IMPERFECTIVE ASPECT AND THE INTERPLAY OF ASPECT, TENSE AND MODALITY IN TORAU

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
Torau displays an highly complex system of aspect, tense and modal marking. One of the most complex elements of this system is the marking of imperfective aspect. Imperfective in Torau is marked by a construction employing a choice of two overt imperfective markers and the possible presence of reduplication.

The range of imperfective semantics encoded by this construction varies widely, encompassing progressive, habitual, persistive, and progressive inchoative or inceptive. Which reading is given depends on not only the choice of imperfective marker and presence or absence of reduplication, but on a complex interplay of these factors with the presence of other aspectual, modal or tense marking, and the aspectual semantics of the verb itself.

This paper teases apart each of these highly interdependent factors to determine the independent functional characteristics of each of imperfective marker and of reduplication.

1. THE IMPERFECTIVE CONSTRUCTION IN TORAU.[1] Torau marks imperfective aspect using a construction unique to Northwest Solomonic (NWS). (Ross 1982; Palmer f.c.) In this construction, found in all NWS first-order subgroups except Choiseul, postverbal particles or enclitics index one of the core arguments, typically the nominative subject (ie. the A or S). Across NWS this construction assigns a particular aspectual status to the clause, typically imperfective, or some subtype of imperfective such as continuous, progressive or durative. The morphology carrying this function in the various relevant languages is either identical to that used in adnominal indirect possessor-indexing constructions in that language, or is historically derived from former possessor-indexing morphology.

In Torau these aspect-marking subject-indexing forms are enclitics that have formally diverged from adnominal possessor-indexing forms and have no synchronic identity

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with their cognate adnominal forms. They assign to the clause the aspectual status of imperfective, the semantics of which is discussed in §4 below.

These enclitics are morphologically complex, at odds with claims that clitics must be morphologically simplex (see for example Inklas 1990)). Two distinct forms, *(i)sa-* and *e-*, mark imperfective aspect. They also function morphologically as host for postverbal subject-indexing suffixes. Two paradigms of subject-indexing imperfective markers therefore occur, shown in Tables 1 and 2.

TABLE 1: IMPERFECTIVE ASPECT SUBJECT-INDEXING ENCLITICS WITH
(I)SA-:

	1EXC	1INC	2	3
SG	(i)sa-gu	-	(i)sa-u	(i)sa-la
PL	(i)sa-mani	(i)sa-da	(i)sa-mu	(i)sa-dia

TABLE 2: IMPERFECTIVE ASPECT SUBJECT-INDEXING ENCLITICS WITH *E-*:

	1EXC	1INC	2	3
SG	e-gu	-	e-u	e-la
PL	e-mani	e-da	e-mu	e-dia

The bracketed vowel in Table 1 indicates that the form of this enclitic is either *isa-* or *sa-*. There appears to be no functional distinction between the two, with some speakers tending to use *isa-* more than some others, and an opinion reported by some speakers that the form *isa-* is more correct. In addition, some verbs, such as postural verbs, appear to be more likely to display the *isa-* form, but both forms occur with all verbs and informants accept both and claim no semantic distinction. However, *sa-* occurs with much higher frequency than *isa-* in unelicited data. Henceforth this marker will be presented simply as *sa-*.

The subject-indexing function of the enclitics in Tables 1 and 2 is straightforward: in each paradigm an identical set of suffixes attaches to a host form to index arguments representing the expected person and number categories. The argument indexed is always the nominative subject, that is, the S of an intransitive predicate and the A of a transitive one. What is less transparent is the function of the two indexing hosts *sa-* and *e-*. Both assign an ongoing status to the event expressed by the predicate:

(1)   a.   pita   ma-to   geesi=**sa-la**
              Peter   RL.3SGS-PST   be.big=IPFV-3SGS
              'Peter was big.'

b. pita   ma-to   **soo**≈sobii=**e-la**[2]
   Peter   RL.3SGS-PST RD≈walk=IPFV-3SGS
   'Peter was walking.'

