Completing and terminating: On aspect marking in Unua

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Abstract
This paper investigates the aspectual roles played by a small number of functional particles in sentences in Unua, a language of Malakula, Vanuatu. Unua verb paradigms encode a realis/irrealis contrast but do not encode the past/nonpast distinction. Particles occurring variously in postverbal or clause-final positions are used to express perfective, perfect, terminative and completive aspect. As in Mandarin Chinese, which uses postverbal versus clause-final to distinguishing perfective and perfect aspect, Unua employs a particle ju/goj in comparable locations in the clause and with comparable functions. The paper proposes that a comparable syntax applies in the two languages in the derivation of clauses expressing these aspectual functions and it shows how this analysis can be seen to tie in with the proposals of Cinque (1999) as to a universal hierarchy of functional projections in the structure of the clause.

Introduction
Different languages apply different grammatical devices to signal both temporal reference and aspect.1 Unua, a co-dialect with Pangkumu of Unua-Pangkumu, a language of the Southeast coast of Malakula, Vanuatu, is a member of the Oceanic branch of Austronesian languages. In Unua the verb paradigms encode a realis/irrealis contrast, but they do not distinguish present and past tense. The irrealis is used in the representation of future events or states of affairs which have not been actualized with respect to the time frame of the discourse. The realis form of the verb can be used to represent events or states of affairs which are realized or being realized either in the past or the present with respect to the discourse time reference. The presence of the realis/irrealis mood contrast and the absence of a tense contrast in Unua is a characteristic typical of Central Vanuatu languages (Lynch 1998: 136).

Although Unua does not formally distinguish past from present in its verb morphology, this does not mean that there is massive ambiguity as to the time reference of sentences containing realis verbs. Default

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interpretations apply with reference to the discourse time frame, but there are also other devices that can be included in sentences to convey temporal and aspectual properties. In this paper I present an investigation of the aspect encoding devices that are used in Unua sentences to denote the completion or the termination of the event or the state expressed by the sentence. As part of my analysis I also consider the use of other aspect marking devices which can have implications as to time reference. A goal of the paper is to attempt to develop an understanding of how the aspect encoding devices that are used in Unua may be compared with the use of such devices in other languages which lack formal marking of tense distinctions in their verb paradigms.

As a background to the investigation, section 2 sets out some of the considerations that come into play in the analysis with respect to interactions that can be observed between classes of predicates and tense/aspect properties. Section 3 undertakes the analysis of the various aspectual devices used in Unua to mark completive, terminative, and perfect and perfective aspect. Section 4 then considers how the aspect marking system of Unua might be viewed from a cross-linguistic perspective through (i) a comparison with features of aspect marking in Mandarin, a language which also lacks the grammatical encoding of tense, and (ii) with respect to the hierarchical organization of aspectual functions that is proposed in Cinque (1999). From the comparison of Unua and Mandarin we will see that both languages have a comparable syntax in the use of markers encoding result states, and perfective and perfect aspect. When the analysis applied to Unua and to Mandarin is set against the proposals of Cinque (1999) as to a universal ordering of functional projections within the clause, it indicates that both languages instantiate the mirror-image surface ordering with respect to Cinque’s proposed hierarchy. This kind of linear ordering implies the use of iterative (phrasal) displacements in the derivation of the surface forms.

2 Aspect and classes of predicates

2.1 Predicate classes

Languages can place restrictions on the use of aspectual markings which are dependent on the class of the sentence predicate. A well known instance of such a restriction is the ungrammaticality of the English progressive with stative verbs:

(1a) *Max is knowing the answer. STATIVE
b. Max is playing tennis. NON-STATIVE

Event interpretations apply in different ways to predicates that have a natural end point versus those that do not:

(2a) Max played tennis during the holidays. (could be many times)

b. Max met my brother during the holidays. (once)

The predicate in (2a) is an activity predicate without an end point and, pragmatically, given the understanding of the time span of the during the holidays adjunct, the most natural interpretation of (2a) is that there was more than one event of playing tennis. In (2b), the predicate has a natural end point and, despite the presence of the time adjunct, we understand that the sentence refers to a single event of meeting my brother.

Two of the four kinds of predicates of the influential Vendler (1967) classification have a natural end point and these are termed ‘bound’ in the table in (2).
(3) Predicate characteristics: (Vendler 1967, Kearns 2000)

<table>
<thead>
<tr>
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<th>CHANGE</th>
<th>DURATION</th>
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<tbody>
<tr>
<td>State</td>
<td>-</td>
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<tr>
<td>Activity/Process</td>
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<tr>
<td>Accomplishment</td>
<td>+</td>
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<tr>
<td>Achievement</td>
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Predicates with a natural end point are also termed telic, contrasting with unbounded predicates which are atelic. Of the two types of telic predicates in (3), both encode change, but whereas accomplishments have duration, achievements do not have duration. Thus, in the past tense sentences in (4), both predicates have an end point, but (4a) has duration, whereas (4b) doesn’t.

(4)a. Max built a house, + DURATION: Accomplishment
b. Max won the lottery, - DURATION: Achievement

That is, we understand that building a house is a process carried over a period of time, but we regard winning the lottery as an instantaneous happening. Building a house is thus an Accomplishment and winning the lottery is an Achievement.

Another difference between the two kinds of telic predicates is that an Accomplishment is agentive whereas an Achievement is non-agentive. Although Max is the subject in all of (2a,b) and (4a,b), Max has the Agent role in (2a) and (4a), whereas in (2b) and (4b) Max is some kind of Patient. If we add agentivity into the table in (3), we get the following array of predicate characteristics:

(5) Predicate characteristics including agentivity:

<table>
<thead>
<tr>
<th></th>
<th>CHANGE</th>
<th>DURATION</th>
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<tr>
<td>Achievement</td>
<td>+</td>
<td>-</td>
<td>+</td>
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</table>

When agentivity is included we see that Accomplishments share more properties with Activities than they do with Achievements. Thus, the Activity predicate in (6a) differs from the Accomplishment in (6b) only for telicity.

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2 For standard tests showing up the two-way agentivity division in the aspectual classes, see Kearns (2000: 211-214). However, the non-discrete nature of what defines the agent role is discussed further in Kearns (2000). As discussed in some depth in Dowty (1991), an interesting issue is the question of what are the primitives in the interplay of predicates, argument roles and event structure in the construction of sentences. See also Dowty (1979) for his analysis of the semantic representation of propositions expressing the different classes of aspectual predicates. Thanks to a reviewer for leading me to this (small) elaboration of the role of agentivity with respect to the aspectual classes.
(6) Boundedness (telicity)
  a. Max walked along the road. -BOUND: Activity
  b. Max walked to the store. +BOUND: Accomplishment

In (6b) the locative PP identifies the end point of an activity and so the predicate as a whole is an Accomplishment, but in (6a) along the road is not an end point so the predicate of (6b) is an Activity.

So there are quite a few properties that are inherent to the distinctions between the different classes of predicates. With respect to boundedness or completion, since telicity can be viewed as an inherent characteristic of particular classes of predicates, we might wonder why it would ever be an option for grammatical markers of completion to be included with such predicates. We might suppose that markers of completion would at least be redundant with predicates that are inherently telic, as seems to be the case if we add a statement of completion to (6b):

(7) #Max walked to the store and he got there.
    telic

In (7) the addition of the completion statement is semantically redundant and it seems to have the effect of making the sentence semantically anomalous in the absence of perhaps of a particular discourse context pertaining to shared knowledge of behaviour attributed to Max.

The examples in (6) showed the contrasting of Activity and Accomplishment predicates. However, if we change the verb forms in these examples to the progressive, what is an Accomplishment in (6b) becomes an Activity:

(8)a. Max is walking along the road. Activity
    b. Max is walking to the store. Activity

In (8b) the focus is on the process (a “process stage” in the terms of Kearns 2000: 216) and there is no entailment that the end point is or will be reached. Thus, in contrast to (6b) the end point of (8b) can readily be negated:

(9)a. ?Max walked to the store, but he didn’t make it there, because . . .
    b. Max is walking to the store, but he won’t make it there because . . .

We see from these cases that the predicate class does not depend just on the predicate-argument structure of the clause; grammatical aspect is also a part of what goes to make up the defining properties of predicate classes. Interpretations applied to sentences including aspectual markings are therefore not independent of other sentence content, including the class of predicate and the presence or not of VP-internal content. With languages lacking formal tense distinctions, it is potentially the case that marking of completion and termination may have a greater role to play in the specification of boundedness.

2.2 Unua realis verbs and predicate class

The Unua verb has contrasting Realis and Irrealis paradigms as shown in (10) with the verb xa ‘go’:
A further Realis paradigm, which is restricted to use in relative clauses and reduced relative clauses (Pearce 2011b), has $m$- where the Irrealis paradigm has $b$-. Other affixes which can be prefixed directly before the verb root are $mo$- ‘CONT’ and $ber$- ‘Inceptive’. These affixes may in turn be preceded by the negative prefix $seb$-. A strong negation with future reference combines $seb$- with a prefix $t$- in the position of the Irrealis $b$-.

