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Edited by Zlatka Guentchéva.

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Tense, aspect and mood in Nêlêmwa (New Caledonia)

Encoding events, processes and states

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Nêlêmwa is an Aspect-Mood oriented language; verbs are unmarked for tense, time reference is expressed by chronology and time adverbs. Aspect hinges on three notions: events (in the aorist), states, and processes. One focus is the contrast between the perfect and the aorist. Bare aorist verb forms refer to events or to sequences of events with no reference to their internal phases. The perfect expresses internal relations between processes and clauses (anteriority, backgrounding, causal relations); it refers to transitional processes that have reached or not their final instant, expressing changes of states and resulting states. In future reference frames, the perfect expresses imminent change of states, or imminent completion of a process, and the speaker’s certainty about their projected occurrence.

Keywords: Tense, mood, aspect, *Aktionsart*, topology, state, event, process, aorist, perfect, chronological ordering, deixis, anaphora, directional

1. Introduction: A brief presentation of Nêlêmwa

Nêlêmwa and its variant Nixumwak are one of the 28 languages of New-Caledonia, which belong to the Oceanic subgroup of the Austronesian family. Nêlêmwa-Nixumwak is spoken in the northernmost part of the Mainland by approximately 900 speakers.

Nêlêmwa is a head-initial language with predicate-argument order. In verbal predication, Nêlêmwa has a split accusative/ergative system: it is accusative with subject/object pronouns (with sVo order), but post-verbal nominal arguments are marked as absolutive and ergative with < verb ABS.patient ERG.agent > order. Single nominal arguments of intransitive verbs are absolutive, with < V ABS.N > order. Absolutive is marked \emptyset ; ergative markers are *ea-* (+ genitive animate NP) and *ru* (for inanimates) (Bril 1997, 2002: 134–142). In non-verbal predication, which is restricted to equative

and attributive sentences, non-verbs (nouns, pronouns, numeral phrases, locative phrases) may be predicative without a copula, without any derivation or conversion, and without any semantic change, other than the expected change triggered by the predicative function (Bril, in press). Like verbal predicates, non-verbal predicates may combine with tense, aspect or mood (T.A.M.) markers and may be subject to time-instability, transitional stages or duration. Consider the following non-verbal predicates: *i âlô* ‘he’s a child’ (*lit.* he child), *i baa âlô* (*lit.* he DUR child) ‘he’s still a child’, *io i ak* (*lit.* FUT he man) ‘he’ll become a man’, *i u thaamwa* (*lit.* she PFT woman) ‘she’s become a woman’.

Tense, aspect or mood are not marked by conjugation or inflectional verbal morphology; the T.A.M. system is expressed by morphemes that mostly occur before the (verbal or non-verbal) predicate and which are organised as follows:

(*irrealis* MOOD) NEG (*subject index*) (ASPECT) (MODALITY) *predicate*.

Irrealis mood includes virtual (subsuming conditional and subjunctive uses), imperative, optative-hortative mood, and future.

The analysis will proceed as follows: Section 2 presents the theoretical framework and the terminology used; Section 3 gives an overview of the characteristic features of the system: temporal frame of reference, *realis* vs. *irrealis* mood, aspect markers; Section 4 details the *irrealis* mood system; Section 5 details the various uses of the perfect, in the *realis* and *irrealis* domains, and the distinctive uses of the perfect in contrast with the bare verb form; Section 6 deals with the morphemes expressing phasal aspects; Section 7 presents phasal verbs expressing lexical *Aktionsart*; Section 8 develops the aspect-marking role of some directionals; Section 9 concludes.

2. Theoretical framework and terminology

This analysis of T.A.M. in Nêlêmwa makes use of the theoretical framework developed by Culioli (1990, 1999a–b), Desclés (1989, 1995), Desclés and Guentchéva (2010, this volume), which is based on a topological model with intervals and boundaries representing the notions of event, process and state as they are encoded in the morphosyntax of languages.¹ After Comrie (1976), Lyons (1990), Desclés & Guentchéva (2012: 134–143), these terms are defined as follows:

1. I wish to thank Zlatka Guentchéva, Alexandre François and Frank Lichtenberk for insightful comments which led me to refine some definitions and to some reorganisation of the paper.

- Events are viewed as a whole, without reference to any internal phase. They are represented by closed intervals. Depending on verb semantics and verb classes, an event may be punctual [•], like *it broke*, or not, like *he sang* ([---]). Events in Nêlêmwa are encoded by a bare verb form called aorist, presented in §3.3.1
- By contrast with events, processes contain internal phases which may be under some aspectual focus; they have an initial instant and a final instant, which may or may not be reached. An ongoing process, whose final instant is not reached, is represented by a semi-open interval ([---[), with an open right boundary (boldface bracket). If reached (as in *it has rained*), the final instant of a process is represented by a closed right boundary ([---]). Processes in Nêlêmwa are marked by a wealth of aspect markers presented in §3.3.2 to §3.3.4.
- States have no boundaries of their own, they are represented by open intervals schematised as (]---[), but the boundaries do not belong to the state itself, they belong to some events (A and B) which frame the state ([A]---[B]). A resulting state such as *it's broken* can be represented as [A]-broken-[B): the state results from a preceding event [A] (such as *fall*, *break*) conducive to the resulting state (*broken*). The open (boldface) boundary (--[B]) belongs to some other event [B], which may trigger another change of state (Desclés & Guentchéva 2012: 141–142).

By contrast with some other Oceanic languages, states in Nêlêmwa have no specific marker, nor any specific paradigm of stative pronouns. Stative verbs appear without further marking in the *realis* mood, as in *i alawuk* '(s)he is/was hungry', or with the *irrealis* mood (*io i alawuk* '(s)he'll be hungry', *o i alawuk* 'if/when (s)he's hungry'). The combination with the perfect marker expresses a change of state as in *i u alawuk* 'he's become hungry'. States may also combine with other aspects, such as the durative marker *i baa alawuk* 'he's still hungry' or the remansive marker, as in *taa khoxo i hla* 'they're still numerous' (REM big.number DET they).

3. Tense, mood and aspect: An overview

This section gives a general presentation of the T.A.M. system in Nêlêmwa, which will be detailed in the following sections.

3.1 Temporal frame of reference and chronological ordering of events

Predicates are not marked for Tense. The temporal frame of events (T) is generally marked contextually or lexically, by adverbs or by determiners, some of which are deictic (*i.e.* anchored in the time of speech (t_0) and speech situation, noted [T= t_0]),

while others are non-deictic and relative to some other temporal frame, in narratives for instance, with no relevance to the time of speech. This is noted [$T \omega t_0$].²

Among deictic adverbs are *koobwan* ‘yesterday’, *ereek* ‘yesterday night’, *caae* ‘tomorrow’, *êna* ‘now’. They are the sole temporal anchors relative to the time of speech (t_0).

Caae requires an *irrealis* marker (future or virtual) in the clause, while adverbs referring to the past (*koobwan*, *ereek*) or the present (*êna*) often occur with the bare-*orist* verb form that refers to events, as in (1a–b).

- (1) a. *Kot koobwan?*
rain yesterday
‘Did it rain yesterday?’
b. *Koobwan xe yo tuâi-na.*
yesterday TPC 2SG lie-1SG
‘Yesterday, you lied to me.’ (Bril 2002: 486)

Anaphoric determiners, such as *bai* ‘that’, and adverbs, such as *êbai* ‘before, earlier on’, refer to the recent or distant past and to shared experience/knowledge. The bare *orist* verb *udi* in (2) refers to a past event, while the perfect in (3) marks relevance of some past event to the time of speech.

- (2) ... *idaama-m bai co udi êbai na mwamaidu.*
eye-POSS.3SG that.ANAPH 2SG take.off before LOC down.there
‘... those eyes of yours that you took off earlier on down there.’ (Bril 2002: 492)

- (3) *Na u diya êbai.*
1SG PFT do before
‘I’ve done it before.’

Lexical specifiers, such as *hule*, express past anchor; *hule* may be used as a noun or as a modifier with deictic or non-deictic use, and meaning ‘long time ago/before’. *Habuk* ‘before’ is a modifier expressing relative chronology in the past:

- (4) *ni yeewat habuk* (or) *ni yeewat hule*
in time before in time long.ago/before
‘in the past’ ‘long ago/before’

2. The symbol ω encodes disconnection from the time of speech (Culioli 1983, 1999a), whereas the symbol \neq encodes a temporal frame anchored in the past, but relevant to the time of speech (like the English present-perfect), as in *he’s been reading for an hour*.

Events or processes are chronologically ordered by mostly spatio-temporal lexemes that are compatible with *realis* or *irrealis* moods (see §5.5).

3.2 *Irrealis* and *realis* moods

As often in Oceanic languages, the basic mood distinctions hinges on the contrast between *realis* and *irrealis*.

Table 1. Realis vs. irrealis moods in Nêlêmwa

IRREALIS				REALIS
virtual/subjunctive	imperative	optative/hortative	future	present or past event
<i>o</i>	<i>o</i> (or) \emptyset	(<i>sho</i>) <i>o</i>	<i>io</i>	\emptyset

While the *realis* mood has no overt marker (\emptyset), the *irrealis* mood subdivides into the virtual mood marked by *o*, and the future marked by *io*. The morpheme *o* has a variety of uses. In dependent clauses, the morpheme *o* subsumes conditional and subjunctive moods: it appears in conditional protases, in *irrealis* time clauses, complement clauses and *irrealis* relative clauses. In independent sentences, *o* appears in imperative sentences expressing a doubtful outcome, while unmarked imperatives with the *irrealis* \emptyset bare form refer to situations whose outcome is deemed possible; the morpheme *o* also expresses hortative and optative moods, mostly (but not obligatorily) combined with *sho o* (*lit.* good if) (see §4.2). The uses of *o* in dependent clauses might be considered divergent developments from the *irrealis* mood marker, but they actually express the basic semantics of *irrealis* (potential, conditional and subjunctive).

3.3 An overview of aspect markers: Combinations and position

Turning now to aspect markers, the main contrast is between the bare aorist³ verb form (which is aspectless) and the perfect; other morphemes express recent completion, pluri-actionality and various types of incompletion (see Table 3). All of them stand before the predicate.

3.3.1 *Events in the bare aorist verb form*

The bare aorist verb form refers to *realis* events, present or past (narrative aorist) and to generic, atemporal statements (gnomic aorist) (see Table 2).

3. Ancient Greek *aóristos* “indefinite” refers to the unmarked verb form.

Table 2. The bare aorist verb form

REALIS		GENERIC STATEMENT
present event (concomitant to t_0)	past event (narrative aorist)	(gnomic aorist)
\emptyset aorist bare V form		

3.3.2 Aspect markers: Perfect, recent completion, pluri-actional, incompletion

By contrast with events marked by bare aorist⁴ verb forms, processes have internal phases which are specified by various aspect markers listed in Table 3.