Moreover, reduplication plays a part in imperfective marking. Reduplication in Torau falls into two types: functionally and formally unpredictable derivational reduplication, and regular apparently exceptionless inflectional reduplication with a specific distinct phonological structure (discussed in §3 below). Reduplication with this form occurs in exactly two morphosyntactic contexts: clauses negated by the clitic *ke*, and the imperfective construction with postverbal subject-indexing. However, not all clauses displaying postverbal imperfective marking also display reduplication, as (1)a. shows. Instead, reduplication always cooccurs with the imperfective marker *e-*, while the marker *sa-* typically occurs without it. An examination of unelicted texts reveals a strong association between reduplication, the marker *e-*, and active verbs, and a strong association between a lack of reduplication, the marker *sa-*, and stative verbs. This allows a preliminary hypothesis that:

(2)   a. *sa-* encodes stative imperfective;
       b. *e-* encodes active imperfective; and
       c. reduplication iconically marks active verbs as referring to multiple occurrences of an active event.

This is supported by the behaviour of imperfective marking with verbs whose semantics plausibly allow stative or active readings. In (3)a. *sa-* and an absence of reduplication give the clause a stative reading, causing *mate* to refer to an ongoing state of being dead, while in (3)b. *e-* and reduplication combine to give the clause an active reading, causing the verb to refer to an ongoing inchoative process of dying.

(3)   a. pita   ma-to   mate=**sa-la**
           Peter   RL.3SGS-PST be.dead=IPFV-3SGS
           'Peter was dead.'

       b. pita   ma-to   **maa**≈mate=**e-la**
           Peter   RL.3SGS-PST RD≈be.dead=IPFV-3SGS
           'Peter was dying.'

However, closer examination of the corpus, accompanied by elicitation and the testing of combinations in the field, reveals a much more complex picture: verbs of all semantic types, indeed perhaps all verbs in the language, may occur with each of the combinations expressed in (4) and illustrated in (5).

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[2] Examples conform to the Leipzig Glossing Rules, except for '≈', which indicates that the reduplicant is a clitic (see §3.2).

(4)   a. *e-* with reduplication
           b. *sa-* with no reduplication
           c. *sa-* with reduplication

(5)   a. pita   ma-to   **gee≈geesi=e-la**
               Peter   RL.3SGS-PST RD≈be.big=IPFV-3SGS
               'Peter was becoming big.'

           b. pita   ma-to   sobii=**sa-la**
               Peter   RL.3SGS-PST walk=IPFV-3SGS
               'Peter continued walking.'

           c. pita   ta   **soo≈sobii=sa-la**
               Peter   PRF.3SGS RD≈walk=IPFV-3SGS
               'Peter is always walking.'

The only combination that does not occur in the corpus and is not accepted by speakers for any verb is *e-* without reduplication. Moreover, the reading given to each combination of *sa-*, *e-* and reduplication varies widely, depending on the combination of other aspect, tense and modal markers present in the clause, along with the aspectual semantics of the verb. This raises two key questions relating to the expression of imperfective aspect in Torau:

(6)   a. what governs the choice of *sa-* and *e-*; and
           b. what role does reduplication play?

This paper attempts to answer these questions.

2. ASPECT, MODALITY AND TENSE IN THE TORAU VERB COMPLEX.
To understand the role of reduplication and the two imperfective markers it is necessary to place these in the context of the overall modal, aspectual and tense marking in the language.

Torau, like the other two languages of the Mono-Uruavan subgroup of NWS, Mono Alu and the extinct Uruava, has a verb-final structure in pragmatically unmarked clauses, and displays other right-headed phenomena such as postpositions, while retaining traces of an earlier left-head typology, including several functionally restricted prepositions, and postnominal lexical modifiers.