The Realis inflected verb of the Unua clause thus does not encode any contrast between past and present time reference:\(^3\)

\[(11)\] Max $i$-$r$-$i$ naur soxa.
Max 3SG-write*TR letter one
\[\text{‘Max wrote a letter./Max was writing a letter./Max is writing a letter. ‘}\]

In the present time reading of (11) (normally expressed in English through the use of the progressive) there is an ongoing activity of writing a letter and the end point has not been reached. In the past tense readings, as shown in the alternative translations, either the activity is ongoing and the end point has not been reached or the activity has been completed and the end point has been attained. The Realis thus does not encode a perfective versus imperfective contrast.

The ongoing nature of an activity can be made explicit by the inclusion of the progressive marker, the prefix $mo$-:

\[(12)\] Max $i$-$mo$-$r$-$i$ naur soxa.
Max 3SG-CONT-write*TR letter one
\[\text{‘Max was writing a letter./Max is writing a letter.’}\]

In (12) both the past and present readings portray an ongoing activity and in both cases the activity could be interrupted so that the end point would not be reached.

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\(^3\) Non-standard glosses applying to the Unua data are as follows: C = Complementizer, CONT = Continuous, IO = Indirect Object, NGEN = Ngenitive (form = *nen*, RSLT = Result, TR = Transitive, and XGEN = XGenitive (form = *xi(sef)*). Terms borrowed from Bislama, the Vanuatu creole language, are given in italics in the text line.
Extra-clausal information can provide contexts for the disambiguation of sentences like (11) and (12), but there are also particular kinds of markers that can be added into the clause to specify the nature of its temporality. Section 3 undertakes the examination of the use of a range of such markers in Unua, encompassing both particle and predicate-like forms.

3 Expressions of completion/termination in Unua

3.1 Overview

We will see in this section that there are a variety of grammatical devices which can be used in Unua to signal that there is an end point to an activity or the completion of an activity:

(13) Marking boundedness and completion in Unua
A. Results: A result state can be specified through the compounding of the verb head with a following predicate form (toxni ‘Result’, xorvi ‘break’, bbuni ‘kill’) or by the addition of an independent predicate after the verb (bbuni ‘kill’, imej ‘dead’, ikasi ‘complete’, ...).
B. Perfect and perfective particles: The particles ju, goj and goj nu signify that an event or a state is located or initiated in a time relative to a reference time, perfective in postverbal position and perfect in clause-final position.
C. Terminative predicate: Postverbal inog signifies the termination of an event or a process.

The subsections following present the analysis of data pertaining to each of (13A-C).

3.2 Predicates expressing results

3.2.1 Result morphology

The examples in (14) - (15) below illustrate the use of -toxni as a morphological increment signifying a result state. Unua has an independent verb tox ‘stay, remain, have’ (Clark 2009 reconstructs Proto North Central Vanuatu (PNCV) *toka ‘sit, stay, be in a place’) and a particle ni used as a marker of an indirect or oblique argument. However, in its uses as an independent verb, tox occurs without following ni.

(14) Bbue nga i-su-su i-xa go i-sua-toxni batin nixe demen rin.
   pig DEM 3SG-DUP-push 3SG-go and 3SG-head.butt-RSLT trunk tree huge PL
   ‘the pig was pushing away and it butted down huge trees.’ [AV.30]

(15)a. Iesu i-ri xini, i-bbuns-i arres se-n rin,
   Jesus 3SG-turn-TR 3SG 3SG-look-TR person GEN-3SG PL
   ‘Jesus turned around, he looked at this people,’ [Mark 8:33]

b. Go vingo i-ri-toxni konoj nen, go i-jvi-jv-i re lesu bati-n.
   and woman.the 3SG-turn-RSLT stopper NGEN and 3SG-DUP-pour-TR LOC Jesus head-3SG
   ‘And the woman screwed off the stopper and poured it on Jesus’ head.’ [Mark 14:3]

4 The references accompanying Unua data are coded as described in Pearce (2011a). In essence, sources represented as ‘XX.xx’ are from recorded narratives, and ‘Matt/Luke/Mark x:xx’ identify texts of New Testament translations: Bembe (2005/2006/2007). ‘X’stands for a letter and ‘x’ stands for a number.
In (14) -suatoxni marks an end state, the trees are pushed down, contrasting with -susu ixa in which the reduplication and the presence of ixa are markers of an ongoing process. In (15a), turning around (-ri) can be viewed as a process, but with -ritoxni we have the end result that the stopper came off.

The examples in (16) show jiv ‘pour’ in contrasting uses with and without suffixed -toxni in sentences with non-past time reference.

(16)a. Avra i-mro-g go vetxur b-i-mavor go uaen b-i-jiv.
if 3SG-like-that and container IRR-3SG-break and wine IRR-3SG-pour
‘If that happens then the container will break and the wine will spill out.’ [Mark 2:22]

b. Arres nga b-i-vena b-i-muxmux ni nue, go b-u-sebe-mn-i
person DEM IRR-3SG-come IRR-3SG-sip IO water and IRR-2SG-NEG-drink-TR
b-u-jiv-toxni vex re roxe ngo go re-re-be-ke-i.
IRR-2SG-pour-RSLT to LOC laplap leaf the and 1INCL-PL-IRR-see-TR
‘The person should come up and sip some water, but you should not drink it, you should spit it out on the laplap leaf and we will see.’ [CI.40]

In (16a), without suffixed -toxni, the focus is on the pouring out which will result from the breaking of the container. In (16b), in the presence of -toxni and the following locative, the focus is on the object of the pouring, the end state reached by that object. Whilst such uses of -toxni are synchronically productive, there are certain verbs used with -toxni that have lexicalized interpretations:

(17)a. xini i-kare morin rin rroni nasum.
SG 3SG-wear clothes PL with necklace
‘he put on (her) clothes and (her) necklace.’ [DT.22]

The lexicalized uses of forms with toxni shown in (i) are in contrast with the more predictable interpretations applied to the toxni forms in (ii):

(i) Verbs with incorporated lexicalized toxni

<table>
<thead>
<tr>
<th>verb</th>
<th>meaning</th>
<th>example</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bsitoxni</td>
<td>‘smash’</td>
<td>bsi</td>
<td>‘fall on top of’</td>
</tr>
<tr>
<td>gratoxni</td>
<td>‘remove meat from’</td>
<td>gara</td>
<td>‘carry’</td>
</tr>
<tr>
<td>kartoxni</td>
<td>‘take off’</td>
<td>kare</td>
<td>‘put on/wear’</td>
</tr>
<tr>
<td>rutoxni</td>
<td>‘send out’</td>
<td>ru</td>
<td>‘vomit’</td>
</tr>
<tr>
<td>suatoxni</td>
<td>‘push down’</td>
<td>su(a)</td>
<td>‘push’</td>
</tr>
<tr>
<td>vartoxni</td>
<td>‘leave’</td>
<td></td>
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</tbody>
</table>

(ii) Verbs with incorporated toxni with predictable interpretations

<table>
<thead>
<tr>
<th>verb</th>
<th>meaning</th>
<th>example</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>jertoxni</td>
<td>‘tie up’</td>
<td>jari</td>
<td>‘tie’</td>
</tr>
<tr>
<td>jibtoxni</td>
<td>‘mend/join’</td>
<td>jib</td>
<td>‘join’</td>
</tr>
<tr>
<td>jivtoxni</td>
<td>‘pour out’</td>
<td>jvi/jvi</td>
<td>‘pour’</td>
</tr>
<tr>
<td>postoxni</td>
<td>‘sell off’</td>
<td>pos (ni)</td>
<td>‘sell’</td>
</tr>
<tr>
<td>revtoxni</td>
<td>‘take out/off’</td>
<td>ravi</td>
<td>‘take’</td>
</tr>
<tr>
<td>ritoxni</td>
<td>‘turn/screw off’</td>
<td>ri</td>
<td>‘turn’</td>
</tr>
<tr>
<td>suatoxni</td>
<td>‘push down’</td>
<td>su(a)</td>
<td>‘push’</td>
</tr>
<tr>
<td>vostoxni</td>
<td>‘pick up’</td>
<td>vosi</td>
<td>‘pick up’</td>
</tr>
<tr>
<td>vurtoxni</td>
<td>‘pay off’</td>
<td>vur/vri</td>
<td>‘pay/buy’</td>
</tr>
<tr>
<td>xirtoxni</td>
<td>‘dig up’</td>
<td>xir/xri</td>
<td>‘dig’</td>
</tr>
</tbody>
</table>
b. Xina no-*kar-toxni* morin rin.  
SG 1SG-cover-RSLT clothing PL  
‘I took off (my) clothes.’ [DT.53]

In what appears to be the same verb root, at least historically, *toxni* supplies the ‘off’ meaning in (17b), contrasting with the ‘on’ meaning with a bare verb form *kare* in (17a).

Although in the examples seen in (14) – (17), predicates with *toxni* all have ‘off’ as part of their result meaning, in (18) the inclusion of *toxni* signifies the completion of the activity expressed by the verb to which it is attached.

