summarize basic verb frames in Japhug. This is done in Jacques (2021, p. 14), which is mostly about the finite clause without any valency alternation operations.

Chapter 4

TAME marking

Realizational details The TAME categories in Japhug are introduced in Jacques (2021, Ch 21). Morphologically speaking, there are three systems (Jacques 2019, p. 516):

- The PRIMARY system, whose main exponents are stem alternation, the orientation preverb, and the modal prefix; all of these happens in the template of the verb (Jacques 2021, Table 21.1). The grammatical categories marked in this system are listed below.
- The SECONDARY system, which also happens in the inflection pattern of the verb but is about aspectual and modal categories largely orthogonal to the grammatical categories marked by the PRIMARY system (Jacques 2021, § 21.6, § 21.7).
- The PERIPHRASTIC system, whose surface form is similar to complement clause constructions with the copula *ŋu*. The copula in periphrastic constructions never takes any argument indexation markers (Jacques 2021, p. 1090), and if we are to analyze the constructions as complement clause constructions, then the literal reading will be something like "it's the case that an event happens", with all the contents before the copula being a complement clause of the copula. In the follows however it can be seen that the TAME categories on the copula is complementary with the lexical verb, and hence the periphrastic constructions are to be analyzed as single-clause constructions.

  In periphrastic constructions the main verb is often in *finite* forms (Jacques 2021, p. 1081); Japhug periphrastic conjugation thus has a difference with English or Latin periphrastic conjugation, where what are used in periphrastic TAME categories are *non-finite* verb forms. The reason possibly is because the periphrastic TAME categories in Japhug historically comes from finite complement clause constructions.

  TODO: is there any constraints on the distribution of participle or infinitive?

The interaction of the three morphological systems makes Japhug TAME system extremely complicated; some periphrastic categories seem to have identical semantics with PRIMARY and SECONDARY TAME marking devices (Jacques 2021, p. 1092); whether there are hidden nuances is still not clear.

Besides the verbal complex, TAME categories are also marked by sentential adverbs and sentence-final particles (Jacques 2019, p. 518; Jacques 2021, § 21.8).

Interaction with other categories TAME categories interact strongly with the lexical aspect of the main verb, which can be crudely divided into being stative and being dynamic (e.g. Jacques 2021, § 21.3.1.2), the person of the subject, and TODO: other properties

Attested categories The following subcategories can be recognized in Japhug:

- Subjective evaluation: some TAME categories can be used to express the feeling of the speaker (§ 21.3.2.4) – but is this a grammatical category?

- Evidentiality. Japhug has a highly complicated evidentiality system (Jacques 2015, Table 31.4). The values of evidentiality attested include the generic, the factual, the sensory, the egophoric, and the inferential.

  A three-fold distinction can be observed with the non-past tense (Jacques 2021, § 21.3.4; Jacques 2019, p. 517): the factual or common knowledge (§ 21.3.1.2), the sensory (§ 21.3.2.2), and the egophoric.

  Actually there is a fourth, bleached "generic" evidentiality value with the non-past tense. The generic non-past TAME configuration with no other non-trivial TAME marking is known as the IMPERFECTIVE (Jacques 2021, § 21.2). This however seems to be very infrequent in main clauses without periphrastic auxiliaries (p. 1087), indicating a strong preference for Japhug to include a non-trivial evidentiality value in non-past sentences.

  The inferential evidentiality value appears only with the past tense, possibly because of semantic reasons: an event happening now usually doesn't need to be "inferred", and this rarity means even this category existed historically, it has long been eroded. With the past tense, we have a dichotomy between the generic evidentiality and the inferential evidentiality. It's impossible to morphologically mark the sensory evidentiality with the past tense, possibly again because of the infrequency of this configuration. It should however be noted that the sensory can still be combined with the past tense by periphrastically attaching a sensory copula to the AORIST (i.e. PAST PERFECTIVE – see below) and the PAST IMPERFECTIVE which have default evidentiality (Jacques 2021, § 21.5.1.8, § 21.5.3.5; Jacques 2019, p. 518). On the other hand, the factual evidentiality and the egophoric evidentiality are never seen together with the past tense.

- Primary tense. The distinction between the past and the non-past can be clearly identified (§ 23.3, § 23.5), partly from the interaction with evidentiality. The meaning of future is regularly expressed in the FACTUAL category (p. 1102), and thus is sometimes recognized as the future tense or "factual evidentiality in the future tense" (Jacques 2019, p. 518). This however seems to be the natural extension of the meaning of the present tense (c.f. English *the next high tide is around 4 this afternoon*; Huddleston and Pullum 2002, p. 131, [20]), and in Jacques (2021), the future tense is not recognized as a grammatical tense in Japhug (Jacques 2021, p. 1102, (46)).

- Modality. In Japhug, once the irrealis situation occurs, it seems other TAME categories are not available. There are four types of irrealis modalities falling in this domain: the IRREALIS, the DUBITATIVE, the IMPERATIVE, and the PROHIBITIVE (Jacques 2021, § 21.4).