As in many Oceanic languages the Torau main verb may be accompanied by a suite of grammatical forms including particles and clitics, along with certain adverbs, serialised verbs and incorporated nouns. Many of the grammatical particles express aspectual, modal and tense categories. As in many Oceanic languages, these various forms comprise a poorly defined syntactic unit referred to as the verb complex. The

place of reduplication and imperfective marking in the Torau verb complex, along with the formal and functional characteristics of other aspectual, modal and tense markers that interact with the imperfective, is described in this section.

The overall syntactic structure of the Torau verb complex is as follows:

(7)   TAM/SBJ + (=NEG=) + (=DIRAUX) + (RD≈) + (TA1) + V*

           + (ADV*) + (=IPFV/SBJ) + (=DIR1) + ((=)TA2) + (=DIR2)

Negation is marked by a form that encliticises to the preceding TAM/SBJ particle if one is present, or if not, then procliticises to the following form, whatever that may be. The elements DIRAUX, DIR1 and DIR2 are directional markers that are not relevant to the issues at stake here and are not discussed further. Each other element in (7) marks or interacts with aspect and is outlined in more detail below. The most important of these is TAM/SBJ, a morphologically complex preposed particle that carries subject-indexing, marking for modality or perfect aspect, and past tense marking if present, each of which is discussed separately in §2.1-2.3 below.

2.1 MODALITY. All finite clauses in Torau have some modal status, either realis or irrealis, regardless of whether overt modal marking is present. Modality is marked overtly by preverbal particles that also index the nominative subject, shown in Tables 3 and 4.

TABLE 3: REALIS PREVERBAL SUBJECT-INDEXING PARTICLES:

	1EXC	1INC	2	3
SG	ma-gu	-	mu	ma
PL	mani	ma-da		di

TABLE 4: IRREALIS PREVERBAL SUBJECT-INDEXING PARTICLES:[3]

	1EXC	1INC	2	3
SG	kae	-	pa	pae
PL	mani-pa	da-pa		di-pa

The Torau system represents a functionally neat exemplar of the prototypical modal distinction between realis (as specific real events) and irrealis (as events that are not specific real events). Realis clauses refer to events located in the past, ranging from the distant past (as in (8)a.) to the very recent past (in (8)b.), and to those located at the moment of speaking (as in (8)c.). Clauses marked with the realis series and no

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[3] The 1EXCSG and 3SG portmanteau forms often occur with the phonologically reduced forms *ka* and *pe* respectively.

other TAM markers or temporal adverbials depend on discourse context to disambiguate past events from present events.

(8)   a.   elai   **ma**=lama   kaisi=a   pidani
              DEM   RL.3SGS=come   take=3SGO   land
              'She came and bought the land [150 years before].' TH073

       b.   elai   buini   **ma**-da-to   kaa≈kadeki=a=e-da
              DEM   Buin   RL-1INCS-PST   RD≈tell.story=3SGO=IPFV-1INCS
              'We were talking about Buin [just a moment ago].' WWII128

       c.   itola=i   **ma**-da   agisi=**to**
              there=LOC   RL-1INCS   be.near-PRS
              'We are almost there.' OL083

The irrealis clauses refer to events that are not specific real events because they are located in the future, and have therefore not happened and are not real (as in (9)a. clause 2); because they are hypothetical ((9)b.); or because they are past counterfactuals ((9)c.-d.); as well as events that are not specific real events because they are habitual, either present ((9)a. clause 1) or past ((9)e.):

(9)   a.   ine   **pa**   waa≈wa=in-au=e-u   "**pa**   kai=au"
              youSG   2S.IRR   RD≈say=APPL-1SGO=IPFV-2SGS   2S.IRR   carry=1SGO
              '…you're always saying to me "you carry me".' TS202-202A

       b.   atee   ta-**pae**   dako=a   elai   **pe**   rausu
              water   PRF-3SGS.IRR   encounter=3SGO   that   3SGS.IRR   be.finished
              'If water touches him he'll be finished.' TS180-180A