(18) Ke ava se-n i-vos-i i-xa go i-se-vos-toxni rre.  
so older.sibling GEN-3SG 3SG-pick.up-TR 3SG-go and 3SG-NEG-pick.up-RSLT NEG  
‘So the older sister went on trying to pick her up but she couldn’t pick her up.’ [SH.33-34]

With *jari* ‘tie/tie to’, once again, the inclusion of *toxni* appears to provide a focus on the result state with the meaning ‘tie up’:

(19)a. go ra-jari i-nixe iog.  
and 3PL-tie-TR boat there  
‘and they tied the boat up there.’ [Mark 6:53]

b. ra-xa ro-rrur-toxni Ber Sasai ra-jari vere-n raru barago-n raru,  
3PL-go 1PL-seize-DUP-RSLT Ber Sasai 3PL-tie-TR arm-3SG 3DU leg-3SG 3DU  
‘they went and seized hold of Ber Sasai and they tied his arms and legs.’ [BS.84]

c. Arres i-rirang b-i-xa b-i-vevnax ji-xi moxmuramur bi-soxa, i-jxe.  
person 3SG-not.able IRR-3SG-go IRR-3SG-steal DIR-XGEN strong.man IRR-one 3SG-not  
Avra i-mro-g xini b-i-jer-toxni moxmuramur ngo bi-vemu.  
if 3SG-like-that 3SG IRR-3SG-tie-DUP-RSLT strong.man the IRR-before  
‘A person is not able to go and steal at a strong man’s place. If he was to do that he would first tie up the strong man.’ [Mark 3:27]

To tie something to something else, as in (19a), entails the realization of an end-state. The same consideration applies to the understanding of *rrur* ‘seize’ in (19b) and to *jari* ‘tie up’ in (19b). The inclusion of (reduplicated) *toxni* with the different verbs, *vos* in (18), *rrur* in (19b) and *jer* (19c) appears to be reinforcing the end-state interpretation. This use of *toxni* can be understood as comparable to the use in English of *fast* in collocations like *hold fast*. In this use, *toxni* is most transparently related to the independent verb *tax* ‘stay/remain’. As can be seen in (19c), the compounding of *jar(i)* with (to-)toxni shows evidence of a vowel shift in the resulting form: *-jer-toxni*. This /a/ → [e] shift is not restricted to compounds with (to-)toxni, but is found in other cases of verb compounding as well. As will be seen below it applies variably with the forms *vrrarr-bbuni* ~ *vrrerr-bbuni* ‘kill-kill’ in (26) below and with the forms *tai xotvi* ~ *te-(xot)-xotvi* ‘cut off/up’ in (21). The characteristic which is common to verbs undergoing this alternation is that, in their uses as independent verbs, they have the form: ...a(C)-i. This common pattern suggests that the process is one of assimilation, in which the low vowel raises to e in the presence of the following high i in the context of i-dropping in compound formation. As a case of assimilation, this vowel shift can be classed as a weakening change.

Another resultative predicative form which however does not give evidence of uses as an independent verb is *xotvi*. Clark (2009) shows the PNCV forms: *koti* ‘cut’ (< ProtoOceanic (POc) *koti* ‘cut off’) and PNCV *koto-vi* ‘cut, cross’ (< POc *koto* ‘cut (across)’. But no independent verb reflex of PNCV *koti* has been found in Unua with the ‘cut’ meaning. I here gloss the Unua form *xotvi* as ‘break’. Following a
head verb, *xotvi* may induce reductions in the form of the head verb, as seen in the examples in (20) and (21b), second occurrence, and (21c).

(20) \[ \text{vase ‘make/cause’} + \text{xotvi} \]

\[ \text{Nabong ingot arres ra-jar-i xini xini ginxe nga m-i-terter go} \]
\[ \text{day many person 3PL-tie-TR 3SG IO vine C REL-3SG-strong and} \]
\[ \text{i-mo-vas-xot-xotv-i} \]
\[ \text{3SG-CONT-make-DUP-break} \]

‘Many times people tied him with strong ropes but he kept breaking them.’ [Mark 5:4]

(21) \[ \text{tai ‘cut’} + \text{xotvi} \]

a. \[ \text{i-ta-i mama se-n nga turin. Nixe nga i-ta-i xotv-i.} \]
\[ \text{3SG-cut-TR mama GEN-3SG C pandanus sucker stick DEM 3SG-cut-TR break-TR} \]

‘his mama’s pandanus sucker was cut. That sucker was cut off.’ [PB.142]

b. \[ \text{Go vax soxa ma, Namar i-ra arres navur se-n soxa xise b-i-xa} \]

\[ \text{and times one only chief 3SG-send person fight GEN-3SG one XGEN IRR-3SG-go} \]
\[ \text{b-i-ta-i xov-ti xise Jon go b-i-vo-s-i vena. Go arres ninge} \]
\[ \text{IRR-3SG-cut-TR break-TR neck John and IRR-3SG.pick.up-TR come and person one.PROX} \]
\[ \text{i-xa vex re naim baso, go i-te-xotv-i Jon xise-n.} \]
\[ \text{3SG-go to LOC house special and 3SG-cut-break-TR John neck-3SG} \]

‘And at once, the King sent one of his soldiers to go and cut off John’s head and to bring it back. And that one went to the prison and cut off John’s head.’ [Mark 6:27]

c. \[ \text{go ru-xot-xotv-i raru go ru-tevn-i raru.} \]
\[ \text{and 3DU-cut-DUP-break-TR 3DU and 3DU-bury-TR 3DU} \]

‘and they cut them into pieces and buried them.’ [NO.07]

d. \[ \text{Rate ro-gom-xotv-i bbujindes go re-vexut re naut soxa nexe-se-n Genesaret,} \]
\[ \text{3PL 3PL-run-break-TR lake and 3PL-ashore LOC place one name-3SG Genesaret} \]

‘They crossed over the lake and landed at a place called Genesaret.’ [Mark 6:53]

With the reduplication of *xotvi* in (21c), we have the meaning ‘cut into pieces’ and, without reduplication in the examples (21a,b), *xotvi*, supplies the ‘off’ result meaning of ‘cut off’. As noted by an anonymous reviewer, the repeated actions encoded in (20) apply to a series of objects, but in (21c) the repeated actions are applied to a single object. As seen in the two occurrences of *xotvi* in (21b), the presence/absence of reduction in the form of the head verb does not give rise to any semantic distinction. In (21d) the resultative interpretation applies in the understanding: ‘complete the crossing of the lake’.

### 3.2.2 Result predicates

There are two syntactically distinct ways in which a verb can occur in the complement structure of a main verb with the result interpretation. In one type of construction the main verb is directly followed by a result predicate. In another type of construction the result is expressed in a complement clause. The first of these two types of construction bears similarities with the result morphology in that, in a number of cases, the
presence of the result predicate may induce reductions in the form of the main verb. The second type of construction has characteristics comparable to those of causative complements.

The example in (22) shows *bbuni* ‘kill’ in uses following a main verb which identifies the process leading to the killing.

(22) go misinov i-tunis-i *bbuni*-i jurej

and dust 3SG-burn-TR kill-TR worm
‘and the dust burnt the worm dead’ [JN.11]

Although in the example in (22) *bbuni* lacks the T/A/M affixes of an independent verb, this predicate can occur as a main verb with the meaning ‘kill’ (23), as also can *vrarri* (24).

(23) ra-gara xini, ra-gara se ro-b-*bbuni*-i re xemer

3PL-carry 3SG 3PL-carry C 3PL-IRR-kill-TR LOC xemer
‘they carried him, they carried him to kill him in the xemer’ [BS.61]

(24) I-*vrarri*-i raru tuen morix ni nue

3SG-kill-TR 3DU other near 1O river
‘he killed one of the two near the river’ [NR.25]

These two verbs are found cooccurring in collocations in which *vrarri* is followed by *bbuni*. In these collocations, *vrarri* bears the subject agreement prefix and may occur compounded with *bbuni*, as in (25b,c) below, or may appear as an independent word bearing the transitive suffix, as in (25a,d):

(25)a. go veverongon mem-vena se mam-ba-*vrarri*-i *bbuni*-i motara

and now 1EXCL.PL-come GEN 1EXCL.PL-IRR-kill-TR kill-TR old.man
‘and now we come to kill the man dead’ [DT.55]

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6 Thanks to an anonymous reviewer for pointing out that the distinction that I make between result morphology (section 3.2.1) and result predicates (this section) corresponds to what Thieberger (2006) distinguishes as asymmetrical versus symmetrical compounds in the South Efate constructions that he describes. In symmetrical compounds, the V2 of a V1 – V2 sequence occurs in other constructions in the language as an independent verb. In asymmetrical compounds, whilst the second item of the sequence may have verb root characteristics (or it may belong to another grammatical category), it does not occur synchronically as an independent verb. The forms that are described under the Result morphology heading in section 3.2.1 thus fall into the asymmetrical compound category. But, under Thieberger’s definitions, we can only count as compounds constructions in which no other morphology intervenes between the V1 and the V2 of a V1 – V2 sequence. Given that in the Unua data we encounter variability with respect to the strict contiguity criterion, with, for example *te-xotvi* versus *tai xotvi* in (21b), the former of these expressions would count as a compound, but the latter would not. In the present section we will see another case of crossover in the formal characteristics of constructions with *bbun-i* ‘kill-TR’, which, however, can occur also as an independent verb. For the convenience of comparison with other predicates with comparable semantics and (partially) comparable syntactic characteristics, I have chosen to discuss result *bbuni* in the present section, rather than in the section on result morphology where it may more properly belong in terms of its formal characteristics in this use.
b.  go i-rang b-i-vrrarr-bbun-i noxobb
   and 3SG-not.able  IRR-3SG-kill-kill-TR  fire
   ‘and he was not able to put out the fire’  [WC.33]

c.  Ale, re-ber-vrrerr-bbun-i go ra-b-xan-i re-ber-vrrerr-bbuni
   ‘Alright, they were about to kill him and then eat him, they were about to kill him’  [BS.88]

d.  go tata se-n i-tumrax go i-vrrrrr-i mu mokiki, ke i-vrrerrr-i bbuni
   and dad GEN-3SG 3SG-get.up and 3SG-kill-TR again boy so 3SG-kill-TR kill-TR boy
   i-xa go i-tev-ri7
   3SG-go and 3SG-bury-TR [SW.42]
   ‘and his dad got up and killed the boy in his turn, so he killed the boy dead and buried him.’