Table 3. Aspect markers: aorist, perfect, recent completion, pluri-actional, incompletion markers

AORIST	PERFECT	RECENT COMPLETION	PLURI-ACTIONAL			INCOMPLETION		
\emptyset	$(k)u \sim (x)u$	<i>hââ</i>	<i>aa</i>	<i>kua</i>	<i>na</i>	<i>baa</i>	<i>gaa</i>	<i>taa_i</i>
	perfect	recent completion	iterative (± <i>realis</i>)	frequency (+ past reference)	processual (+activity V)	durative	persistive	remansive, & state of activity

A. The perfect

The perfect is marked by $ku \sim xu \sim u$. *Ku* or its weak form *xu* appear in clause initial position, allomorph *u* occurs between the subject index (s) and the predicate (P), as shown below; from now on they will be referred as $(k)u \sim (x)u$:

- < *ku* ~ *xu* P >
 < (s) *u* P >

A verb in the perfect may refer to a complete or incomplete process, *i.e.* which may or may not have reached its final instant. This also depends on the verb's telicity. When completed, a process may have a resulting state, as in *he's cooked the food*. With stative verbs, the perfect indicates a change of state. The perfect will be further analysed in §5.

B. Recent completion

Hââ marks the recent completion of a process and cannot combine with the perfect marker. *Hââ* originates from the impersonal verb *hââhuuk* 'be recent, new':

4. In Nêlêmwa, the *realis* aorist and the *irrealis* aorist are both marked \emptyset .

- (5) *Hââhuuk paara eli.*
 be.recent story that.ANAPH
 ‘That story is recent.’ (i.e. has just been circulated)

In complex predicate constructions, *hââhuuk* may be the modifier of another verb, as in (6a), whereas the aspect morpheme *hââ* (6b) occurs between the subject and the predicate. *Hââ* indicates that the final boundary of the process has recently been reached ([---]//) in relation to the time of speech (in discourse) or to some past event (in narratives).

- (6) a. *Hla diya hââhuuk* (vs.) b. *hla hââ diya.*
 3PL do be.recent 3PL REC.COMPLT do
 ‘They’ve done it recently/they’ve just done it.’
- (7) *I xam⁵ hââ toven.*
 3SG ASS REC.COMPLT finish
 ‘He’s just finished.’

Hââ does not combine with the perfect (*(k)u*, (*(x)u*), nor with the prospective/future *io*; but it may combine with the potential morpheme *o*. In a narrative (8), the recently completed process (*hââ uya*) is relative to a past situation disconnected from the time of speech.

- (8) *Dua hla hââ uya hlaabai*
 when.PAST 3PL REC.COMPLT arrive those.ANAPH
fhavaro-â xe kia hoxo haxixi-hla.
 guest-POSS.1PL.INCL TPC NEG.EXIST someone fear.TR-3PL
 ‘When our guests had just arrived (for the first time) nobody was afraid of them.’

C. Already completed event or process: *taa₂* ‘already’

The morpheme *taa₂* ‘already’ will be analysed in §6.3, together with the remansive *taa₁*. They probably stem from a common origin, but have developed different meanings. *Taa₂* marks the prior completion of a process or event. In contrast with *hââ*, which excludes any combination with the perfect marker, the prior completion marker *taa₂* may combine with the perfect marker (*(k)u*, (*(x)u*) to stress anteriority.

- (9) *Hla u taa the maaxi habuk ma hla ya mwa.*
 3PL PFT PREV reap straw before SUB 3PL thatch house
 ‘They’ve/had already reaped the straw before thatching the house.’

5. *Xam* is a discourse-assertive marker.

D. Pluri-actional markers

Pluri-actionality is encoded by *aa* (iteration) and *kua* (frequency + past reference). This is developed in §6.1.

E. Incompletion markers

Various morphemes express incompletion: the processual marker (*na*) is restricted to activity verbs; other markers are durative (*baa*), persistive (*gaa*), continuative-contrastive *gat*, remansive (*taa*₁). These morphemes will be further detailed in §6.1, §6.2, §6.3.1.

3.3.3 Other aspect markers

Other aspect markers, listed in Table 4 and further detailed in §6.4 to §6.6, focus on the specific relation to the initial or the final boundary of an event, process or state, but from an external perspective, since (i) the event or process has not yet occurred (*kio fwâ* ‘not yet’ refers to an uninitiated process (see §6.4.1)), or (ii) it has failed to achieve completion (*fwââm* ‘almost, nearly’ indicates near, but failed, occurrence of some event or process (§6.4.3), or (iii) the marker refers to some permanently completed or bygone event that will not occur again (*kio haxa* ‘no longer, no more’) (§6.5, §6.6).

Table 4. Other aspect markers

unreached boundary not yet occurred	nearly reached boundary, but failed	permanently terminated, bygone
<i>kio fwâ</i> ‘not yet’	<i>fwââm</i> ‘almost, nearly’	<i>kio haxa</i> ‘no longer, no more’

3.3.4 Position of aspect markers

Aspect markers generally occur before the predicate (verbal or non-verbal) and between the subject index and the predicate if there is a subject index.

- (10) *Hli baa âlô.*
 3DU DUR child
 ‘They are still children.’

In (11), the iterative marker *aa* has its scope on the numeral predicate *aaxan* ‘three’, the iterated event is < catching 3 fish >:

- (11) *Aa aa-xan shâ-pwee-n.*
 ITER CL-three content-line-POSS.3SG
 ‘He has angled three fish again.’ (*lit.* it’s again three (fish) his catch of fish)

Only the continuous marker *gat*, which also has some modal connotations (such as counter-expectancy), appears in post-predicate position (after the non-verbal

predicate *thaamwa* in (12)). The presupposition in (12) is that someone else than the woman is expected to speak:

- (12) [*Thaamwa=ena gat*] [*hoona na vhaa !*]
 woman=that.DX2 CONT that.DX2 PROC speak
 ‘It’s still that woman who is speaking !’ (*lit.* it’s still that woman the one speaking)

3.4 Combination of aspect markers

After this general overview of T.A.M. morphemes, a brief survey of some of their combinations is now presented.

3.4.1 Combination of the perfect $(k)u \sim (x)u$ and other aspect markers

As shown in Table 5, the perfect cannot combine with the recent completion morpheme *hââ*, nor does it occur with *kio fwâ*, which refers to an event or process that has not yet occurred, and is thus in semantic conflict with the perfect in Nêlêmwa. But it may combine with *taa₂*, which marks previousness and can be translated by ‘already, before’.

The perfect does not combine with incompletion markers (such as processual *na* or durative *baa*), but it combines with persistent *gaa*, which has modal semantics. It also combines with pluri-actional aspect markers (iterative and frequency). This will be further detailed in §6.

Table 5. Combination of the perfect with other aspect markers

	RECENT COMPLETION	PREVIOUS OCCURRENCE	NOT YET OCCURRED	PLURI-ACTIONAL		INCOMPLETION		
	<i>hââ</i>	<i>taa₂</i>	<i>kio fwâ</i> ‘not yet’	<i>aa</i> iterative	<i>kua</i> frequency (in past)	<i>na</i> processual	<i>baa</i> durative	<i>gaa</i> persistent
PERFECT $(k)u \sim (x)u$		+		+	+			+

3.4.2 Combination of irrealis morphemes with the perfect

The *irrealis* mood markers, virtual (*o*) or future (*io*), may combine with the perfect marker $(k)u \sim (x)u$. *Irrealis* mood markers are in outermost, leftmost position, standing before the whole verb phrase (*i.e.* the predicate (P) and the subject index (s)).

allomorph <i>u</i> (between subject (s) & predicate) [<i>o</i> < s <i>u</i> P >] [<i>io</i> < s <i>u</i> P >]	allomorphs <i>ku</i> ~ <i>xu</i> (no subject expressed) [<i>o</i> < <i>ku</i> ~ <i>xu</i> P >] [<i>io</i> < <i>ku</i> ~ <i>xu</i> P >]
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The semantics of such associations is analysed in §5.8.

3.4.3 Combination of irrealis morphemes with other aspect markers

The *irrealis* markers may combine with other aspect markers (see Table 6): the main restrictions concern *kio fwâ* ‘not yet’, the recent completion marker *hââ* and the marker of frequency in the past *kua*, which are all semantically incompatible with the future *io* for obvious semantic reasons.

Table 6. Combination of irrealis markers (*io*, *o*) and other aspect markers

PLURI-ACTIONAL		INCOMPLETION			NOT YET OCCURRED	RECENT COMPLETION
<i>aa</i> iterative	<i>kua</i> frequency (in past)	<i>na</i> processual	<i>baa</i> durative	<i>gaa</i> persistent	<i>kio fwâ</i> ‘not yet’	<i>hââ</i> just completed
<i>io</i>	+	+	+	+		
<i>o</i>	+	+	+	+	+	+

When the future *io* ~ *e* combines with the locative verb *gi* ‘be.LOC’ and the processual marker *na*, which expresses some ongoing activity, as in (13), the meaning is epistemic, expressing near certainty.

- (13) *Io gi ye na pwe.*
 FUT be.LOC 3SG.FR PROC fish
 ‘He must be fishing.’ (*lit.* He will be fishing)

Compare with reference to an ongoing present activity: *gi ye na pwe* ‘he is fishing.’

4. Irrealis mood

The two *irrealis* morphemes (virtual/subjunctive *o* and future *io*⁶ ~ *e*, (originally *ixo*, *exo*)) express different degrees of epistemic stance and different degrees of certainty or

6. *Io* is the form chosen by the speakers to unify the many variants *e*, *e(x)o*, *i(x)o*. This morpheme probably originates from a compound form *e-* (presentative) + *-xo* (anaphoric suffix referring to unknown, non-referential entities for the speaker).

probability relative to the occurrence of the projected event. They are mutually exclusive in the same clause, but may occur in two different clauses within a sentence. They stand in the leftmost position before the whole predicate phrase (subject index (s) and predicate (P)):

virtual: $o < (s) P >$
future: $io \sim e < (s) P >$

- (14) *Io na diya.*
FUT 1SG do
'I'll do it.'

4.1 Future, prospective: $Io \sim e$

$io \sim e < (s) P >$

The future morpheme $io \sim e$ is compatible with close or distant future, depending on the context and on other co-occurring morphemes. Imminent future is expressed by combining $io \sim e$ with the adverb *êna* 'now':

- (15) *Io i uya êna.*
FUT 3SG arrive now
'He'll arrive soon/in a moment.'

- (16) *Na io na faxi êna.*
and FUT 1SG cook now
'and I'm going to cook it now.' (Bril 2002: 493)

4.2 The virtual marker o

The uses of the virtual morpheme o in independent sentences (imperative, hortative, optative) and in dependent clauses (conditional protases, *irrealis* complement and relative clauses) is now presented.