       c.   ela   da-**pa**=ka   ua=ai,   elai   itoio   da-pa   tuu=isa-da
              that   1INCS-IRR=NEG   say=3SGO   that   there   1INCS-IRR   stay=IPFV-1INCS
              If we didn't do that [fight], we would still be there.' TH061

       d.   baina   **pe**=ka   a-arap=ia
              woman   3SGS.IRR=NEG   CS-go.across=3SGO
              'The woman didn't carry him across.' TS200B

       e.   nimani   lagoo   asa   omano   atunu   iala
              weEXC   subsequently   only   like   smite   fish
              'After that only to catch fish

              ta-mani-**pa**   lao-ou=ma...
              PRF-1EXCS-IRR   go-descend=hither
              would we come down…

mani-**pa**   papagi,   mani-**pa**   lao-sae   abani
1EXCS-IRR   search   1EXCS-IRR   go-ascend   return.
We would search and we would go back up.' WWII143-146

Irrealis clauses may display the present tense marker *to*, indicating that the event is about to happen immediately:

(10)   a.   da-**pa**=lo   matate=**to**
              1INCS-IRR=go   emerge-PRS
              'We are about to arrive.' OL085A

        b.   elai   **kae**   dopisa=in-a=la=**to**   atee
              that   1SGS.IRR   release=APPL-3SGO=thither=PRS   water
              'I'm releasing the water now.' MM049

Realis is the default modal status. In most morphosyntactic contexts it is not overtly marked, and the realis series given in Table 3 does not occur. Overt realis marking only occurs when it is required to provide a morphosyntactic locus for other marking, in the form of preverbal subject-indexing, or the past tense marker *–to*. Both these features are expressed by bound (or portmanteau) forms requiring a preverbal host. The perfect aspect marker *ta* (discussed in §2.2 below) also functions as the morphosyntactic locus for subject-indexing and past marking, so overt realis marking is unnecessary when perfect marking is present and they do not cooccur. In the absence of perfect marking, overt realis marking occurs when the past tense marker is present as it requires a host. In the absence of perfect and past marking, overt realis marking occurs when no postverbal subject-indexing is present and realis marking is therefore the only possible locus for subject-indexing. When postverbal subject-indexing is present, preverbal subject-indexing is redundant and it and the realis marker hosting do not occur (unless required to host past marking). In a nutshell, overt realis marking is ungrammatical:

(11)   a.   in clauses carrying perfect marking; or
        b.   in clauses carrying postverbal subject-indexing, unless the past marker is present.

Overt irrealis marking may be omitted in imperative and hortative clauses.

2.2 PERFECT ASPECT. Perfect aspect in Torau is marked using the preverbal particle *ta*. As with modal marking, this also functions as host for preverbal subject-indexing. This particle carries a set of subject-indexing suffixes that partially correspond to those occurring with the realis marker in Table 3. In irrealis clauses these are further suffixed with the irrealis marker *pa* also seen in Table 4, with the exception of the 1SG and 3SG categories, where the entire portmanteau forms

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employed in non-perfect irrealis are suffixed to *ta*. The perfect irrealis paradigm is given in Table 6. The paradigm unmarked for irrealis is by default realis and is shown in Table 5.

TABLE 5: PERFECT PREVERBAL SUBJECT-INDEXING PARTICLES (DEFAULT REALIS):

	1EXC	1INC	2	3
SG	ta-gu	-	ta-u	ta
PL	ta-mani	ta-da	ta-mu	ta-di

TABLE 6: PERFECT PREVERBAL IRREALIS SUBJECT-INDEXING PARTICLES:

	1EXC	1INC	2	3
SG	ta-kae	-	ta-u-pa	ta-pae
PL	ta-mani-pa	ta-da-pa	ta-mu-pa	ta-di-pa

Perfect aspect marks the clause as expressing a prior event with continuing relevance, and again represents a neat exemplar of the semantics of perfect aspect.