The examples in (25) thus give variable evidence of a close syntactic relation between the two predicates,\(^8\) the transitivity suffix -i which is present on vrrarri in (25a) and (25d) is absent in (25b) and (25c). The vowel assimilation effects are particularly striking in (25c) given the contrast with “bare” vrrarri in the clause preceding the occurrence with the weakened vowel.

In all of the examples in which bbuni occurs as a reinforcing result predicate, when the object of the clause is overt, it follows the two-predicate sequence, as in (22) and (25a,b,d). In the other type of construction in which the result is expressed in a complement clause, the predicate in the result clause follows the overt argument that it modifies, as in the following examples:

(26)a.  go tue-n re-vaxe xise re-b-bar-i mokiki b-i-mej
   and brother-3SG 3PL-plan XGEN 3PL-IRR-beat.up-TR boy IRR-3SG-die
   ‘and his brothers planned to beat the boy dead’  [GS.54]

b.  B-u-seb-bar-i arres b-i-mej
   IRR-2SG-NEG-beat.up-TR person IRR-3SG-die
   ‘You should not beat anyone dead’  [Mark 10:19]

The fully clausal result predicates in (26) are in contrast with post-main verb bbuni in the examples in (22) and (25) in that the result predicate bears agreement and T/A/M prefixes and it follows the argument that it modifies. These examples also show the use of the completive -mej in constructions in which the main verb is in the irrealis (giving rise to the use of the irrealis form of -mej).

In the following examples a main verb cooccurs with both types of result constructions:

(27)a.  i-vrrrrr-bbun-i motara i-mej.
   3SG-kill-kill-TR old.man 3SG-die
   ‘he killed the man dead.’  [BD.97]

\(^7\) It is also the case that some speakers use vrrerrri rather than vrrarri as independent verbs or alternate in uses of the two forms.

\(^8\) Some notions of how the surface forms might be derived are sketched out in section 4.2.
b. Mur-b-bar-i bbun-i memru mor-b-mej go mur-b-ta-i xot-xotv-i
   2DU-IRR-beat.up-TR kill-TR 1EXCL.DU 1EXCL.DU-IRR-die and 2DU-IRR-cut-TR DUP-in.pieces-TR
   mur-b-tevn-i memru.
   2DU-IRR-bury-TR 1EXCL.DU

   ‘You will beat us dead and you will cut us up into pieces and bury us.’ [NO.03]

The result clause construction that we have seen in uses with mej is syntactically comparable with the standard causative construction that is used with the main verb vase ‘make’:

(28)a. mama se raru xini i-berax b-i-vase tusi-n ngo b-i-sus.
   mama GEN 3DU 3SG 3SG-not.want IRR-3SG-make brother-3SG PROX2 IRR-3SG-give.suck
   ‘their mother did not want to feed her brother.’ [VT.12]

b. I-mo-vase xina no-mo-kbex ni nu.
   3SG-CONT-make 1SG 1SG-CONT-jump IO EMPH
   ‘He was making me go jumping right up.’ [BD.91]

The uses of bbuni as a postverbal result predicate and of mej as the verb of a result clause appear as entrenched collocations. In other instances in which the modified argument is non-overt the diagnostics to distinguish between the complement clause construction and the incorporated predicate construction may not be available. In the example in (29) below the evidence that we have seen so far suggests that mej is likely to be the verb of a result clause complement. However in the example in (30), without other compelling evidence, it may be the case that the single syllable verb which is the second predicate of a sequence is prohibited from occurring without an affix, either the appropriate agreement and T/A/M markers or the default form prefix -i.9

(29) go arres ngaro re-bar-i i-mej.
   and person the.PL 3PL-beat.up-TR 3SG-die
   ‘and the people beat him dead.’ [Mark 12:5]

(30) ra-xa ra-jar-i i-ser.
   3PL-go 3PL-die-TR 3SG-hang
   ‘they went and strung him up,’ [BS.79]

The result clause interpretation would apply to both (29) and (30) on the understanding that the second verb in each case is a result predicate associated with a (3SG) non-overt argument. On the alternative non-clausal analysis, imej in (29) and iser in (30) are like postverbal bbuni and xotxotvi in (22). The latter two predicate forms, however, lack subject agreement prefixes, whereas single syllable -mej and -ser bear the 3SG -i-prefix. In order to determine if the prefix in these cases counts as 3SG agreement or as the default prefix (see fn. 9), we would need to see if this prefix can occur on -mej/-ser when the potential understood argument is other than 3SG.10

Another predicate form kas-i ‘complete-TR’ appears with the 3SG prefix of an inflected verb when it follows a main verb. First, the examples in (31) show kasi as an independent main verb in uses with the

9 Single syllable modifying predicates occur with the -i-prefix, as in:

(i) Nato, xina no-vase i-vo xini xai.
   chicken 1SG 1SG-make 3SG-good IO 2SG
   ‘Chicken, I have behaved well towards you.’ [BI.31]
‘complete’ meaning. In another use, shown in (32), kasi occurs as the modifier of a locative argument, roughly signifying ‘complete coverage’.

(31)a. Demej ngo i-kese nexse norrom ngaro i-xa go i-kas-i rate kebeg.
   devil PROX2 3SG-call-out name yam the.PL 3SG-go and 3SG-complete-TR 3PL all
   ‘The devil went on calling out the names of the other yams until he completed all of them.’
   [NW.22]

   b. I-vo se xande mim-b-kas-i majingen ngo nga tabbu xande re-m-tebatin
   3SG-good GEN 2PL 2PL-IRR-complete-TR work the C ancestor 2PL 3PL-REL-begin
   vemu.
   before
   ‘It is good if you complete the work that your ancestors began before.’ [Matt 23:32]

(32)a. Naxerr nga navir m-i-vir i-kas-i mamren i-tebatin re mavren nga
   time C lightning REL-3SG-shine 3SG-complete sky 3SG-begin LOC side C
   rrueri go i-xa i-nog re mavren nga xobbuar,
   east and 3SG-go 3SG-end LOC side C west
   ‘When the lightning struck it completely lit up the sky beginning from the east side all the
   way to the west side,’ [Matt 24:27]

   b. Go arres ro-sbo majingen se-n i-kas-i naut kebeg nga Siria.
   and person 3PL-discuss work GEN-3SG 3SG-complete-TR place all C Syria
   ‘And people talked about his work through the whole of Syria.’ [Matt 4:24]

In the examples in (33), even in the absence of an overt locative argument, kasi is used independently to convey the ‘complete coverage’ meaning.

(33)a. I-rve-rve-i nesur i-nog i-tuv-ni i-xa i-xa i-kas-i, go
   3SG-DUP-pull off-TR dry coconut leaf 3SG-end 3SG-throw-IO 3SG-go 3SG-go 3SG-complete-TR and
   i-tuv-ni se b-i-sri goj nu.
   3SG-throw-IO GEN IRR-3SG-burn FOC.already now
   ‘She pulled off dry coconut leaves and she went on throwing them everywhere and she threw
   them to burn them all up.’ [WC.20]

   b. Go i-sursur, i-sursur i-sursur rririvji i-xa i-xa i-kas-kas-i
   and 3SG-burn 3SG-burn 3SG-burn 3SG-burn around 3SG-go 3SG-go 3SG-DUP-complete-TR
   ‘And it was burning and burning and burning completely all around.’ [WC.26]

3.2.3 Summary

The formal characteristics of the three types of construction that include a result predicate are summarized in (34).

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10 I currently lack the relevant data on this possibility.
VERB + RESULT constructions

A. Result morphology (-toxnī, -xotvi, -bbuni):
- The result predicate immediately follows the main verb root.
- The result predicate has no subject agreement inflectional prefixes.
- A vowel of the main verb root can be subject to assimilation.
- The meaning of the verb + result predicate combination may be lexicalized.

B. Result predicate (xotvi, bbuni, ikasi; and possibly: imej, iser):
- The result predicate immediately follows the main verb.
- The result predicate may or may not bear inflectional prefixes.
- The result predicate can act as a reinforcer of the meaning of the main verb.

C. Result clause (open class):
- The result predicate is the main predicate of a complement clause.
- The overt argument modified by the result predicate appears between the main verb and the result predicate.

We have seen that the divisions between the (34A) and (34B) result constructions do not hold firm for certain verb + result combinations, in which the expression of the result variously appears as a morphological increment on the main verb (34A) or as a freestanding word following the verb (34B) (as in the alternations: vrrerr-bbuni – vrrarri bbuni). On these grounds, the forms (-)xotvi and (-)bbuni are shown as belonging in both the (34A) and (34B) classes. In the case of imej and iser, on the examples that we have seen, it is possible that these forms should simply be classed as occurring in result clauses. To this extent, the three-way classification shows divisions which could be seen as indicative of a cline in the progressive grammaticalization of independent verbs as they take on the more functional roles of predicates expressing aspectual characteristics, but still with differing semantic denotations (e.g., result xotvi ‘break off/up’ versus result toxni ‘RSLT/end state’).