4.2.1 Virtual marker o in imperative, hortative and optative sentences

A. Imperative

Unmarked imperatives display the bare verb form,⁷ while o appears in marked imperatives expressing a stronger injunction, as in *o taauri!* 'do wait!'; *o maya!* 'do be patient!', wait!'; *o khomi!* 'do count!'.⁸

7. In Mwotlap, imperative is one of the many functions of the aorist marker (François 2003: 194–195).

8. In Palau, "imperative is expressed by the [...] hypothetical form" (Hagège 1986; Lemaréchal 1991: 162).

- (17) (O) *kuut mwena!*
 VIRT stand there.DX2
 ‘(Do) stop there!’

Negative orders or prohibitions are marked by *a(xo)*:

- (18) *Axo yo thea o hele!*
 PROH 2SG play INSTR knife
 ‘Don’t play with this knife!’

B. Optative, hortative: sho o

The optative, hortative form is *sho o* (*lit.* good if/that).

- (19) *Sho o yo maak!*
 good VIRT 2SG die
 ‘May you die!’
- (20) *Sho o wa tâlâ-e.*
 good VIRT 2PL listen-3SG
 ‘You should listen!’

4.2.2 *The morpheme o in dependent/subordinate clauses*

In subordinate clauses, the virtual marker *o* has several functions in conditional protases, in *irrealis* complement and in relative clauses.

A. Conditional protases

– *O* marks conditional protases, like the first occurrence of *o* in (21) (*o i oome uya agu*); the second occurrence of *o* bears on the numeral predicate of the *irrealis* relative clause (*agu [o aa-xiik]*), and refers to a potential entity of the class *agu* ‘person’:

- (21) [O *i oome uya agu* [o *aa-xiik*]] [*na a wa*
 VIRT 3SG come arrive person VIRT CL-one but PROH 2PL
tu paa].
 go.down outside
 ‘If someone arrives, don’t go out.’ (*lit.* should a person who might be one arrive...)

B. Irrealis relative clauses

– In *irrealis* relative clauses, *o* refers to some virtual/potential property or determination of the relativised noun.

- (22) *Je le yeewat o hâ axe.*
 3SG.be.LOC there time VIRT 1PL.INCL see
 ‘There are times when we may see it.’ (Bril 2000: 256)

O commutes with *xe*, which refers to *realis*, factive relative clauses. Compare (23a), which refers to a potential non-specific indefinite ‘sharp’ knife whose existence is unasserted, with the factive (23b), which asserts the existence of a ‘sharp’ knife and refers to a definite entity. The epistemic feature of virtual *o* thus correlates with potential indefinite reference (see Brill 2001).

- (23) a. *Oda fhe hele o caak!*
 go.up get knife VIRT sharp
 ‘Go get a sharp knife!’ (*lit.* a knife that may be sharp, if there is such a thing)
- b. *Oda fhe hele xe caak!*
 ‘Go get the sharp knife!’ (*lit.* the knife that’s sharp).

O refers to a virtual and unasserted propositional content in the relative clause, as in (24a), where the verb of the main clause is in the future:

- (24) a. ... *me io i thuuxe hmavat [o pwa-giik]*.
 ... and FUT 3SG tell piece VIRT CL-one
 ‘... and she’ll tell a part of the story.’ (*lit.* a piece that may be one)

On the other hand, a *realis* main clause and *realis* context trigger the use of *xe*:

- (24) b. *I thuuxe hmava-t xe pwagiik.*
 ‘She told one part of the story.’

Similarly, relativised NPs dependent on negative existential predicates trigger the use of *o*, as in (25), since there is no possible factual reference.

- (25) *Kia agu o na axi-e.*
 NEG.EXIST person VIRT 1SG see-3SG
 ‘I did not see anybody.’ (*lit.* there isn’t a person (that) I may have seen).

C. Irrealis complement clauses

— *O* also appears in complement clauses dependent on verbs referring to virtual events, also dependent on modal verbs, deontic (*khere* ‘be forbidden’, *kââlek* ‘be impossible’), or epistemic-evidential (*shuma* ‘seem as if/that’). All such uses of *o* are equivalent to the subjunctive or conditional and constitute *irrealis* frames of reference.

- (26) a. *Na faaxeen o hmeede khô-hâ wo.*
 1SG ask VIRT be.cooked food-POSS.1PL.INCL PL.INDF
 ‘I asked if our food was cooked.’ (*lit.* I asked would our food be cooked)
- b. *Khere o hâ pweeli nox=ena.*
 be.forbidden VIRT 1PL.INCL fish.TR fish=that.DX2
 ‘It’s forbidden for us to fish that fish.’ (*lit.* it’s forbidden that we fish ...)

- c. *Cêê kââlek o na diya.*
 very impossible VIRT 1SG do
 ‘It’s impossible for me to do it.’ (*lit.* it’s impossible that I do it)
- d. *Shuma o i jela.*
 be.like VIRT 3SG happy
 ‘He seems to be happy.’

D. Irrealis time expressions with *o* vs. past realis reference with *dua*

The virtual morpheme *o* occurs in predicative time expressions with virtual time reference, such as *thabwan* ‘night’ in (27a). Compare with the past reference marked by the conjunction *dua* ‘when’ (27b), which may only refer to the past.

- (27) a. *êna o thabwan.*
 now VIRT evening
 ‘tonight, this evening’ (yet to come) (*lit.* now [when] it be evening)
- b. *koobwan dua thabwan*
 yesterday when.PAST night
 ‘yesterday night’ (*lit.* now [when] it was evening)

On the other hand, a time reference concomitant to the time of speech is marked by a deictic determiner, as in (27c). Compare with the virtual reference in (27a).

- c. *Ni tan hleny*
 in night this.DX1
 ‘tonight, during the night’ (concomitant to the time of speech)

In (28a–b), *waak* ‘morning’ (like *thabwan* ‘night’ in (27)) is the predicate of a time clause. In (28a), <*o waak*> refers to some virtual time dependent on a main clause with future temporal frame; while in (28b), *dua* has past reference.

- (28) a. *Io i uya [o waak].*
 FUT 3SG arrive VIRT morning
 ‘He’ll arrive in the morning.’
- b. *I uya [dua waak].*
 3SG arrive when.PAST morning
 ‘He arrived in the morning.’ (*lit.* he arrived when morning)

Various conjunctive time expressions display similar contrasts: *uya=(da) dua* ‘until (past)’ ~ *uya=(da) o* ‘until (virtual)’ (*lit.* arrive=(up) when), or *ni yeewat dua* ‘when (past)’ (*lit.* in the time when) ~ *ni yeewat o* ‘when(ever)’ (virtual), (see §8.4).

5. The perfect: Definition and use in *realis* and *irrealis* frames

While the bare aorist verb form refers to events (independently from any phasal aspect) and to sequential events in narratives, the perfect marker (*k*)*u* ~ (*x*)*u* refers to

past events or to completed processes which bear some relevance either to the present and to the time of speech (like the English present perfect), or to another past event in narratives (like the English past perfect); the perfect may also refer to some resulting state relevant to present or past temporal frames.

The perfect may appear in *realis* and *irrealis* sentences, as shown by (29), which refers to the projected, imminent completion of a process. This will be detailed in §5.8.

- (29) *Io <na u pwaala=du mwa>*.
 FUT 1SG PFT sail=down SEQ
 ‘I shall be off sailing north (soon).’ (north direction is expressed as ‘down’)

5.1 The perfect in *realis* frames: Relevance to the time of speech and narrative uses

In discourse contexts, the perfect refers to a process anterior to the time of speech (t_0), but relevant to it. In narratives, the perfect refers to a process (t_n) anterior to another past reference point (t_{past}), in a temporal frame which is disconnected from (t_0).⁹

The process in the perfect may be complete or incomplete, *i.e.* it may or may not have reached its final instant, as in English for that matter, *he has/had worked a lot* does not signal completion. On the other hand, especially when used with telic verbs such as *break*, the action may be complete or completed and may have a resulting state, as in *he has/had broken the vase*; this is also the case with *ku hmeede* ‘cooked’ in (30):

- (30) *Ku hmeede cet?*
 PFT cook cooking-pot
 ‘Is the food cooked?’

Completion may be expressed lexically by adding *toven* or *roven* ‘stop, end’ (see §7.3).

The interval representing an incomplete process is semi-open: its right boundary is open (as in Figure 1 below). If the process is completed, the (bold) right boundary of the interval [A] is closed (as in Figure 2), and there may be a resulting state, represented by slashes (|////|) in Figure 2.

Figure 1: [---[

Figure 2: [A]////|

In (31–32), $(k)u \sim (x)u$ also refers to a completed process, relative and prior to some reference point (which may be past or present):

- (31) *Na i u aa fhe*.
 but 3SG PFT ITER take
 ‘But he has/had (already) taken it back.’ (something given before)

9. This is noted [t_n anterior to $t_{\text{past}} \omega t_0$].

- (32) *Na na, xe na u khuxi caa-ny.*
 but 1SG TPC 1SG PFT eat.TR starch.food-POSS.1SG
 ‘As for me, I’ve eaten my food.’ (Bril 2002: 480)

– With inchoative verbs like ‘begin’, $(k)u \sim (x)u$ focuses on the initial phase of an incomplete process, as in (33).

- (33) ...*me ku thaaxapuxet ni yeewar=eli.*
 and PFT begin in time=ANAPH
 ‘... and it has/had begun at that time.’
 (and is/was still ongoing relative to some past reference point)

– With terminative verbs, $(k)u \sim (x)u$ focuses on the final instant of the closed interval:

- (34) *(xu) toven.*
 PFT finish
 ‘It’s finished.’

Terminative processes, such as *he’s finishing*, or *it’s coming to a close*, are represented by an open interval, which is closed only when the process has reached its endpoint.

5.1.1 Past event relevant to the time of speech

In (35), the past temporal frame is set by the adverb *hule* ‘long ago’ in the first clause, the perfect has scope on the numeral predicate NP *tujic kau-n* ‘ten years’, while present relevance to the time of speech (t_0) is marked by the adverb *êna* in the second clause.

- (35) [*I uya hmwiny hule*] [*xu tujic kau-n êna*].
 3SG arrive here long.ago PFT ten year-POSS.3SG now
 ‘He arrived here long ago, ten years from now.’ (*lit.* it’s been ten years now)

In (36–37), a time interval is computed between two boundaries, going back in time from the time of speech (t_0), but with implicit relevance to t_0 . In (36), the perfect has scope on the numeral predicate NP *pwadu bwalit* ‘two days’:

- (36) *Xu pwa-du bwalit*
 PFT CL-two day
 ‘it was two days ago’

- (37) *I u o=da mwa mwa-yeenat na le.*
 3SG PFT go=up SEQ house-learn LOC there
 ‘The school there has progressed.’ (until now) (Bril 2000: 512)

5.1.2 Completed process in the past temporal frame of a narrative

In example (38), the verb of the main clause (*hnawi-e*) is in the bare aorist form and refers to a past event, while the perfect in the subordinate clause refers to a prior state. Compare with the two past sequential events in the bare aorist form in (39).