In realis clauses perfect aspect marks the event as occurring in the recent past with continuing relevance in the present, as in (12)a., or occurring in an earlier time with continuing relevance at some point in the past already established in the discourse, as in (12)b. In (12)a. the speaker is suffering the effects of having to wade across a river rather than be carried by the addressee. The relevance of the past event is therefore felt at the moment of speaking (hence the interpretation of perfect as a marker of recent past). In (12)b. the narrative has established an earlier time (in this case WWII) as the temporal locus of the events. Clause 1 therefore refers to an event that occurred and then had continuing relevance as the context for the past event expressed by the subsequent clause.

(12) a. **ta**-u   uara=in-au...
          PRF-2SGS be.unwilling=APPL-1SGO
          'You have been lazy towards me…

          ta-u=ka   kaa≈kai=au
          PRF-2SGS=NEG   RD≈carry=1SGO
          You haven't carried me.' TS205-212

    b. yamamoto **ta**   lauma
       Yamamoto PRF.3SGS come
       'Yamamoto had came

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elai   itaa buini di=lama   atun=a
that   here Buin   RL.3PLS=come smite=3SGO
[and] they [Americans] came and killed him here at Buin.' WWII115

These readings may be reinforced by the presence of overt tense marking. The clause in (13)a. is marked for present tense, indicating that the event is occurring at the moment of speaking, but is also marked for perfect aspect, indicating that it occurred prior to that moment. These combine to give the reading that the event is the continuation in the present of an event already occurring prior to the moment of speaking. In (13)b. overt past tense marking indicates that the event had occurred prior to a past location in time already established in the discourse.

(13) a. kuresu (**ta**)   u≈uaka=e-la=to
         Kuresu   PRF.3SGS RD≈work=IPFV-3SGS=PRES
         'Kuresu is (still) working.'

      b. dosiro itaa **ta**-di-**to**   tuu=sa-dia.
         Dosiro here PRF-RL.3PLS-PST sit=IPFV-3PLS
         'The Dosiro were already here.' TH0019

In irrealis clauses perfect aspect marks the clause as referring to a future or hypothetical event that will have continuing relevance at some time in the future, or to habitual events prior to an established time with continuing relevance at that time. In (14)a. perfect marking indicates that clauses 1 and 2 express events which have not yet occurred, but which if do occur will have continuing relevance as the context for the event expressed by the subsequent clause 3. In (14)b. the clause refers to habitual events located in the past that were prior to and had continuing relevance for subsequent past events expressed by the next clause as the context which would give rise to those subsequent events.

(14) a. itaa amata=i   **ta**-mu-**pa**   tuu=sa-mu
         here village=LOC PRF-2PLS-IRR   sit=IPFV-2PLS
         'If you stay here in the village,

         siapani   **ta**-mani-**pa**=lo   bomu=ai
         Japan   PRF-1EXCS-IRR=go   bomb=3SGO
         if we bomb the Japanese

         nimu   mani-pa   atunu   ari-atapo-i=mu
         youPL   1EXCS-IRR   smite   RECIP-be.together-TR=2PLO
         we will kill you all together.' WWII137-139

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b. sikuna **ta**-di-**pa**   laa≈lao=e-dia=ma   boni=ai
   ship   PRF-3PLS-IRR   RD≈go=IPFV-3PLS=hither night=LOC
   'Ships would go in the night.

   ine   pa   bola=sa-u
   youSG   2SGS.IRR   hear=IPFV-2SGS
   You would hear [them].' WWII187-188

This coding of events as hypothetical, habitual or future, but with continuing relevance as the context for subsequent events, gives clauses marked with perfect and irrealis a conditional reading. This is the only way the conditional function is expressed in Torau, the language lacking any other construction or formal marker to express conditionality.

2.3 PAST TENSE AND DEFINITE IRREALIS MODALITY. The preverbal modal/aspectual subject-indexing particle may also display a suffix –*to*. This is a bound form which requires a preverbal particle as host. The marker has two distinct functions that are on the face of it difficult to reconcile semantically, one occurring in realis clauses, the other in irrealis clauses.