The result predicates that we have seen thus either reinforce the expression of an end-state that is already expressed by the main verb (-vrrerr-bbuni ‘kill-kill/kill dead’), or they add in the expression of an end-state which is not part of the meaning of the main verb (-jari iser ‘tie hang/string up’, -tuvni ... ikasi ‘throw all over’).

3.3 Particles encoding perfective and perfect aspect

Comrie (1976: 12) distinguishes perfective and perfect aspect as follows:

The term ‘perfective’ contrasts with ‘imperfective’, and denotes a situation viewed in its entirety, without regard to internal temporal constituency; the term ‘perfect’ refers to a past situation which has present relevance, for instance the present result of a past event (his arm has been broken).

In the terms of Comrie’s definitions, the Unua particles ju ‘already’, goj ‘FOC.already’, goj nu ‘FOC.already now’ appear to function as markers of perfective and perfect aspect. The perfective versus perfect uses are positionally as well as interpretively distinct. The data shows that goj nu is restricted to occurring after a direct object, whereas ju/goj are directly post-verbal. Clause-final goj nu encodes relevance with respect to the “now” time and thus functions as a perfect. Post-verbal ju/goj marks perfective aspect. To the extent that the positional distinction is not always manifest (as, for instance, when
the clause has no direct object), there is inevitably a certain amount of ambiguity in the interpretations where goj occurs independently.

The examples in (35) show that goj nu must follow a direct object:

(35)a. Xini i-r-i naur goj nu.
   3SG 3SG-write-TR letter FOC.already now
   ‘He has already written a letter.’

b. *Xini i-r-i goj nu naur.
   3SG 3SG-write-TR FOC.already now letter
   [Kalangis Bembe 27/11/07]

In Unua, the independent particle go has a double function as the conjunction ‘and’ and as a marker of focus. When go combines with ju as goj it has the focus rather than the conjoining function. When goj occurs with nu ‘now’, the resulting combination thus provides a more emphatic focus on relevance to present time.

The “now” time reference of goj nu is the “now” time of the discourse context, as in the following:

(36)a. Ale. Rrav i-ron goj nu, rrrav i-rron, nemen rin nemen rin ra-sar.
   OK canoe 3SG-sink FOC.already now canoe 3SG-sink bird PL bird PL 3PL-fly
   ‘OK. The canoe having sunk now, the canoe (having) sunk, and, the birds, the birds flew away.’ [RR.47]

b. re-vena ra-xa vex re naim se motara ngo goj nu, ra-xa
   3PL-come 3PL-go to LOC house GEN old.man the FOC.already now 3PL-go
   ro-rrur-to-toxni Ber Sasai
   3PL-seize-DUP-RSLT Ber Sasai
   ‘having come back now to the house where the man was they went and got hold of Ber Sasai’ [BS.54]

In these examples goj nu references (prior) events relative to the time of the discourse context, which, in both (36a,b) is past time.

It is also the case that events that have not yet taken place can be referenced to a “now” time:

(37)a. I-vra go: “Rru-b-xa voxbe?”
   3SG-say and 1INCLDU-IRR-go to.where
   ‘She said: “Where are we going?”’

   I-vra: “Rru-b-xa goj nu, rru-b-xa vex aim.’
   3SG-say 1INCL.DU-IRR-go FOC.already now 1INCL.DU-IRR-go to home
   ‘He said: “Let’s go now, let’s go home.”’ [SW.22]

11 The use of go as a focus marker is seen in forms elicited as translations of English sentences with initial cleft constituents, e.g.:

(i) Nabbubb ngo go rrate rra-ta-i.
   grass the FOC 1INCL.PL 1INCL.PL-cut-TR
   ‘It was the grass that we cut.’ [SO 20/7/06]
b. li, no-kro ju. Rrraru! Rru-b-xa goj nu ma.”

‘Yes I am awake. Let’s go! Let’s just go right now.’ [NR.15]

In the examples in (37) goj nu occurs in clauses in which the irrealis verb references events which are not yet actualized, but which are to be actualized from the “now” point in time.

In a variant form of this marking of perfect aspect goj appears with the inflectional marker i-:

(38)a. Ke i-ngar i-goj nu mama se-n nga i-ngar i-ngar ni i-vra

b-e-ke-i.

IRR-1SG-see-TR

‘So she burst out crying, his mama was crying and crying because she wanted to see him.’ [PB.159]

In (38b), igoj occurs without following nu, but, given its position after the verb complement, it is here occurring as a variant of perfect goj (nu). In other constructions, the i- marking typically occurs on predicates with adverbial or adjectival modifying functions.

In contrast with goj nu, in the examples in (39) post-verbal particles ju/goj appear to behave primarily as markers of anteriority:

(39)a. Nano no-jbar-i aim go tue xina i-r-i ju/goj naur xeru.

‘Yesterday I arrived home and my brother had already written two letters.’ [Kalangis Bembe 27/11/07]

In both (39a) and (39b) the presence of nano ‘yesterday’ locates the events in the past. In (39b), the event of the writing of the two letters is understood as sequential to the arrival, but in (39a), in the presence of ju/goj, the letters have been written before the arrival. The particles ju/goj here mark the anteriority of an event with respect to a reference time. The difference between ju and goj is that goj simply appears as more emphatic than ju.

One of the difficulties in distinguishing between perfect and perfective is that both aspects convey termination when applied to non-stative predicates denoting events located in the past. The termination is necessarily understood as anterior to a time reference point. Perfect aspect marks the relevance of the event with respect to the time reference viewpoint and perfective aspect provides a view over the whole event, rather than to some internal stage of the event (as is denoted in the use of imperfective aspect). If it is correct to assume that ju/goj are markers of perfective aspect in (39a), then it would seem to be the case that Unua is employing these particles to denote anteriority in the absence of other formal devices for the marking of past tense.
The examples following show further instances in which the use of ju is compatible with the perfective interpretation:¹²

(40)a. No-ngar ni mama i-xa ju vex maxat.
   1SG-cry  IO mama 3SG-go already to high
   ‘I am crying because mama has gone up above.’ [BO.62]

b. No-xa no-rav-i ju vena vex ji xai.”
   1SG-go 1SG-take-TR already come to DIR 2SG
   ‘I went and I have brought her back to you.’ [BO.105]

c. No-vra-i ni ju xai, no-vra:
   1SG-say 1O already 2SG 1SG-say
   ‘I already said to you, I said:’ [WW.10]

d. go vinkiki ngo mama se-n i-vra xni ju avra,
   and girl the mama GEN-3SG 3SG-say 1O already if
   ‘and the girl’s mother had already said to her that if,’ [CS.35]

e. motara Ber Sasai i-rej rroni ju vindra ngo
   old.man Ber Sasai 3SG-say with already old.woman the
   ‘the man Ber Sasai had already spoken with the woman’ [BS.65]

These examples have the flavour of a perfective rather than of perfect: the focus seems to be on the fact that something has taken place, rather than on the assertion of the event being relevant to a now time.

In cases in which ju is used with a stative predicate, the interpretation becomes that of an inchoative, thus an achievement:

(41)a. Rate tebeg veverngo re-rex ju
   3PL all now 3PL-married already
   ‘They are all married now.’ [RA.187]

b. motara Bongbae se Aulua i-mej ju
   old.man Bongbae GEN Aulua 3SG-die already
   ‘old man Bongbae from Aulua has already died/is already dead’ [SA.189]

The verb mej is ambiguous between stative ‘dead’ and achievement ‘die’. The verb kasi ‘marry’ in Unua is an accomplishment predicate, in apparent contrast with stative rex ‘married’. In both (41a,b) the meanings appear to be those of achievements rather than of statives.

The examples in (40a,c) and (41a,b) have shown perfective uses of postverbal ju/goj with the anteriority reading relative to a present time reference point and with those in (39a) and (40b,d) relative to past time reference. These particles can also denote anteriority relative to (unrealized) future, as in the following examples:

(42)a. i-mo-vsexn-i xina no-mej ju, tuo-g re-bar-i bbun-i ju xina
   3SG-CONT-show-TR 1SG 1SG-die already brother-1SG 3PL-beat.up-TR kill-TR already 1SG
   ‘it is a sign that I am already dead, my brothers have already killed me’ [GS.60]

¹² Other evidence (Pearce 2011a) shows that postverbal ni, xni and rroni in (40c,d,e) are cliticized to the verb and that these elements do not therefore count as interveners in the postverbal placement of ju.
In the context from which it is extracted, although the verb is not in the irrealis, (42a) is an explanation of the significance of something that could happen at a future time. Within that hypothesized future time, what may happen is a sign that the speaker is already dead. In (42b), the inclusion of goj after the irrealis state predicate bimmes once again gives rise to the inchoative interpretation ‘dried out’, as against simply ‘dried’.