- (38) *I hnawi-e a Pwâ-Hivic dua u gi hli bwa mat.*
 3SG leave-3SG AGT Pwâ-Hivic when PFT be.LOC 3DU on shore
 ‘Pwâ-Hivic left her when they were already on the shore.’ (Bril 2002:482)
- (39) *Co huli-na êbai dua hî tu.*
 2SG guide-1SG before when 1DU go.down
 ‘You guided me earlier on when we went down.’ (Bril 2002:489)

5.2 The perfect with stative verbs: Change of state

Whether in narratives or discourse, stative or nominal predicates marked in the perfect by $(k)u \sim (x)u$ refer to a change of state or to a new, transitional resulting state, which is represented by $(\text{ } // \text{b} // \text{ })$.

$$[A] // \text{b} // [(t_0 \text{ or } t_{\text{past}})]$$

The resulting state $(\text{ } // \text{b} // \text{ })$ is the outcome of the event or process $[A]$, it may be relevant to a reference point (t_0 in discourse, or t_{past} in narratives). Similarly in Latin, *cognōscō* ‘I learn’ contrasts with the perfect *cognōvī* ‘I know’ which expresses a resulting state.

– The change of state may result from some natural evolution, as in (40–41):

- (40) *Na u hulak.*
 1SG PFT old
 ‘I’m old (now).’ (*lit.* I have gotten old)
- (41) *Na u whaup.*
 1SG PFT be.toothless
 ‘I’m toothless (now).’ (*lit.* I have become toothless)

In (42) to (44), the change of state results from an event $[A]$ which is expressed contextually: it results from disobeying the rules in (42), from eating in (43), from stealing in (44)). In (42), the change of state can be represented as follows: $[A] - \text{tôxâ} - [\text{ }]$.

- (42) *Hli u tôxâ.* vs. *Hli tôxâ.*
 3DU PFT be.purulent
 ‘They got covered with pustules.’ ‘They were pustulous.’
- (43) *Xu pôlôk kiya-n.*
 PFT be.full belly-POSS.3SG
 ‘His belly is full (now).’ (*lit.* it has become full) (Bril 2002:474)
- (44) *Xu kian idaama-ny!*
 PFT disappear eye-POSS.1SG
 ‘My eyes have disappeared!’ (Bril 2002:487)

A noun or pronoun in predicate function may combine with the perfect marker to express a change of state, as *hli u thaamwa* ‘they have become women’ in (45), and *u wap* ‘it’s high tide now’ in (46):

- (45) *I axi horaamalileny êbai nu mahlileny xe hli u*
 3SG see these2.FEM.DX1 before coconut these2.DX1 REL 3DU PFT
thaamwa xe aa-ru.
 woman REL CL-two

‘He sees these two, (who were) before these two coconuts, who have become two women.’

- (46) *I axe khabwe u wap.*
 3SG see COMP(say) PFT high.tide
 ‘She sees that it’s high tide (now).’ (Bril 2002: 487)

In (47), the first perfect *u ogi* ‘they had left’ marks a completed, backgrounded process which stands in causal relation with a resulting change of state represented by *u ye hada* ‘she was then (left) on her own’, in which the perfect marker *u* has scope on the predicative free pronoun *ye*.

- (47) *Hla u ogi shaak xe u ye hada.*
 3PL PFT leave swamp.hen REL PFT 3SG.FR alone
 ‘They had left the swamp hen who was then (left) on her own.’

5.3 Graded change of state and evolutive process with the perfect

Dynamic or stative verbs are compatible with stages and degrees of evolution which are expressed by combining the perfect marker $(k)u \sim (x)u$, degree markers like *cêê* ‘very’, *pwâ* ‘a little’, and the sequential marker *mwa* ‘then’. Together, they refer to an ongoing, transitional process, and to a gradual change of state, from some past point up to the present in discourse, or relative to another time point in narratives.

- (48) *Ku cêê coola khilû i ye.*
 PFT very strong disease DET 3SG
 ‘He’s been increasingly ill.’ (*lit.* his disease has become very strong)
- (49) *Na u cêê mwa tâlâ vhaa Nêlêmwa.*
 1SG PFT very SEQ hear language Nêlêmwa
 ‘I understand Nêlêmwa better and better.’
 (*lit.* I’ve (gained) much better understanding)
- (50) *Na u pwâ tâlâ-mwemweli.*
 1SG PFT a.little hear-know
 ‘I understand slightly better.’ (*lit.* I’ve (gained) slightly better understanding)

speaker's temporal frame (t_0) marked by *êna* 'now'. Note that the bare verb form (*faxi* 'cook') in the relative clause refers to a past event marked by *kôôbwan*.

- (55) *Me na mwa na=da me mwa idaama-ny; me na u axe*
 and 1SG SEQ put=up so.that SEQ eye-POSS.1SG and 1SG PFT see
êna hlaabai co faxi kôôbwan.
 now those.ANAPH 2SG cook yesterday
 'And I put them up to have eyes (lit. to be my eyes), and now I get to see
 what you cooked yesterday.' (Bril 2002: 492)

In (56), the first perfect refers to a change of state (*i u alawuk* '(as) she got hungry'),¹¹ which is the causal background triggering the consequent event in the aorist (*i oda khîli-wo ja* 'she went up to roast sea-shells'). In the next sentence, this is repeated in the perfect (*i u khîli-wo ja*), as a sort of backgrounding,¹² cueing construction ('once she had roasted sea-shells') which refers to a completed process relevant for the next event in the aorist (*i o=da*).

- (56) *Na i u alawuk, na i o=da khîli-wo ja;*
 but 3SG PFT hungry so 3SG go=up roast-PL.INDF sea-shells
 'but she'd got hungry, so she went up to roast sea-shells;
i u khîli-wo ja le, mwena xe i o=da...
 3SG PFT roast-PL.INDF sea-shells there there.DX2 TPC 3SG go=up
 (once) she had roasted sea-shells, then, she went up.' (Bril 2000: 502)

The excerpt from a narrative in (57) shows an alternation of bare aorist and perfect verb forms in a past temporal frame disconnected from the speaker's time. The bare form *yhoraabwa* 'lived' in [P₁] is stative-like, while (*k*)*u* ~ (*x*)*u* in [P₂] (*hli u tu* 'they had gone down') refers to a completed and backgrounded process. The event in the bare form *hli tu tuuli naam pwagiik* 'they went down, found a water-hole' in [P₃] forwards the story, adding new information. The perfect in [P₄] (*hli u tha* 'they speared') marks a process which is the causal background relevant to the next event in [P₅] 'they caught a lot of fish'.

- (57) *Hli yhoraabwa Alevic. Na ni naxâât pwa-giik xe [...] hli u*
 3DU live Alevic but in day CL-one TPC 3DU PFT
 ← P₁ → ← P₂ →
 'They lived at Alevic. One day, they had gone down (to the sea)

11. Compare with the expression of a present state: *i alawuk* '(s)he's hungry'.

12. For similar backgrounding effects of the perfect in Vanuatu languages, see (François 2010).

tu *thu* *naam.* *Hli* *tu* *tuuli* *naam* *pwa-giik*
 go.down make water.hole 3DU go.down find water.hole CL-one
 ───────────────────────────────────▶ ───────────────────────────────────▶ P_3 ───────────────────────────────────▶
 to make water-holes (for fishing). They went down, found a water-hole
xe *pôlôk* *o* *nok* *mwena* *xe* *hli* *u* *tha, tha, tha*
 REL full with fish there.DX2 TPC 3DU PFT spear spear spear
 ───────────────────────────────────▶ ───────────────────────────────────▶ P_4 ───────────────────────────────────▶
 full of fish then, they set spearing (fish), spearing,
me *khada* *kââlek* *hleeli* *shâ-doo-li* *nok.*
 COORD after be.numerous these.ANAPH content-assagai-POSS.3DU fish
 ───────────────────────────────────▶ ───────────────────────────────────▶ P_5 ───────────────────────────────────▶
 and then they caught a lot of fish.' (*shâ-doo-li nok lit.* means 'these
 assagai-speared fish of theirs')

In (58), another excerpt from a narrative in a past reference frame, the two perfects *u pwaala* in the subordinate clause [P_1] and *u yhowaalak* in the main clause [P_2] are backgrounded, prior situations which are relevant for the next sequence of events in [P_3] and [P_4] marked by the bare verb forms *o=da ku-râimi pwat* 'go up to pick a fruit' and *no-huu* 'follow with the eyes'.

- (58) [*Dua hli u pwaala*], [*na i u yhowaalak=da horaamwaleny*
 when 3DU PFT sail COORD 3SG PFT climb=up this.FEM.DX1
 ───────────────────────────────────▶ ───────────────────────────────────▶ P_2 ───────────────────────────────────▶
 'When they had sailed away, Hiixe had climbed up
Hiixe bwa hooli pwê-khojomi], [*me i o=da ku-râimi*
 Hiixe on ANAPH Cerberas Manghas and 3SG go=up stand-pick
 ───────────────────────────────────▶ ───────────────────────────────────▶ P_3 ───────────────────────────────────▶
 the tree, and she went up to pick
pwat pwa-giik na mwaida ni hadat] [*me i no-huu Kaavo*
 fruit CL-one LOC there.up in branch and 3SG see-follow K
 ───────────────────────────────────▶ ───────────────────────────────────▶ P_4 ───────────────────────────────────▶
 one fruit up there in the branches, and she watched Kaavo
ma Pwayili dua hli u pwaala.]
 and P. when 3DU PFT sail
 ───────────────────────────────────▶ ───────────────────────────────────▶ P_5 ───────────────────────────────────▶
 and Pwayili when they had sailed away.'

The following segment in (59) shows again alternation of perfects and of bare aorist forms (underlined); the perfects mark transitional processes, serving as background with relevance for the following sequence of events marked by bare verb forms.

- (59) *Me i u tu mwa, tu mwa, o=da shi horaamwaleny*
 and 3SG PFT go.down SEQ go.down SEQ go=up at this.FEM.DX1
 ‘and she set going down then; she went down, went up to this woman’s
 place,
me hli u wo. Hli u wo, na i xau oo=me
 and 3DU PFT weave 3DU PFT weave COORD 3SG UNEXP come=HITHER
 and they both set weaving. They’d been weaving, and suddenly
hiji aa-xiik xa fhe para khoo-n nu na
 ant CL-one also take piece food-POSS.3SG coconut LOC
 an ant arrived, took a piece of coconut,
mwêli, me i xau thegela me i o=da mwa bwa baarawo.
 there and 3SG UNEXP run and 3SG go=up SEQ on weaving
 ran, and went up onto their weaving.’ (Bril 2000: 502–503)

In (60), *ni yeewat dua* sets the temporal reference as past, all the following verbs are in the bare aorist form (underlined) and refer to sequential events. The assertive form *xau* ‘suddenly’ is modal rather than aspectual, and refers to a sudden, unexpected action.

- (60) *Ni yeewat dua i xau thaaxa khuwo, (...)*
 in time when 3SG UNEXP start eat
 ‘As she was just starting to eat, (...)
na i xau fhe bulaivi a aa-xiik ava horamalaaleny (...)
 but 3SG UNEXP take club AGT CL-one some these.FEM.DX1
 all of a sudden one of these (women) (...) took the club
me i xau hnawe=du ni bwaat.
 and 3SG UNEXP let.go=down in head
 and suddenly struck her on the head.’