In realis clauses -*to* locates the referent event wholly in the past, as in (15)a., in contrast with events located in the past that may or may not still be occurring, as in (15)b.

(15)   a. italai   di-**to**   tuu=sa-dia
          there   RL.3PLS-PST   sit=IPFV-3PLS
          'They were sitting there (but no longer are).' TS103B

       b. italai   tuu=sa-dia
          there   sit=IPFV-3PLS
          'They were sitting there (and may or not still be).'

In addition to simply locating events in the past, -*to* gives an additional durative aspectual sense to the clause. With stative or postural verbs it indicates that the event occurred over a period of time in the past. In (15)a. the clause is marked as imperfective, so refers to an ongoing event in any case. In (16)a., however, no imperfective marking is present. Here -*to* gives the clause a reading in which the event occurred over a longer period in the past than the corresponding clause without -*to* in (16)b. This gives (16)a. the durative reading of 'live' as opposed to 'sit' in (16)b.:

(16)   a. italai   di-**to**   tuu
          there   RL.3PLS-PST   sit
          'They used to live there (but no longer do).' TS103B

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b. italai   di   tuu
    there   RL.3SGS sit
    'They were there/were sitting there (and may or may not still be).'

In realis clauses expressing punctual events *-to* indicates that the action occurred in the past and is no longer occurring, but with an additional durative sense giving the clause a habitual reading, as in (17)a. Without *-to* the clause lacks the habitual reading:

(17) a. tolou di-**to**   an-idia
          eel   RL.3PLS-PST   eat=3PLO
          'They used to eat eels (but no longer do).'

      b. tolou   di   an-idia
          eel   RL.3PLS   eat=3PLO
          'They ate eels (and may or may not still do).'

In realis clauses expressing punctual events where a temporal adverb precluding a habitual reading is also present, *-to* again indicates that the event occurred in the past and is no longer occurring, but here *-to* gives an iterative rather than strictly durative reading, indicating that the event occurred on more than one occasion, as in (18)a. Without *-to* the clause indicates that the event occurred on one occasion only ((18)b.):

(18) a. aniani   lagoo   di-**to**   tere-dia
          food   subsequently   3PLS-PST give=3PLO
          'Later they gave food (on several occasions).' WWII107

      b. aniani   lagoo   di   tere-dia
          food   subsequently 3PLS give=3PLO
          'Later they gave food (on one occasion).'

However, *-to* cannot be interpreted as simply encoding past habitual, as it occurs in contexts in which the event cannot be habitual. The durative rather than habitual reading of realis with *-to* can be seen in (19), where the blood is flowing on a single occasion, but over an extended period of time:

(19)   asi-na   elai   masi-na
          younger.sibling-3SGP that   blood-3SGP
          'His little brother's blood

          ma-**to**   a≈ale   geesi=e-la
          RL.3SGS-PST RD≈flow be.big=IPFV-3SGS
          was flowing strongly.' TS045A

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In negative realis clauses *-to* gives a slightly different reading. It again locates the event, or rather the non-occurrence of the event, wholly in the past, but it further indicates that the failure of the event to occur was contrary to expectations:

(20)   elai   sikuna   di-**to**=ka   laa≈lauma.
         DEM   ship   RL.3PLS-PST=NEG   RD=come
         'The ships didn't come (after all).' WWII050

Past marking with *-to* is not obligatory in clauses expressing events prior to the moment of speaking, as realis clauses may be interpreted as referring to past or present events depending on context. Instead, *-to* is used when the speaker wishes to make it clear that the events occurred wholly in the past:

In irrealis clauses *-to* has a somewhat different semantic effect. Instead of locating the event in the past, it combines with irrealis marking to give a definite irrealis reading. In this context it has a modal function indicating that the speaker regards the event as definitely going to occur, or that the subject is under an obligation to carry out the event. In clauses referring to future events it may indicate that the speaker regards the subject as under an obligation to carry out the event:

(21)   inau   ipiu=ai   kae-**to**   u≈uaka=e-gu
         I   Ipiu-LOC   1SGS.IRR-DEFIRR   RD≈work=IPFV-1SGS
         'I have to continue working for Ipiu.'