In postverbal position the particles ju and goj thus function as typical markers of the perfective in the terms of our understanding of the definition spelt out in Comrie (1976): they reference the time of an event or a state of affairs relative to a subsequent time, the time reference anchor of the discourse context. Whether the event or state of affairs that they mark is completed or not is a function of the predicate class of the construction in which they appear. The perfective particle can cooccur with a result state predicate, as in the following example:

(43) ra-vrrarr-i bbun-i ju i-matur maxat.
3PL-kill-TR kill-TR already 3SG-sleep high
‘they have already killed him dead he lies up there.’ [NR.31]

Whilst the presence of bbuni in the first clause of (43) establishes a result state interpretation, the inclusion of ju in this clause marks the time reference contrast with the time reading associated with the verb of the second clause: past versus present.

3.4 ‘Ended’: nog

The predicate nog ‘end’ is used in a clause in the third person singular form with the function of marking the closure or termination of an event or an activity. In an extension of this function, nog is used as an adverbial introducing the resumption of a narrative. It can be difficult to distinguish between these two functions in particular instances (especially in the absence of a boundary-marking pause). Before trying to understand these special functions, we first consider the use of nog as the main verb of a clause, as in the examples in (44).

(44)a. Jirvaren se xina i-nog iog.
story GEN 1SG 3SG-end there
‘My story ends there.’ [SS.65]

b. Reken nabburen se rrarru i-nog.
today friend GEN 1INCL.DU 3SG-end
‘Today our friendship is over.’ [BI.32]

In the context of this extract from a story, the scenario that is evinced is predicted to take place at some future time. The speaker places himself within that future time, thus using the realis forms of the verbs, corresponding to a “narrative present”.

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13 In the context of this extract from a story, the scenario that is evinced is predicted to take place at some future time. The speaker places himself within that future time, thus using the realis forms of the verbs, corresponding to a “narrative present”.
In its use as a main verb, *nog* corresponds most closely to English *end* rather than to *finish*. Consider the difference between *end* and *finish* in accordance with the context specified before (45a,b):

(45) Context: I have been making a basket and, subsequently, I say:

a. I finished the basket.
   *I ended the basket.

When used transitively, *end* is understood as ‘stop/put an end to’, as in (46a), or, more marginally as ‘put an end on’, as in (46b):

(46)a. I ended the fight between those two.
   b. ?I ended the story that I was writing.

In (45a) *finish* is agentive and the sentence has the same interpretation as (47a):

(47)a. I finished making the basket.
   b. ?I ended making the basket.

The only possible interpretation for (47b) is one with the terminative ‘stop’ meaning. With the ‘stop’ interpretation, the making of the basket is not completed, the process of making the basket is interrupted.

In the Unua examples in (44) the independent predicate *nog* has the non-agentive terminative ‘end’ meaning. To represent the end of an agentive activity, *i-nog* ‘3SG-end’ is used after the verb signifying the activity. Very often in this function *inog* follows one or more occurrences of *ixa* ‘3SG-go’, which is used to represent an ongoing activity, as in the examples in (48):

(48)a. Ke, i-nre ru-teng i-xa i-nog, i-vun re tevense-n, i-vra: 3SG-like 3DU-cry 3SG-go 3SG-end 3SG-remonstrate LOC husband-3SG 3SG-say
   ‘And so when they stopped crying, she remonstrated with her husband, saying:’ [SS.34]

b. motara soxa, ale, i-xa vex raman i-xa go i-um i-um i-xa i-xa old.man one alright 3SG-go to LOC.garden 3SG-go and 3SG-clear 3SG-clear 3SG-go 3SG-go
   *i-nog.* Ale i-sr-i bitinx 3SG-end OK 3SG-burn-TR tree
   ‘a man, OK, he went to the garden, he went and he went on clearing things up until it was done. OK, he burnt down trees,’ [SW.02]

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14 A reviewer asks whether *inog* occurs only after a process/activity verb or whether it may also occur after a punctual verb, such as ‘cough’. I have not found clear cases of *inog* following a punctual verb and, as the reviewer suggests, the prediction would be that, if such is possible, the interpretation would be iterative (as in the English contrast: *he coughed* Punctual versus *he was coughing* Iterative). That is, for Unua, the predicted contrast would be: *ipur* ‘he coughed’ versus *ipur inog* ‘he stopped coughing’. In the latter, the interpretation would be Iterative and, in the former there is possible ambiguity between the Punctual and Iterative interpretations.
c. I-majing i-xa i-nog, go i-vena i-non, go i-ngavngav.
   3SG-work 3SG-go 3SG-end and 3SG-come 3SG-sit and 3SG-rest
   ‘When he finished working, he came and sat down and rested.’ [NV.02]

d. Ale, i-wet rrarra apen i-vjixn-i nixe i-xa i-xa i-nog, go i-vra:
   OK 3SG-wait wait below 3SG-stick-TR wood 3SG-go 3SG-go 3SG-end and 3SG-say
   ‘OK, she waited, she waited, and below the other one went on sticking the sticks until that
   was finished and then she said:’ [WW.36-37]

   Although in the following examples ixa is not present after the verb, the use of the verb repetition
   signals that the activity is an ongoing process. The presence of inog here again denotes the termination of a
   (drawn out) activity:

   (49)a. Nabong soxa xasuv i-ta rrav, i-ta rrav i-nog, i-rve-i i-rng-i rites.
      day one rat 3SG-cut canoe 3SG-cut canoe 3SG-end 3SG-pull-TR 3SG-put-TR LOC:sea
      ‘One day the rat carved a canoe, once he had finished the canoe, he dragged it and put it into
      the sea.’ [RR.05]

   b. I-rve-rve-i nesur i-nog i-tuv-ni i-xa i-kas-i, go i-tuvn-i
      3SG-DUP-pull-TR dry:coconut:leaf 3SG-end 3SG-throw-TO 3SG-go 3SG-complete and 3SG-throw-TR
      se b-i-sr-i goj nu.
      GEN IRR-3SG-burn-TR FOC:already now
      ‘She pulled off dry coconut leaves and threw them around everywhere. And she threw them to
      be ready to burn now.’ [WC.20]

   c. i-traxn-i, i-traxn-i neriv rin, i-traxn-i neriv rin i-nog go i-vra:
      3SG-tie up-TR 3SG-tie up-TR arrow PL 3SG-tie up-TR arrow PL 3SG-end and 3SG-say
      ‘she bound them up, she bound up the arrows, and when she finished binding up the arrows
      then she said:’ [WT.34]

   The examples in (49) show that terminative inog follows the direct object of a transitive verb. In the
   examples (49a) and (49c) the activity verb that is modified by inog comes after another occurrence of the
   same verb. It is possible that the verb repetition is another means of encoding the ongoing nature of the
   activity, but, alternatively, it could be that the verb doubling is simply a factor of the kind of repetition
   that occurs frequently in oral story telling. In (49b), the activity verb is in the reduplicated form signifying
   here ongoing (iterated) actions.

   In another similar kind of use, inog seems to have a function as a marker of a completed stage in a
   narrative:

   (50) go i-vrrarr-i arres soxa. Ale, i-vrrarr-i arres soxa i-nog. Ale, i-x-i jinen
      and 3SG-kill-TR person one OK 3SG-kill-TR person one 3SG-end OK 3SG-carry-TR innards
      arres ngo maxat vena i-gir vena.
      person the high come 3SG-return come
      ‘and he killed a man. OK, he killed a man off. OK, he carried the entrails of the man back from
      on high.’ [SW.09]

   Whereas in other cases that we have seen in (48) and (49) inog marks the end of a process, in (50) vrrarri
   ‘kill’ is an accomplishment predicate and it necessarily has its own end-point. For this reason, the use of
   inog in (50) is not required to provide an end-point to the action that is denoted and its use in this
   instance seems to be as a marker of the termination of an event as a step in the narrative. It is quite natural
   in narratives that the termination of an activity or event marks the completion of a stage in a story that will
   be followed by a subsequent stage.
It seems that the narrative stage completing function of *minog* has led to another use in which it serves as an adverbial introducing a next step in a narrative. In this adverbial function, *minog* occurs in one of two forms: either with the relative clause prefix as *m-i-nog* ‘REL-3SG-end’ or in the form *minog* followed by *go ‘and’.* Both of these forms have the function of marking a narrative stage and it is possible that the use of one or other of these forms in a speaker-dependent variable. The examples in (51) show instances of this use with the form *minog*:

(51)a. Ru-non i-xa go vindra dabago-n. **M-i-nog**, vindra i-vra-i ni motara, 3DU-stay 3SG-xa and old.woman belly-3SG REL-3SG-end old.woman 3SG-say-TR IO old.man

‘They went on living there and the woman became pregnant. Then, the woman said to the man,’ [DT.05]

b. Rra-b-xa re-b-ke-i teme xamru. **M-i-nog** re-xr-i nabbur, 1INCL.PL-IRR-go 1INCL.PL-IRR-see-TR father 2DU REL-3SG-end 3PL-dig-TR hole

‘We will go and find your father.’ Then they dug a hole,’ [DT.33]

c. **Ale m-i-nog** i-ri-gir-i go i-matur raron. OK REL.3SG-end 3SG-turn-back-TR and 3SG-sleep LOC.inside ‘OK then it turns back and goes to sleep inside. [NR.52]

In all of the examples in (51), *minog* occurs in a clause-initial position (preceded only by the discourse marker *ale* in (51c)).