5.5 The perfect in chronologically ordered events and relative time constructions

Events are chronologically ordered by adverbs, such as *habuk* ‘in front, first, before’, *mon* ‘behind, after’, or by sequential lexemes, such as *khadaa* ‘after, then’, *mwa* ‘then’, which may occur in *realis* or *irrealis* reference frames. In (61), the perfect marker (*k*) *u ~ (x)u* marks a completed event, while *mon* marks some posterior chronological ordering relative to another event or process.

- (61) *I u mwa le mon.*
 3SG PFT SEQ go after
 ‘(S)he has then left after.’

In (62), the perfect (*u farame*) in the main clause refers to a completed process, anchored in the past by the anaphoric adverb *êbai* ‘earlier, before’ (see Table 5 below)

and with consequences upon the present situation; the adverb *habuk* ‘before’ in the subordinate clause orders it chronologically.

- (62) *Na u farame êbai o na khabwe habuk.*
 1SG PFT forget before VIRT 1SG say before
 ‘I have forgotten if I said it before.’

Compare with: *na farame êbai o na khabwe habuk* ‘I forgot if I said it before.’

Habuk ‘before’ and *mon* ‘after’ also occur as subordinators, together with the subordinator *me*, as in (63):

- (63) *Na habuk me i o=da=me xe pwaxat me i*
 but before SUB 3SG go=up=HITHER TPC necessity SUB 3SG
parega idaama-n.
 hang eye-POSS.3SG
 ‘But before she came up here, she needed to put her eyes back (in their sockets).’

Habuk ‘before’, *mon* ‘after’ and *hule* ‘long ago/before’ also function as nominal modifiers, as in (64).

- (64) *ni naxâât bai habuk*
 in day ANAPH before
 ‘the day before (or) in those days’

5.6 The perfect with reference to some imminent event or to the imminent completion of a process

An imminent event, or the imminent completion of a process, is often expressed by a perfect marker¹³ in Oceanic languages (in Toqabaqita, Solomon islands (Lichtenberk 2008), as well as in Kanak languages).¹⁴ It also occurs in Mandarin, or in spoken French, where one of the two readings of *je suis parti* ‘I’m off’ (*lit.* I’m gone) is of imminent departure.

- (65) *Na u le.*
 1SG PFT leave
 ‘I’m off.’

The imminent process is asserted, as if already completed (hence the perfect), and the focus is on the projected final instant of the process and its resulting state.

In (66), the first occurrence of the perfect (*u nanami*) refers to a prior event relevant to the time of speech (t_0) and triggering the next process, also marked in the

13. Ö. Dahl (2006) labels such use of the perfect ‘iamitive’.

14. In Drubea (Shintani & Paita 1990) and Xârâcùù (Moysse-Faurie 1995).

perfect (*na u le*), but expressing imminent completion this time. Similarly, in (67), the perfect (*na u ulo*) indicates some imminent change of state.

- (66) *Mo axe bu na u nanami khabwe me na u le.*
 2DU see for 1SG PFT think COMP(say) SUB 1SG PFT leave
 ‘Listen you two, for I’ve decided to leave.’
- (67) *Bwaaramwa Pwâ Keebö ! co yhaali-na bu na u ulo.*
 alas P. K. 2SG lift.off-1SG for 1SG PFT burn
 ‘Help Pwâ Keebö ! lift me off (the fire) or I’m going to burn.’
 (Bril 2002: 495)

5.7 The perfect and other lexical expressions of imminence

It is of some interest that various lexical (locative or temporal) expressions of imminent completion involve (*ku* ~ (*x*)*u*), and express gradation.

A. (*ku* ~ *xu*) *jeuk me* ‘be close to, almost, nearly’ (*jeuk* ‘be close, be next to’) refers to a targeted and nearly reached process or state, relevant to t_0 in (68) or potential in (69).

- (68) *Bu (xu) jeuk me pólók kee-n.*
 for PFT be.close SUB be.full basket-POSS.3SG
 ‘Her basket is almost full already.’
- (69) *Na ni yeewat o khabwe ku jeuk me foro=da taan...*
 but in time VIRT EVID(say) PFT be.close SUB white=up day
 ‘But at the time when dawn may seem to be almost bright ...’
 (*lit.* when day will be close to be white)

B. (*ku* ~ (*x*)*u thara* also expresses imminent completion (*thara* ‘next to’):

- (70) *I axe khabwe xu thara bwan.*
 3SG see COMP(say) PFT next.to night
 ‘She sees that it’s getting dark.’ (*lit.* it is close to night)

C. Imminent completion may also be expressed by a negative time phrase *kio hule me* ‘almost, soon’ (*lit.* it’s not long, where *hule* is predicative), combined with (*ku* ~ (*x*)*u* in the next clause.

- (71) *Kio hule me i u toven o khuwo.*
 NEG long.time SUB 3SG PFT finish PREP food
 ‘He has almost finished eating.’ (*lit.* it’s not long that he has finished with food)

The verbal phrase *u diya me* (*lit.* do for) ‘be about to’ also expresses imminence, see §7.1 below.

5.8 The perfect in *irrealis* reference frames

The specific uses of the perfect in *irrealis* reference frames are now considered.

5.8.1 *The perfect in imperative or hortative utterances: Urged projected completion*

In imperative and hortative utterances, the use of the perfect $(k)u \sim (x)u$ is emphatic, it expresses the projected completion of a transitional process or a projected change of state with a stronger sense of urgency.

- (72) *Co u fhe hliina thaxamo i yo me wa u*
 2SG PFT take those2.DX2 old.woman DET 2SG and 2PL PFT
o=da mwa!
 go=up SEQ
 ‘Do take these two spouses of yours and get on your way back!’

Compare with an unmarked imperative:

Fhe hliina thaxamo i yo.
 ‘Take these two spouses of yours.’

- (73) *Wa u fhe hleena mââwu-wa roven me wa*
 2PL PFT take those.DX2 belonging-POSS.2PL all and 2PL
u khavak!
 PFT go.away
 ‘Do take all your belongings and be off!’

Compare with an unmarked imperative:

Wa fhe hleena mââwu-wa.
 ‘Take all your belongings.’

- (74) *Co axe! hî u taabwa me hî u khuwo!*
 2SG see 1DU PFT sit and 1DU PFT eat
 ‘Listen! Do let’s sit down and eat!’

– In self-directed hortative utterances, the semantics of $(k)u \sim (x)u$ are similarly emphatic:

- (75) *Sho o na u o=da bwaxamat.*
 good VIRT 1SG PFT go=up shore
 ‘I must absolutely go up to the shore.’

Compare with the neutral self-directed hortative:

Sho o na oda bwaxamat.
 ‘I had better go back to the shore.’

5.8.2 Use of the perfect in future reference frames

In a virtual (*o*) or a future (*io*) frame, $(k)u \sim (x)u$ refers to the imminent completion of a process, or an imminent change of state; it also expresses epistemic modality and the speaker's certainty about the projected occurrence of the event.

Table 7. Combination of irrealis mood and perfect

Semantics		
<i>o</i>	$(k)u \sim (x)u$	potentially completed action or change of state
<i>io</i>	$(k)u \sim (x)u$	projected, future action expressed as if completed

Note that *io* has scope on the whole clause, while $(k)u \sim (x)u$ has scope on the predicate only:

- (76) a. *Io* <*na u le caae o waak*>.
 FUT 1SG PFT leave tomorrow VIRT morning
 'I'll be leaving tomorrow morning (for sure).'
 (*lit.* I'll have left for sure tomorrow morning)

Compare with a neutral future event:

- b. *Io na â caae o waak*
 FUT 1SG go tomorrow VIRT morning
 'I'll go tomorrow morning.'

The combination of the future and the perfect may also express a projected change of state considered as certain in some future time:

- (77) *Io* <*na u mwa puri*>.
 FUT 1SG PFT SEQ snake
 'I shall become a snake.' (*lit.* I shall have become a snake for sure)

5.8.3 The perfect in virtual or conditional frames

– In clauses with virtual reference depending on a similitive verb, such as (78), the perfect in the dependent clause refers to a potential change of state or resulting state marked as if already achieved.

- (78) *Maariik o na u maak!*
 be.like VIRT 1SG PFT die
 'It's as if I was dead!' (Bril 2002: 498)

– In conditional clauses (79), the perfect $(k)u \sim (x)u$ expresses the projected completion of a virtual process with epistemic or deontic meanings.

- (79) [O *awa-m* *me* [yo u o=*da*]] *xe* [e *na*
 POT will-POSS.2SG SUB 2SG PFT go=up TPC FUT 1SG
 ←—————P₁—————→ ←—————P₂—————→
diya waja-m
 make boat-POSS.2SG
 →—————→
 ‘If you must go/really want to go, I’ll make a boat for you.’
 ‘Should you really want to go, I’ll make a boat for you.’

Compare with the neutral sentence: *o awa-m me yo oda...* ‘if you want to go...’

– In virtual time clauses, such as [P₁] in (80), marked by the conjunctive marker *ni yeewat o* ‘when’, the perfect *na u â* is the prior and backgrounded (but virtual) condition for the projected event in [P₂] to occur.

- (80) [Ni *yeewat o* *na u â*] *xe* [*io na pwâ vhaa Nêlêmwa*].
 in time VIRT 1SG PFT leave TPC FUT 1SG a.little speak Nêlêmwa
 ←—prior completed event P₁—→ ←—————P₂ prospective event—————→
 [projected in some potential frame]
 ‘When I have left, I’ll speak some Nêlêmwa.’

Thus P₁ is equivalent to anterior future in French *quand je serai parti*. Compare with: *ni yeewat o na â* ‘when I leave...’ (*quand je partirai*, a simple future in French).

In (81), in the virtual frame of [P₁] marked by *ni yeewa-t o*, the perfect marker *(k)u ~ (x)u* marks the decision to follow (*ku awa-m me yo u oxuri*) as the prior condition for the process in [P₂] to occur. The perfect in [P₂] *yo u le* ‘you’ll go’ projects the imminent process as if already completed, and is modally assertive.

- (81) [Ni *yeewat o* *ku awa-m* [*me yo u oxuri hlaabai*
 in time VIRT PFT will-POSS.2SG SUB 2SG PFT follow these.ANAPH
 ←—————P₁—————→
nanamiwo i yo] (...) *xe* [*yo u le*].
 thought DET 2SG TPC 2SG PFT go
 →—————→ ←—————P₂—————→
 ‘When you have decided that you must follow your wishes [...], you’ll set off.’

So far, the analysis has focused on the functions and meanings of combined mood and aspect markers; we shall now turn to the expression of the various phasal aspects of processes.

6. Expression of the phasal aspects of processes

There are numerous morphological indicators of the internal phases of processes; these morphemes are generally pre-verbal. Table 8a (repeated from Table 3) summarises pluri-actional markers, and the various markers of incompletion.