- It seems the anterior category (the PERFECT category in English) is absent in Japhug.
- Aspect: the imperfective-perfective distinction. The non-past categories are always inherently imperfective: no perfective aspectuality is seen with non-past tense (Jacques 2019, p. 517), again possibly because of semantic reasons, since the perfective may be semantically identified with the past. The imperative-perfective distinction can only be seen with the past tense (Jacques 2021, Table 21.1, note that the AORIST is also known as the PAST PERFECTIVE; pp. 1135, 1143).
- Aspects TODO: terminative, continuative, etc. TODO: the position of the inchoative aspect The progressive aspect (§ 21.6; note that Table 21.8: compatibility?)

The composition between these categories is not orthogonal, and no independent morphological exponent can be identified for each separate TAME categories mentioned above (but in periphrastic conjugation, distribution of these primitive TAME categories onto the main verb and the auxiliary copula can be observed; Jacques 2021, p. 1089, (7)).

Primary categories By combining these categories and removing unattested combinations, we find the 11 PRIMARY TAME categories listed in Jacques (2021, p. 21.1). The realis part is replicated in Table 4.1. Note that the AORIST is just the PAST PERFECTIVE in Jacques (2015, Table 31.4), and indeed Jacques (2021, p. 1135) makes it clear that the category expresses past perfective events. It should be noted that the mapping from tense, aspect and evidentiality features to concrete PRIMARY categories is only unidirectional: for some categories there are usages that can't be full described by Table 4.1. For example, the IMPERFECTIVE category has hortative meanings sometimes (Jacques 2021, § 21.2.5); and the concrete PRIMARY categories also have non-trivial interaction with the lexical aspect of verbs (Jacques 2021, § 21.2.6, § 21.2.7).

Table 4.1: Analysis of Japhug realis TAME categories; the two sensory past cells may be filled by PERIPHRASTIC NARRATIVE (Jacques 2021, § 21.5.1.8) and PERIPHRASTIC IMPERFECTIVE NARRATIVE (Jacques 2021, p. 1157), although the two constructions are only in use in a part of the population; the meaning of the two constructions are also mostly similar to the INFERENTIAL and the INFERENTIAL IMPERFECTIVE.

tense	aspect	evidentiality				
		generic	factual	sensory	egophoric	inferential
non-past	imperfective	IMPERFECTIVE	FACTUAL	SENSORY	EGOPHORIC PRESENT	
past	imperfective	PAST IMPERFECTIVE				INFERENTIAL
	perfective	AORIST				INFERENTIAL IMPERFECTIVE

Periphrastic conjugations In a periphrastic construction we have a main verb in one of the non-past forms and one copula carrying tense and aspect information. The most prevalent periphrastic constructions are those formed by combining the copula and the IMPERFECTIVE (Jacques 2021, p. 1089), but constructions with FACTUAL (Jacques 2021, § 21.3.1.4) and SENSORY verb forms are also possible.

Chapter 5

Clause embedding

Manner serial verb construction The term *serial verb construction* is a cover-all terms for constructions where there are two verbs (or at least words that look like verbs) found in a clause but the clause is clearly not a complement clause construction or an auxiliary verb construction. The underlying structure can be extremely heterogeneous: control construction, coordination on the level of core verb phrase (hence the two verbs share the same TAME marking), manner adverbial construction where the modifier is a core verb phrase, non-prototypical auxiliary clause construction, and even more. In Japhug attested serial verb constructions can all be placed under the category of manner adverbial construction (Jacques 2021, § 25.4.1).

In the Japhug serial verb construction, the modified main verb is the second verb; the modifier precedes the main verb and may be one of the follows:

- A deideophonic verb (Jacques 2021, § 25.4.1.1);
- A similative verb phrase containing *fse* or *stu* and their semi-object, with the meaning of 'do like this';
- A verb phrase describing simultaneous action (Jacques 2021, § 25.4.1.4), possibly followed by the emphasis marker *zo*;
- Other verbs of manner.

In all cases, the first verb (or verb phrase) is the modifier; discourse linker *tɕe* can appear between the modifier and the main verb (Jacques 2021, p. 1408, (73)), demonstrating that the two verbs are two morphological words.

Degree serial verb construction Interestingly, a serial verb construction describing the degree of an action can also be found in Japhug; in this construction the verb describing the degree is the *second* verb. One way to analyze the historical origin of the construction is to treat everything before the stative degree verb as its complement, and thus Jacques (2021, p. 1410, (76)) may be analyzed as 'that the elders who knew [traditional stories] well die is finished.' This however is against the observation that the agreement marker on the second verb agrees with the subject (and therefore is plural in the above case, not singular as expected for an impersonal verb), which clearly says that the construction is indeed monoclausal.

Another possible historical origin of the construction is verb phrase-level coordination, something with the meaning of English *?The elders who knew traditional stories died and they finished.* The English example here is awkward, partly because *die* is a

state-change verb in English and therefore specifying its progress is semantically unacceptable.

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