In the following examples with *inog* *go* in (52) we see that this form also occurs clause-initially and that it has an interpretation that appears to be indistinguishable from to the interpretation applying to *minog* in (51):

(52)a. Reken no-vra b-a-vase jirvaren bi-soxa, jirvaren bi-xeru, go b-e-tetebatin today 1SG-want IRR-1SG-make story IRR-one story IRR-two and IRR-1SG-begin

ba bi-soxa, i-nog go b-o-sbo mu tuen. ATTEN IRR-one 3SG-end and IRR-1SG-discuss again other

‘Today I want to tell one story, two stories, but I’ll start with one and, then I will go on with the other one.’ [BD.04]

b. **Ale, mor-xenxen. Ale i-nog go i-mre xemer se srate, xemer se srate OK 1EXCL.DU-DUP-eat OK 3SG-end and 3SG-like xemer GEN 1INCLPL xemer GEN 1INCLPL ‘OK, we ate together. OK, after that, it was as if it was our xemer’ [PB.09]

c. Rraxum, rru-bo-sr-i ba xise xina, b-i-nog go rru-b-xa crab 1INCL.DU-IRR-burn-TR ATTEN XGEN 1SG IRR-3SG-end and 1INCL.DU-IRR-go

rru-bo-sr-i xise xai.’ 1INCL.DU-IRR-burn-TR XGEN 2SG ‘Crab, we will burn my place, and then we will go and burn yours.’ [XR.10]

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15 I have not as yet been able to find a good explanation as to why the relative clause prefix *m-* shows up in this use of *inog*.
Go Meri i-non navur xeter rroni Elisabet. \textbf{i-nog go} i-ber-xaxa gir vex and Mary 3SG-stay month three with Elizabeth 3SG-end and 3SG-INCPT-walk back to ji-xi-n. DIR-XI-3SG ‘And Mary stayed three months with Elizabeth. Then she walked back to her place.’ [Luke 1:56]

In the absence of a clear pause or intonational break before or after an \textit{inog go} sequence, it can be difficult to determine whether inog has the terminating function, the stage completing function or the introducing adverbial function (cf. (49c)). With (52a,c) my classification of inog as having the introducing adverbial function is based on my understanding of the sentence semantics in these examples. In example (52b) the Bislama borrowed discourse marker \textit{ale ‘OK’} (< French \textit{allez}) coming before \textit{inog go} marks the beginning of a new stage in the narrative sequencing. The example (52d) observes the punctuation of the original translation which thus places \textit{inog go} at the beginning of a clause (in the introducing adverbial function therefore).

3.4 Summary

The preceding discussion has shown an array of markers encoding various kinds of distinctions to do with completion and termination. These markers have been seen to have characteristic locations in the structure of the clause. To summarize: (53) presents a schema showing the different markers and their relative positioning in the clause:

\begin{verbatim}
(53) Verb -toxni ju/goj ... ikasi/inog/(i)goj (nu)
      -xotvi
      (-)bbuni
      imej
      iser

\end{verbatim}

As shown in (53) the Result markers immediately follow the verb root and the Verb+Result is immediately followed by a Perfective marker. We have seen evidence in (35a,b), (36b) and (38b) that \textit{(i-}jgoj (nu) can follow a direct object and, in (49a,b,c), that terminative inog also follows a direct object. The ordering with respect to a direct object is thus the justification for showing, in the schema in (53), these Perfect and Terminative items as being located after Perfective \textit{ju/goj} which occurs before a direct object. We have evidence for the occurrence of \textit{ikasi} after a direct object in (32b) but, in this case \textit{ikasi} introduces a locative phrase and thus does not occur independently. We have also seen that both \textit{kasi} and \textit{inog} may follow continuative \textit{ixa, ixa, ...} sequences. However we have no evidence for relative positions for the items in the Completive, Perfect and Terminative categories as we have no data showing cooccurrences with these items. Not shown in (53) is the \textit{inog} with the stage marking function (as in (50)), but it is possible that the position for stage marking \textit{inog} is non-distinct from that of Terminative \textit{inog}. In the further discussion that follows we will leave \textit{inog} aside and we will focus on the Result markers, the Perfective, and the Perfect. Those are the markers for which we have the most clear cut evidence as to their location in the clause. We will see also that, from this perspective, they are interestingly comparable with markers with roughly corresponding functions in Mandarin Chinese.
4 Aspect marking: A cross-linguistic perspective

4.1 A comparison with Mandarin Chinese

The differentiated positioning of markers with aspe ctual kinds of functions brings to mind the case of the Mandarin Chinese particle le, which has distinct functions in the post-verbal position (verbal-le) and the clause-final position (sentential-le). I think it is thus of interest to try and see if there is any parallelism in the uses of le in Chinese and in the uses of certain of the particle-like expressions that we have seen in Unua. As in Unua, the verb form in Chinese does not distinguish between present and past. A variety of aspectual markers can be used to signify aspe ctual and temporal properties of the clause relative to what Smith (1997) calls a ‘viewpoint’. But we will focus here on the uses of the le particle.

With respect to the uses of the le particle in Mandarin, Soh (2009: 625) provides the following example illustrating the use of both verbal-le and sentential-le:

(54) Tā men dàodá-le shān-dīng le.
they reach-LE mountain-top LE
‘They reached the top of the mountain (which they hadn’t done before/contrary to what one may expect).’ [Soh 2009: 625]

The expansions that Soh gives in the English translation for (54) spell out her analysis of what she interprets as two kinds of functions for sentential-le (and see also Soh and Gao 2008). Soh (2009: 628) proposes the following pair of examples to show the meaning distinctions for the verbal-le and sentential-le with an atelic predicate (a predicate without an inherent endpoint and thus an Activity).

(55)a. Tā mà-le tā de háizí.
he scold-LE he POSS child
‘He scolded his child.’

b. Tā mà tā de háizí le.
he scold he POSS child LE
‘He is scolding his child (which he was not doing before/contrary to expectations).’ [Soh 2009: 628]

In (55a), the verbal-le is said to signal the end of the activity, whereas, in (55b), the activity may be ongoing and the presence of the sentential-le marks alternative viewpoints with respect to the activity.

However, whilst the most natural interpretation of verbal-le as in (55a) involves what we might understand as completion, it is in fact the case that verbal-le encodes termination rather than completion. The completion/termination distinction is shown in examples taken from Smith (1997: 68-69) which demonstrate the use of the wán ‘finish’ result predicate:

---

16 There is some debate in the literature as to whether le should be treated as a single morpheme that is active in distinct syntactic environments or as two distinct, but homophonous, morphemes (for references on this issue, see Soh 2009: 629). For convenience, I here refer globally to the ‘particle le’, but, when distinguishing the uses of le, I refer to ‘verbal-le’ and ‘sentential-le’.

17 I have adapted Mandarin examples cited from different sources by adding in the tone markings to the pinyin forms.

18 For comparable examples, see also Tai (1984: 292)
Because result wán in (56a) entails completion, the extension in this example is a contradiction. The extension in (56b) is not contradictory and this example thus shows that post-verbal le encodes termination of the activity and not necessarily the completion of the activity to its endpoint.19

Smith (1997: 68) classes wán as a ‘Resultative Verb Complement’. From the point of view both of the placement of wán with respect to the verb and of its classification as a resultative, wán appears to be semantically and syntactically comparable to the resultative morphemes that are found in Unua (e.g., Result toxni ‘break off/up’ and Result toxni ‘RSLT/end state’ discussed in section 3.2.1). There is also an interesting parallelism in the use of verbal-le following a result predicate in Mandarin (56a) and the result predicate – ju sequencing in the Unua example given earlier as (43):

(43) ra-vrrarr-i bbun-i ju i-matur maxat.
   3PL-kill-TR kill-TR already 3SG-sleep high
   ‘they have already killed him dead he lies up there.’ [NR.31]

In effect, there is a good correspondence between the interpretations applied respectively to the postverbal and the clause-final particles in the two languages. On the analysis that I have presented in section 3.3, postverbal ju/goj appear as perfective markers and clause-final goj nu as a perfect. Although Soh (2009) and Soh and Gao (2008) argue that, whilst sentential-le has the characteristics of the perfect, a finer-grained analysis brings out some additional characteristics,20 for the accounts that we have seen here, this particle has at least the role of a marker of perfect aspect. In the case of the Mandarin verbal-le, a number of authors are in agreement that it is a perfective (Rohsenow 1976, Smith 1997, Tai 1984, Soh and Gao 2008: 448, Soh 2009).21 Thus, if my analysis of the Unua data is on the right track, the Mandarin result predicates and the two uses of le in Mandarin line up with the Unua markers in the following way:

(57) | Result predicate | Perfective | Perfect |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandarin</td>
<td>V-wán, etc.</td>
<td>V-le</td>
</tr>
<tr>
<td>Unua</td>
<td>V-toxni, etc.</td>
<td>V ju/goj</td>
</tr>
</tbody>
</table>

The preceding sections of this paper have presented an account of a wider range of aspectual marking devices in Unua, but, given what has emerged in the present section as to the comparability of Mandarin and Unua for the markers discussed here, I propose in the section following to consider the implications of

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19 Smith (1997) notes that the judgments as shown in (56a,b) are not representative of all dialects of Mandarin: there is another dialect “in which the simple perfective indicates completion, if a specific object nominal appears in the appropriate verb constellation” (Smith 1997: 281). In this other dialect (56b) is contradictory. (The dialect represented in (56b) is consonant with the dialect described in Soh 2009 and discussed also in Soh and Gao 2008.) My thanks to Yan Huang for alerting me to the existence of acceptability judgment differences in the case of constructions of the (56b) type.