Table 8a. Pluri-actional and incompletion markers

PLURI-ACTIONAL			INCOMPLETION			
<i>aa</i>	<i>kua</i>	<i>na</i>	<i>baa</i>	<i>gaa</i>	<i>gat</i>	<i>taa₁</i>
iterative	frequency (+past)	processual (+activity V)	durative	persistive	continuative contrastive	remansive & state of activity

Stative verbs and states are compatible with some of the aspect markers expressing pluri-actionality (iterative *aa*, frequency *kua*) and incompletion (durative *baa*, persistive *gaa*, remansive *taa₁*). This will be developed under §6.1, §6.2.

The morphemes in table 8b (repeated from Table 4) focus on the initial or final boundary of an event or process. *Kio fwâ* ‘not yet’ refers to a still uninitiated process (§6.4.1); *fwââm* ‘almost, nearly’ indicates near, but failed, completion of some projected event (§6.4.3); *kio haxa* ‘no longer, no more’ refers to some permanently terminated event or process.

Table 8b. Other aspect markers

boundary unreached	boundary nearly reached, but failed	permanently terminated, bygone
<i>kio fwâ</i> ‘not yet’	<i>fwââm</i> ‘almost, nearly’	<i>kio haxa</i> ‘no longer, no more’

These aspect morphemes are compatible with any predicative lexeme (\pm verbal), but some of them, for instance the processual marker *na*, only combine with activity verbs. Compatibility between verb semantics and aspect morphemes also depend on the verb’s inherent semantic features and *Aktionsart*: \pm stative, \pm punctual, \pm telic, \pm reversible (like ‘die’), iterative or cyclic (like ‘breathe’), compatible with a gradient (like ‘grow’), with degrees and grades.

6.1 Pluri-actionality: Iteration and frequency

Pluri-actional markers such as *aa* (iterative) and *kua* (frequency) may refer to punctual events (like ‘kick’) or to processes (like ‘work’). *Aa* is compatible with \pm *realis* mood morphemes, while *kua* ‘often’ is only compatible with past reference.

6.1.1 *Aa: Iteration of time points or time intervals*

Aa is compatible with all types of predicate (\pm verbal) and with all semantic types, stative or dynamic, \pm telic verbs, \pm punctual. It has iterative, regressive meaning (like ‘read again’) or reversive meaning (like ‘grow again’). In (82), the first iterative marker has scope on a free pronoun in predicate function.

- (82) *Aa yawa! wa aa tu khak!*
 ITER 2PL.FR 2PL ITER go.down cast.net
 ‘(it’s) you again! Go back net-casting again!’

– In a negative sentence marked by *kio*, the meaning changes with the scope of *aa*, either on < p > or on < non p > as summarised below:
kio < *aa* p > ‘not again’ vs. *aa* < *kio* p > ‘again not p’

- (83) *Kio i aa mago.*
 NEG 3SG ITER sleep
 ‘He did not fall back to sleep.’ (interrupted cycle)

- (84) *Aa kio i mago.*
 ITER NEG 3SG sleep
 ‘Again, he is not sleeping.’ (iterative)

6.1.2 *Kua: Frequency (past)*

The frequency marker *kua* is only compatible with past reference frames. It may combine with the perfect marker, as in (85), expressing relevance to some reference point. When combined with other markers, *kua* occurs immediately before the predicate.

- (85) *I u kua khabwe.*
 3SG PFT FREQ say
 ‘He’d often said it.’

- (86) *Kio i kua shaya shi-n.*
 NEG 3SG FREQ work side-POSS.3SG
 ‘He does/did not often work at home.’ (known from past experience)

Interestingly, *kua* may combine with iterative *aa* with emphatic meaning:

- (87) *I aa kua tuâ yava.*
 3SG ITER FREQ lie 1PL.EXCL.FR
 ‘He kept lying to us.’ (known from past experience)

6.2 Markers of incompleteness

Various morphemes mark ongoing or incomplete processes, which are represented by semi-open intervals ([---]); these morphemes have distinct semantics: *na* is processual, *baa* is durative, *gaa* is persistent, *gat* is continuative-contrastive, *taa₁* is remansive.

Only persistent *gaa* and continuative-contrastive *gat*, which have modal semantics, are compatible with the perfect marker $(k)u \sim (x)u$.

6.2.1 Na: Processual

The processual marker *na* is only compatible with activity verbs. It originates from a nominalising locative prefix (*hma-* ‘place’), which accounts for its immediate preverbal position and for the lack of a subject pronoun, which makes such constructions less finite and more participial. *Na* occurs in dependent clauses, headed by locative predicates (*gi* and *je*),¹⁵ as in (88–89), or dependent of perception verbs, as in (90), where *na* is actually part of a participial-like relative clause. Note that in (88), the plural pronoun *hla* is the subject of the locative verb *gi* in postverbal¹⁶ position. Compare with *gi na ni mwa* (lit. be.LOC 1SG in house) ‘I’m in the house’.

(88) [Gi hla [na pwa-yiic]].
be.LOC 3PL PROC cut-wood
‘They are cutting wood.’ (lit. they are in the process of wood-cutting)

(89) Kio je [na haga].
NEG 3SG.be.LOC PROC fish
‘He is not fishing.’

(90) I axi hobai hulak [na taabwa ni wooxa-hli].
3SG see ANAPH old.man PROC sit in middle-POSS.3DU
‘He sees/saw that old man sitting among them.’

Example (12), repeated here, is another example of a participial-like relative clause headed by *na*: [*thaamwa=ena gat*] [*hoona na vhaa*] ‘it’s still that woman who is speaking’ (lit. it’s still that woman the one speaking).

But with such usage, *na* is no longer a nominalising prefix, as evidenced by the possible insertion of another aspect marker, such as persistent *gaa* in (91), which connotes obstinacy. Since nominalising prefixes do not allow insertion of any other entity between the prefix and the verb, *na* appears to have specialised as an aspect marker.

(91) Je na gaa gi.
3SG.be.LOC PROC PERSIST cry
‘He’s still there crying/he keeps on crying’ [obstinately]

15. The locative verb *gi* ‘be in some place’ has postverbal subject pronouns for all persons (including 3SG *gi ye*), and only refers to animates, while *je* is only compatible with 3rd person singular or plural \pm animate entities; compare *gi ye ni mwa* ‘he’s in the house’, *je ni mwa* ‘he’s/it’s in the house’.

16. *Gi* ‘be in some place’ is one of the few verbs with postverbal subjects.

Yet, in contrast with other aspect markers, *na* excludes any subject index. Thus, in contrast with *i baa gi* ‘he’s crying’ or *i gaa gi* ‘he keeps crying’, **i na gi* is ungrammatical, only a locative expression, such as *je na gi* ‘he’s there crying’, is acceptable.

6.2.2 Comparison of durative *baa*, persistive *gaa*, continuative-contrastive *gat*

Before proceeding with the detailed analysis of durative *baa*, persistive *gaa* and continuative *gat*, here is a brief outlook of their semantic differences, illustrated in (92).

Baa refers to some ongoing process with activity verbs, while *gaa* expresses persistence, and possibly contrast with some other expectation on the speaker’s part and modal semantics; as for continuative *gat*, the only marker to be in post-verbal position, it also denotes contradictory expectation.

- (92) a. *I baa khuwo* ‘(s)he’s eating’
 b. *I gaa khuwo !* ‘(s)he’s still eating’ [she’s persistent, but should not]
 c. *I khuwo gat* ‘(s)he’s still eating’ [it is expected to be over]
- (93) a. *I baa khu kuvic âlô hleny.*
 3SG DUR eat yam child this.DX1
 ‘The child is eating yam.’
- b. *I gaa khu kuvic âlô hleny.*
 3SG PERSIST eat yam child this.DX1
 ‘The child goes on eating yam.’ (he should not, yams must be kept)

6.2.3 *Gaa: Persistive*

Like iterative *aa*, and frequency *kua*, persistive *gaa* is compatible with all types of predicates, non-verbal (94), stative or dynamic, and with \pm punctual events. It is also compatible with *irrealis* and *realis* reference frames. Positions are as follows:

o ~ io (s) *gaa* predicate (*irrealis*)
 (s) *u gaa* predicate (*realis*)

- (94) *Xam gaa pânaat.*
 ASS PERSIST stone
 ‘It is still stone.’ (as a persistent state of things, but a different one is expected)
- (95) *Xam gaa pe-maariik.*
 ASS PERSIST REC-be.similar
 ‘It is again similar.’
- (96) *Gaa nabak=du kua-n.*
 PERSIST sink=down foot-POSS.3SG
 ‘Her feet keep on sinking down.’

Gaa may express irritation when the persistent process or state is seen as an obstacle. It may combine with *gêlâ* ‘always’ (like iterative *aa* and frequency *kua*).

- (97) *I gaa gi gèlà.*
 3SG PERSIST cry always
 ‘She keeps wailing all the time.’

6.2.4 Baa: *Durative*

Durative *baa* is compatible with \pm *realis* reference frames; but not with the perfect marker $(k)u \sim (x)u$, in contrast with persistent *gaa*. It refers to an ongoing process with activity verbs, but it is durative with stative verbs, as in (99):

- (98) *I baa khuwo, na xau tabö kot.*
 3SG DUR eat but UNEXP fall rain
 ‘He was eating when the rain started falling.’
- (99) *Baa maaxa.*
 DUR be.raw
 ‘It’s still raw.’

– Negated duration: *kio... baa* ‘not/no longer ongoing’ vs. non-initiated duration *baa kio* ‘still not’

If the negation *kio* has scope on the segment \langle *baa* + predicate \rangle , as in (100), the process is no longer ongoing: *kio* \langle *baa* p \rangle ‘not/no longer ongoing’. If *baa* has scope on the negated predicate (101), the process has not yet started: *baa* \langle *kio* predicate \rangle refers to some uninitiated duration meaning ‘still not’; *gat* marks some contradictory expectation.

- (100) *Kio* \langle *i baa mago gat* \rangle .
 NEG 3SG DUR sleep CONT
 ‘He’s not/no longer sleeping.’
- (101) *Baa* \langle *kio i mago gat* \rangle .
 DUR NEG 3SG sleep CONT
 ‘He’s still not asleep.’

6.2.5 Gat: *Continuative and contrastive*

Gat is one of the few aspectual morphemes to occur after the predicate. It marks continuative aspect, but also denotes contradictory expectation or presupposition. It often combines with durative *baa*:

- (102) *Baa kia-e gat.*
 DUR not.be.there-3SG CONT
 ‘He’s still not there.’ [but he should be]
- (103) *Co khuxi o baa hnu gat!*
 2SG eat.TR VIRT DUR hot CONT
 ‘Eat it while it’s still hot!’

A. *kio mwa... gat* ‘no longer’

In (104), the state of ‘still being young’ (*âlô gat*) is negated; the perfect (*(k)u ~ (x)u*) and the sequential *mwa* mark the transitional process leading to a change of state (*lit.* it’s no longer the case I am still young). The perfect has scope on the whole negative sentence and marks the change of state relevant to the present (t_0):

- xu < kio mwa na âlô gat >*
- (104) *Xu kio mwa na âlô gat.*
 PFT NEGSEQ 1SG child CONT
 ‘I’m no longer young.’ (in spite of what you think)

Compare with the neutral statement: *kio na âlô* ‘I’m not young.’

B. *Combinations of durative baa, continuative-contrastive gat, processual na*

When durative *baa* and continuative *gat* combine with the locative processual constructions *gi... na* or *je... na*, the markers *baa... gat* frame the locative predicate while *na* has scope on the following activity verb.

- (105) [*Je gat*] [*na pwe*].
 3SG.be.LOC CONT PROC fish
 ‘He’s still there fishing.’ (but he should be back)
- (106) [*Baa gi hla gat*] [*na khuwo*] !
 DUR be.LOC 3PL.FR CONT PROC eat
 ‘They are still there eating!’ (they should not)

Compare with: *je [na pwe]* ‘he’s fishing’, *gi hla [na khuwo]* ‘they are eating’.

6.3 *Taa*₁ remansive and *taa*₂ previous occurrence

*Taa*₁ (possibly originating from *taabwa* ‘sit, be settled’) refers to remansive states or states of activity,¹⁷ often expressing contrast. There is another *taa*₂, probably with the same lexical origin, which expresses previous occurrence and means ‘already, (do) in advance, before’; *taa*₂ often (but not always) appears in what can be analysed as lexicalised verb compounds, like *taa fooyet* ‘cook in advance’, *taa khabwe* ‘predict, warn’ (*khabwe* ‘say’), *taa paare* ‘warn’ (*paare* ‘announce’), *taa pajale* ‘promise, say in advance’ (*pajale* ‘reveal’). On the other hand, some non-lexicalised uses of *taa*₂ (analysed in §6.3.2) express previous occurrence and can be translated by ‘already’. These two morphemes are probably independent evolutions from the same lexeme.

17. See Desclés & Guentchéva (1995) for the notion of state of activity like *it’s on flight*.

6.3.1 *Remansive* *taa*₁

Remansive *taa*₁ combines with stative or activity verbs with different semantics.

A. *Taa*₁ with stative predicates: *Remanent state of things*

With stative predicates, *taa*₁ refers to a remanent state, which may be seen as an obstacle (107a) to another expected state, with which it is implicitly contrasted; it may connote impatience or irritation:

- (107) a. *Puxet da me taa khoxo i wa?*
 origin what? SUB REM be.many DET 2PL
 ‘Why do you remain so numerous?’ (there should be fewer people)

Compare with a simple neutral question:

- (106) b. *Puxet da me khoxo i wa?*
 origin what? SUB be.many DET 2PL
 ‘Why are you so numerous?’

B. *Taa*₁ with activity verbs: *remanent activity or state of activity*

With dynamic verbs, *taa*₁ expresses a remanent activity or state of activity, contrasting with some other (expected) event/state. In (108), two projected concomitant activities are contrasted:

- (108) *Co taa kuut mwena, bu na taa haga=ve hmwiny.*
 2SG REM stand there.DX2 for 1SG REM fish=CROSSWISE here
 ‘You stay there, as I’ll be fishing around here.’ (Bril 2002: 482–483)

Compare (108) with an ongoing process: *je na haga* ‘he is fishing’.

In (109), an event (*o-da* ‘go up’) is contrasted with a remanent state of activity (*taa muuvi* ‘stay put’):

- (109) *Na o=da ni daak, wa taa muuvi.*
 1SG go=up in garden 2PL REM stay
 ‘I go up to the field, you stay (here).’
- (110) *Na hi agu xe shuma o i pweedi-e [...],*
 but this person TPC be.like VIRT 3SG turn.round-3SG
 ‘But this person, he seems to turn his back (*i.e.* lose interest),
bu i taa no=du ni wi-yaak.
 for 3SG REM watch=down in sea-salt
 for he remains/keeps watching down towards the sea.’
 (instead of listening facing the speaker)

The persistent marker *gaa* may combine with a *taa*-marked remanent activity:

- (111) Co [gaa [taa kââleng hmwiny]].
 2SG PERSIST REM go.around here
 ‘Keep on turning round here.’

Differences appear clearly in the two imperative clauses in (112): in a. the participant is urged to keep moving, and *taa* marks some implicit and contextual contrast with the one who stops; while in b. with *gaa*, simple persistence is expressed without any such contrastive meaning.

- (112) a. Co *taa* ôô=xi!
 2SG REM go=away
 ‘Keep moving away!’ [while the other is stopping]
 b. Co *gaa mwa* ôô=xi!
 2SG PERSIST SEQ go=away
 ‘Go further away!’

6.3.2 *Taa*₂ ‘already’, expressing previousness

The other morpheme, *taa*₂, stresses the previous occurrence of an event, and prior completion of some activity.

- (113) I axi hulak aa-xiik xe i *taa* tuu=me.
 3SG see.TR old.man CL-one REL 3SG PREV go.DOWN=HITHER
 ‘He sees an old man who’d already come down here.’

*Taa*₂ may combine with the perfect marker to stress anteriority in relation either to the time of speech or to a past event in a narrative:

- (114) Hla u pe-tîxââc hlaali yabwec, puxet hoona i u
 3PL PFT REC-be.angry those.DX3 subject cause that.DX2 3SG PFT
taa ogine
 PREV finish
 ‘The subjects got angry because he had already finished (tilling)
 baaruxia i ye, ke i *baa* mweelôô baaruxia i Teâ.
 furrow DET 3SG then 3SG DUR remain furrow DET Chief
 his furrow (of new yam), while the chief’s furrow still remained (untilled).’
- (115) Pûwûlûû fââlô xe i u *taa* kââleng mwamaidu Tavaam.
 news mission TPC 3SG PFT PREV go.around down.there Tavaam
 ‘As for the news of (this) mission, it has already gone around (the area of)
 Tavaam down there (in the north).’

6.4 Morphemes equivalent to ‘not yet’ and ‘almost’

This section concentrates on morphemes which specifically focus on the relation to the initial boundary of the event, process or state. Those are *kio... fwâ* or *fwâ kio* ‘not yet’,

fwâ koni ‘never yet, still never’, and *fwââm* ‘almost, nearly’; they refer to a process or event that has not yet occurred.

6.4.1 *Kio... fwâ ~ fwâ kio* ‘not yet’

Fwâ is only used in combination with the negation *kio*. The morphemes are discontinuous when the negation comes first in *kio... fwâ*, but they are adjacent in the reverse order (*fwâ kio*), without any semantic difference whatsoever. *Kio... fwâ* or *fwâ kio* refer to an event that has not yet occurred, either in relation to the time of speech or to some other reference point disconnected from the time of speech (116–117).

- (116) *Kio i fwâ uya (or) fwâ kio i uya.*
 NEG 3SG YET arrive YET NEG 3SG arrive
 ‘He has/had not arrived yet.’ (or) ‘He has/had yet not arrived.’

The combination with *gat* marks some contradictory expectation:

- (117) *Fwâ kio i uya (gat).*
 YET NEG 3SG arrive CONT
 ‘He (still) hasn’t arrived yet.’ [*gat* rendered here as ‘still’ suggests that he should be here.]

Compare with the durative aspect in (102) repeated here:

- baa kia-e gat*
 ‘he’s still absent/not there.’

When *kio ... fwâ* combines with a phasal verb (start, finish), only the phase expressed lexically and the relevant boundary are under consideration (the initial boundary with an inchoative verb as in ‘he hasn’t yet started’, or the final boundary as in (118)).

- (118) *Kio i fwâ toven.*
 NEG 3SG YET finish
 ‘He hasn’t yet finished.’

6.4.2 *Fwâ koni* ‘never so far, never yet, still never’

Koni is a negative modal verb meaning ‘unable, impossible’. By contrast with *kio ... fwâ* which refers to one event, *fwâ koni* ‘never yet/so far’ has a scanning effect, it negates any occurrence of an event within a given temporal frame, up to the time of speech or up to some past event.

- (119) *Va fwâ koni tu Frans.*
 1PL.EXCL YET be.unable go.down France
 ‘We’ve/d never been to France so far/yet.’

6.4.3 *Fwââm* ‘almost, nearly’

Fwââm ‘almost, nearly’ refers to an event which almost occurred. A similar meaning is expressed by French *faillir*, *manquer de* or English *come close to*. The semantics of < *fwââm* p > can be glossed as follows, [the interval of event p was almost reached, but fell short of it].

(120) *Fwââm au-riik me io kio i khabwe shi-ny!*
 ALMOST times-one CONJ FUT NEG 3SG say side-POSS.1SG
 ‘He was very close not to tell me!’ [but he did]

(121) *I fwââm maak.*
 3SG ALMOST die
 ‘He almost died.’

6.5 Permanently terminated event or state: *Kio... ha(x)a* ‘no... longer’

Haxa expresses permanence with restrictive connotations, meaning ‘only stay/keep doing’. In (122), the perfect marker signals a change of state relevant to the time of speech. As shown by (122a–b), it appears in *realis* and *irrealis* reference frames. Its negative counterpart *kio haxa* refers to a situation (event or state) which is permanently terminated (123) and which may also denote bygone events.

– Permanence: *haxa*

- (122) a. *I u ha(x)a taa nô-waa.*
 3SG PFT PERM sit watch-empty
 ‘He merely stayed/kept staring away.’
 b. *Io ha(x)a top na mwena.*
 FUT PERM rot LOC there.DX2
 ‘It will just remain rotting away there.’

– Permanently terminated or bygone event or state: *kio haxa*

(123) *Mwena xe hla u hûn, kio hla ha(x)a vhaa.*
 there.DX2 TPC 3PL PFT be.silent NEG 3PL PERM speak
 ‘Then, they fell silent, they no longer spoke.’

6.6 Comparing permanently terminated *kio... haxa* ‘no longer’ with *kio... baa* ‘not ongoing’ and *fwâ kio* ‘not yet’

The following examples illustrate the use of these negative aspectual phrases, contrasting (i) permanently terminated events, processes or states expressed by *kio... haxa*, with (ii) no longer ongoing processes with *kio... baa*, and (iii) events that have not yet occurred with *fwâ kio* ‘not yet’.

– *kio...* *haxa* refers to a terminated event, sometimes permanently over as in (124).

- (124) *Kio i ha(x)a mago.*
 NEG 3SG PERM sleep
 ‘He never sleeps anymore.’ [due to insomnia or disease]

– By contrast, *kio...* *baa* in (125), (repeated from (100)) simply refers to an interrupted process, which may be resumed. Optional *gat* denotes some contradictory expectation or presupposition.

- (125) *Kio <i baa mago (gat)>.*
 NEG 3SG DUR sleep (CONT)
 ‘He’s not/no longer sleeping.’

– Compare finally with *fwâ kio* (126) which refers to an event that has not yet started.