20 Thus, for Soh and Gao (2008: 470): ‘We show that sentential -le shares its assertive meaning with perfect and its presupposition with English already.’

21 For a brief overview of some alternative accounts, see Soh (2009: 629).
these findings for the kind of hierarchical structure that is put forward as being universal in the influential proposal of Cinque (1999).

4.2 A hierarchy of functional projections (Cinque 1999)

The syntactic literature has recently seen a number of proposals arguing for a universal underlying ordering of projections in components of the sentence. This work has developed out of earlier proposals from Emonds (1978) and Pollock (1989) on the positions of functional heads within the IP to extensions involving adverbial positions within the IP (Cinque 1999) and to the consideration of an array of dedicated positions in the CP domain at the left-periphery of the clause (Rizzi 1997). Under these proposals, the conventional labels ‘CP’ and ‘IP’, as shown in (58), have come to be viewed as cover terms for an array of projections in a universally ordered hierarchical schema.

\[
\text{(58) } \quad \text{CP} \quad \text{Spec} \\
\quad \quad \quad \quad \text{C'} \\
\quad \quad \quad \quad \text{C} \quad \text{IP} \quad \text{Spec} \\
\quad \quad \quad \quad \quad \quad \text{I'} \quad \text{I} \quad \text{vP/VP} \\
\quad \quad \quad \quad \quad \quad \quad \quad \text{[+Tense]} \\
\quad \quad \quad \quad \quad \quad \quad \quad \quad \text{[+Agr]} 
\]

In what follows I will be concerned with considering the extent to which our findings for Unua (and for Mandarin Chinese) may be viewed as matching up with Cinque’s (1999) proposed universal schema applying to aspecual projections in the domain of the IP.

Unua and Mandarin belong to different language families and these two languages are typologically different on a number of criteria. Most notably, Mandarin is a tone language with a lack of inflectional morphology on the verb, whereas, Unua (not a tone language) has a rich system of verbal inflectional morphology. However, these two languages have in common that they encode aspecual distinctions but not [+/- past] tense and that they have a basic SVO constituent ordering. Nevertheless, given the typological differences between these two languages, it seems quite remarkable that we have found that they essentially employ comparable syntactic marking for result aspect and for perfective and perfect aspect. Given this comparability, it is of interest for us to consider the extent to which the syntax of aspect marking in Unua and Mandarin may be viewed when put against a hierarchy of functional projections such as that proposed in Cinque (1999).

Cinque (1999) adopts Kayne’s (1994) right-branching view of clause structure under which different functional projections are organized in the following way:

---

22 For a more recent collection of papers exploring the make-up of both the IP and CP domains, see Rizzi (2004).
In languages in which iterative raisings apply in the derivations of the surface forms, the outputs corresponding to structures like that in (59) can result in mirror-image linear orderings of the type:

(60) \[ \ldots V \quad F_3 \quad F_2 \quad F_1 \ldots \]

In such surface orderings the items following the verb and closest to it are lower in the base structure than are items appearing further to the right of the verb.

One difficulty in considering how the array of aspectual projections might match up with those proposed in Cinque (1999) concerns the exact nature of the interpretations that are applied to specific functions.\(^{23}\) A partial view of Cinque’s array of projections including functions that could be relevant to those considered here is as follows:

(61) Clause structure (partial) showing representative adverbials: adapted from Cinque (1999: 106 ‘second approximation’)

\[ \ldots [ \text{once Tense}_{\text{past}} \quad \text{then Tense}_{\text{future}} \quad \text{perhaps Mood}_{\text{Irrealis}} \ldots [ \text{usually} \]

\[ \text{Aspect}_{\text{habitual}} \ldots [ \text{already Tense}_{\text{Anterior}} \quad \text{no longer Aspect}_{\text{Terminative}} \quad \text{still Aspect}_{\text{Continuative}} \quad \text{always Aspect}_{\text{Perfect(?)}} \quad \text{characteristically? Aspect}_{\text{Generic/Progressive}} \ldots [ \text{completely} \]

\[ \text{Aspect}_{\text{SG,CompletiveI}} \quad \text{tutto Aspect}_{\text{PL,Completive}} \ldots [ \text{completely Aspect}_{\text{SG,CompletiveII}} \ldots \]

With the kind of linear ordering that is represented for Unua and Mandarin in (57), it would appear that both of these languages could instantiate a surface mirror-image sequencing of the IP-internal projections. First, on the assumption that Result aspect is housed in a projection above the vP/VP, the fact that the verb is followed by the Result marker and that it precedes all other aspectual markers suggests that the verb raises out of the vP/VP to a position above the location of the Result marker and that the compound so formed then raises to a higher position in the clause structure:

\[^{23}\] For some further elaborations as to functions within the IP domain, see Cinque (2004, 2009).
In his portrayal of the IP-internal projections of the Mandarin clause, Cinque (1999) shows the ‘F’ orderings in (63a) corresponding in part to the mirror-image surface ordering in (63b):

(63)

\[ \text{IP} \]
\[ \text{FP} \]
\[ \text{F'} \]
\[ \text{F} \]
\[ \text{ResultP} \]
\[ \text{Result'} \]
\[ \text{Result} \]
\[ \text{vP/VP} \]
\[ \text{vos}-\text{toxni} \]
\[ \text{xiè}-\text{wán} \]

(62)

In his portrayal of the IP-internal projections of the Mandarin clause, Cinque (1999) shows the ‘F’ orderings in (63a) corresponding in part to the mirror-image surface ordering in (63b):

This mirror-image interpretation is consistent with the underlying ordering proposed in (61) in which the three types of Completives are lower in that ordering than the projection labelled as ‘Aspect\text{Perfect(?)}’. However, in terms of our understanding of the roles of the two le in Mandarin, I believe that Cinque’s labels for these functions need to be reconsidered. First, the label that is given as ‘PERF(ect)’ in (63a) corresponds to ‘Aspect\text{Perfect(?)}’ in (61), which Cinque (1999: 96) states as being understood as being in contrast with Imperfective. This means that Cinque’s ‘Perfect(?)’ therefore corresponds to our ‘Perfective’. Second, Cinque’s label ‘Tense\text{Anterior}’ corresponds to the English ‘already’ function which we have interpreted here as ‘Perfect’. Spelling out these terminological differences, (64) shows the correspondences, with the terms used in Cinque (1999) in (64a) and those elaborated here in (64b):

(64)

\[ \ldots \text{[already Tense\text{Anterior}} \ldots \text{[always Aspect\text{Perfect(?)}]} \]
\[ \text{b. } \ldots \text{[already Aspect\text{Perfect} \ldots \text{[always Aspect\text{Perfective}]} \]

Finally, another terminological difference in the two labelling systems (ours and Cinque’s) is that we have equated Mandarin wán with Unua Result marking, whereas Cinque uses the label ‘Completive’ for this morphology. Nevertheless, disregarding the labelling differences, if we suppose that Cinque’s ordering of projections is valid, we are led to assume that, in the terms of the definitions that we have developed here, for the aspectual markers in both Unua and Mandarin, their underlying ordering is the reverse of the surface ordering shown in (57) and should thus be as follows:

\[ \text{24 I am here taking the labelling distinctions as being essentially terminological. If it turns out they are in fact substantive, then it is another question as to the possible implications of our interpretation of the Perfective/Perfect distinction to applications in other languages.} \]
Although we have not been able to treat the data discussed here to the level of detail in the interpretations that is given witness to in even the partial schema shown in (61), the picture of the ordering of the aspectual functions in Unua and in Mandarin has been shown to approximate to the kind of arrangement of projections seen in the (61) schema. As it stands, the ordering of projections in (65) when viewed against the surface mirror-image ordering in (57) points to the application of iterative raisings of constituents in the derivations of the surface orderings in Unua and in Mandarin.

5 Concluding remarks

It is certainly no easy task to untangle the precise functions of aspectual marking in different languages and many questions remain. We have focused especially on the identification and the distribution of Result, Perfective and Perfect marking in Unua (as represented in (57)). We have also uncovered the roles of inog as a Terminative marker and in two kinds of narrative stage marking functions. We have considered the possible role of ikasi with a Completive function. All of these markers in different ways have the function of denoting boundedness. We have also seen that there is some comparability between Unua and Mandarin Chinese in the use of Result/Completive, Perfective and Perfect aspect marking. Our further examination of the data from these two languages has indicated that the common patterning that we have observed may be viewed as consistent with our understanding of the proposed hierarchy of functional projections that is proposed in Cinque (1999). For the further understanding of the syntax of the Unua clause, much more work needs to be done on the problem of how the full array of aspectual markings are integrated with other constituents of the clause in the syntactic derivations.

However, I believe that, even at this stage of our understanding of the various devices marking aspect in Unua, it has been instructive to step back from the Unua data and to view it in terms of how it might align with findings about the syntax of aspectual functions in other languages. It will also be of interest to see to what extent the kinds of uses of aspectual markers that we have found in Unua have parallels in other Vanuatu languages. Our goal in the task of describing languages is that the descriptions produced, whilst naturally having due regard to the facts of language specific phenomena, should contribute ultimately to the broader goal of understanding human language and how it works.

6 References