- (126) *Fwâ kio i mago (gat).*
 ASP NEG 3SG sleep CONT
 ‘He’s not yet asleep.’

7. Phasal verbs

So far, the focus has been on the morphological expression of aspects and on the phasal aspects of a process; there are also a few phasal verbs expressing imminent occurrence (*diya me* ‘about to’), incipient phase (*thaaxa* ‘begin’) or final phase (*toven* ‘end’). Duration can also be expressed lexically by verbs such as *kuut* ‘stand’ or *mu* ‘stay, remain’.

7.1 *Diya me*: Imminence

Diya me (lit. do for) ‘be about to’ refers to an imminent action. It is compatible with *realis* (127–128) or *irrealis* virtual frames (129).

- (127) *I u diya me i (u) oxo-va.*
 3SG PFT do SUB 3SG PFT follow-1PL.EXCL
 ‘He’s about to follow us.’
- (128) *Bu i diya me i fhe aroo-ny ai a Kaavo?*
 for 3SG do SUB 3SG take husband-POSS.1SG where? AGT Kaavo
 ‘So where is Kaavo about to take my husband?’
- (129) *O diya me kot, na fha kuru.*
 VIRT do SUB rain COORD blow wind
 ‘When it’s about to rain/should it be about to rain, the wind blows.’

7.2 Inchoative verb: *Thaaxa(puxet)* ‘begin’

The inchoative verb *thaaxapuxet* is a compound of *thaaxa* ‘begin, start’ (which also has spatial use)¹⁸ and *puxet* ‘origin’; it is compatible with present, past or future reference frames.

- (130) a. *Dua hla thaaxapuxet me hla uya...*
 when 3PL begin SUB 3PL arrive
 ‘When they began to arrive...’
- b. *I thaaxa shaya.*
 3SG begin work
 ‘He started working.’

7.3 Cessative verb: *Toven* ‘end, stop, finish’

Toven ‘stop; finish, end’ marks the last instant of a process.

- (131) *Wa u toven o thivi maaxi i na?*
 2PL PFT finish COMP pluck.TR straw DET 1SG
 ‘Have you finished plucking my straw?’

The postverbal form, *roven*, is a verbal specifier in complex predicates:

- (132) *I u keva wany xe wa-giik... xa keva roven wany hleny.*
 3SG PFT build boat REL CL-one also build finish boat this.DX1
 ‘He’s built a boat... and that boat is finished.’

7.4 Durative verbs: *Kuut* ‘stand’, *mu* ‘stay’

The verbs *kuut* ‘stand’ and *mu* (the short form of *muuvi* ‘stay’) express durative meanings.

- (133) *Tu kuut me yo axe khabwe ti.*
 go.down stand COORD 2SG see COMP(say) who?
 ‘Go down, stand, and see who it is.’
- (134) *Hla taabwa me hla u muuvi mu.*
 3PL sit COORD 3PL PFT stay stay
 ‘They settled and they’ve been staying there.’

18. *Thaaxapuxet* has a temporal prepositional function as in *thaaxapuxet caae* ‘starting from tomorrow’, while *thaaxa* functions as a spatial preposition, as in *thaaxa na Odayan* (begin LOC Odayan) ‘starting from Odayan’.

8. Aspectual role of directional markers

One last part of speech which contributes to aspectual specifications is directionals; their main spatial and aspectual meanings are summarised in Table 9 (see Brill 2002:301–305, Brill 2004:99–128 for a detailed analysis).

Table 9. Directionals

	DEICTIC DIRECTIONALS		NON-DEICTIC DIRECTIONALS		
	<i>me</i>	<i>xi</i>	<i>ve</i>	<i>da</i>	<i>du</i>
SPATIAL	centripetal, hither	centrifugal	crosswise	upward	downward
ASPECTUAL MEANING	up to now	*	continuous (or) prospective	progressive (cumulation up to a point)	*

8.1 Centripetal directional *me*: Present perspective

In its aspectual function, the centripetal morpheme *me* ‘hither’ (towards the speaker) expresses the current relevance to the time of speech (t_0) of a past process which may be completed or not, since current relevance does not presuppose the completion of the process.

(135) *Na xam kua nooli=me.*
1SG ASS often see.TR=HITHER
‘I’ve often seen that.’ (until now)

(136) *Hooli vhaa eli xe hâ u tâlâ=me.*
that.ANAPH speech that.ANAPH TPC 1PL.INCL PFT hear=HITHER
‘Those words, we’ve heard them up to now.’

8.2 Upwards *da*: Progression

The upward directional *da* marks a progressive and cumulative process:

(137) *Hla vhaa=da.*
3PL speak=up
‘They’re talking away.’

When some time limit is expressed, *da* indicates progression up to that point.

(138) *Hla u civa=da [ku “cilic civa!”].*
3PL PFT dance=up PFT go.wrong dance
‘They danced until (they heard) « the dance has gone wrong! »’

The verb *o=da* ‘go up’ also expresses cumulation and progression until some endpoint:

- (139) *Dua u o=da uya mweli, hla thu wooxa agu.*
 when PFT go=up arrive there.ANAPH 3PL do middle people
 ‘When things have reached that point, they divide people.’
- (140) *O=da mwa xa tan.*
 go=up SEQ also be.night
 ‘In the end, it got dark.’

8.3 Crosswise *ve*: Temporal expansion, continuous

When used aspectually, the crosswise¹⁹ directional *ve* refers to the unbounded expansion of an ongoing process. *Ve* is compatible with present, past or potential temporal references, as shown below.

- (141) *I hâk=ve.*
 3SG be.big=CROSSWISE
 ‘He’s growing up.’
- (142) *Co taa=ve da mwêna?*
 2SG sit=CROSSWISE what? there.DX2
 ‘Why do you remain sitting there?’

– Future or potential reference

- (143) *Paari-na=ve uya hna-kûûli-a-t.*
 tell-1SG=CROSSWISE arrive NMZ-end-DET-C
 ‘Tell me until the end.’
- (144) *pwaxa taan mahleena io yo malep=ve na-t.*
 for day those.DX2 FUT 2SG live=CROSSWISE inside-C
 ‘for the days to come that you’ll be living.’
- (145) *Kââlek o hâ na=ve.*
 impossible VIRT 1PL.INCL put=CROSSWISE
 ‘It is impossible for us to postpone (it).’

8.4 Aspectual conjunctive phrases with *da* ‘up’, *ve* (crosswise)

The directional also occurs in a conjunctive phrase *uya=da*, the grammaticalised form of the verb *uya* ‘arrive’, which marks a final instant.²⁰ If the endpoint is virtual, it

19. The crosswise directional is used for directions such as ‘across a river’, but it is also used for directions across the oriented ‘up-down’ axis; thus, it is also used with meanings such as ‘along the coast’, and with the aspectual meaning of progression.

20. It also has a prepositional function as in *uya êna* ‘until now’ (*lit.* arrive now).

combines with *o*, *uya=da o* ‘until’ (146a); if *realis*, it combines with *xe* (146b); if the endpoint is past in a narrative, it combines with *dua*.

- (146) a. *Io na xam gaa shaya maya uya=da o*
 FUT 1SG ASS PERSIST work slowly arrive=up VIRT
na kûûli.
 1SG finish.TR
 ‘I’ll do this work slowly until I finish (it).’
- b. *I wâlem uya=da xe i axe puyat xe pwa-giik.*
 3SG walk arrive=up SUB 3SG see hill REL CL-one
 ‘He walks until he sees a hill.’ (*lit.* until he sees a hill that is one)

It may also combine with the crosswise directional *ve* to express progression until an endpoint (147–148).

- (147) ... *uya=ve ni thumaaxa i aayo-ma.*
 arrive=CROSSWISE in do-funeral DET Chief-great
 ‘[they do so] until the great Chief’s funerals (come).’
- (148) *me oo=me uya=ve ni yeewat hleny.*
 and come=HITHER arrive=CROSSWISE in time this.DX1
 ‘and it has been passed on until nowadays.’
 (*lit.* and it has come here passing on until this present time)

9. Conclusion

Tense (present or past) has no verbal exponent in Nêlêmwa; the time of events is merely contextual and indicated at clause or sentence level by deictic and anaphoric adverbs. In the aspectual domain, the core notions hinge on the bare aorist form, the perfect marker *(k)u ~ (x)u*, the recent completion marker *hââ*, and a wealth of incompletion markers encoding subtle semantic nuances, plus two pluri-actional markers. Directionals also participate in aspectual specifications. Mood has been shown to hinge on the contrast between *realis* and *irrealis*, with some imbalance between them in terms of morphological exponents: *realis* is \emptyset -marked, in contrast with the *irrealis* markers. The virtual/subjunctive marker *o* also has epistemic value when used to refer to uncertain, potential situations.

In dependent clauses, some conjunctive markers like *dua* ‘when’ (+past) contain inherent temporal reference. Some aspect morphemes also have inherent temporal features: thus, *kua* (translatable by ‘often’) is only compatible with the past, *hââ* refers to a recently/just completed process, *taa₂* (translatable by ‘already’) marks previous occurrence. Tense and aspect thus interact to some extent.

Coming back to the contrast between the bare aorist verb form and the perfect marker $(k)u \sim (x)u$, the bare aorist verb form refers to (past or present) events, or to sequences of events, without reference to their inner phasal structure. It also expresses generic statements. On the other hand, the basic meaning of the perfect is to express the relevance of some anterior event or process in relation to a reference frame (either the time of speech (t_0) or some past event (t_2)); but the perfect has other functions and meanings: it may refer *i.* to the resulting state of a completed process, *ii.* to a change of state, or *iii.* to a transitional process or to a change of degree in the context of some evolution. In complex clauses, the perfect may be used with backgrounding effects and may express causal relations between processes and clauses. In *irrealis* reference frames, the perfect may have deontic or epistemic meanings, it may assert the projected completion of a process as certain.

Thus, the fairly basic time reference stands in contrast with the wealth of aspectual and phasal morphemes. This classifies Nêlêmwa as a mood- and aspect-predominant language.

Abbreviations

AGT agent marker; ANAPH anaphoric; ASP aspect; ASS assertive; C construct morpheme; CL classifier; COMP complementiser; CONJ conjunction; CONT continuous; COORD coordinator; DET determiner; DIR directional; DU dual; DUR durative; DX deictic; EVID evidential; EXCL exclusive; EXIST existential; FEM feminine; FR free pronoun; FREQ frequency; FUT future; INCL inclusive; INSTR instrumental; INTR intransitive;; ITER iterative; LOC locative marker; NEG negation; NMZ nominaliser; PERM permanence; PERSIST persistive; PFT perfect marker; PL plural; PL.INDF plural indefinite; POSS possessive; POT potential; PREV previous; PROC processual; PROH prohibitive; REC reciprocal; REC.COMPLT recent completion; REL relative marker; REM remansive; SEQ sequential conjunction; SG singular; SUB subordinator; TPC topic marker; TR transitive; UNEXP unexpected; VIRT virtual.

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