With second person subjects this may give the clause imperative illocutionary force, indicating that the speaker regards the addressee as obliged to carry out the event, as in (22) lines 1 and 3.

(22)   pa-**to**   lukautu   atoro=in-a=e-la...
         3SGS.IRR-DEFIRR   look.after be.good=APPL-3SGO=SBJ-3SGS
         'You must look after him well…

         ta-pae-**to**   ua=in-o   "e   alo=in-au"
         PRF-3SGS.IRR-DEFIRR   say=APPL-2SGO   oh   do=APPL-1SGO
         When he says to you "do this for me",

         pa-**to**   alo=in-a
         2S.IRR-DEFIRR   do=APPL-3SGO
         You must do it for him.' TS173-177

Alternative, when combined with perfective aspect in future events, *-to* indicates that speaker believes the event will definitely occur, as in (22) line 2. Such clauses have the reading 'when' the event occurs, as in (23)a., in contrast with corresponding

clauses without *-to*, which have the less definite reading of 'if' the event occurs, as in (23)b.:

(23) a. apo-gu   **ta**-pae-**to**   lao, inau kae   lao ba
          wantok-1SGP PRF-3SGS.IRR-DEFIRR go   I   1SGS.IRR go   also
          'When my friend goes I'll go too.'

      b. apo-gu   **ta**-pae   lao, inau kae   lao ba
          wantok-1SGP PRF-3SGS.IRR   go   I   1SGS.IRR go   also
          'If my friend goes I'll go too.'

When referring to habitual events *-to* again indicates that the subject is obliged to carry out the action, as in (24) line 1, or that the subject has a right to carry out the action, as in (24) line 3:

(24)   itaa nida sa-da   abani da-pa-**to**   an=a
          here weINC POSS-1INCP own   1INCS-IRR-DEFIRR eat=3SGO
          'Here we have to eat our own [food].

          anua   ta-di-pa-**to**   peko=ia
          people PRF-3PLS-IRR-DEFIRR like=3SGO
          When other people want it,

          di-pa-**to**=lama   kais=ia
          3PLS-IRR-DEFIRR=come take=3SGO
          they can come and take it.' ST030-031A

It is not immediately apparent how the two broad realis and irrealis sets of functions of *-to* are to be reconciled. However, given that *-to* in realis clauses and *-to* in irrealis clauses are formally identical; are in complementary distribution; and have identical morphosyntactic behaviour aside from their attachment to realis and irrealis particles respectively, it may be hypothesised that they are morphological identical, and that their functions are to be reconciled on further investigation.

2.4 PREVERBAL TENSE/ASPECT PARTICLES. A preverbal position (TA1 in (7)) exists within the verb complex for syntactically and phonologically independent particles expressing various aspectual or temporal categories. These are not serialised verbs as they cannot occur without a following main verb. They include:

(25) a. *boo*   'previously'
      b. *mala*   'to a small extent (a little bit, for a little while)'
      c. *aru*   'always'
      d. *ago*   'just now (just a moment ago, in just a moment)'

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This position is confined to these particles, and clause level temporal adverbs and adjuncts may not occur here.

2.5 POSTVERBAL ADVERBS. Several postverbal adverb positions (ADV* in (7)) exist within the verb complex. These may be occupied by a range of adverbs that only occur within the verb complex in one or other of these positions and express various manner and aspectual categories. These are not serialised verbs as they cannot occur without a preceding main verb. They include:

(26) a. *sakesake*   'quickly'
      b. *bebela ~ bela*   'quickly, easily'
      c. *atikiai*   'slowly, softly'
      d. *lee*   'immediately'
      e. *ai*   'initially'
      f. *uua ~ uuai*   'in that direction'
      g. *taolo ~ taon-*   'again'

2.6 POSTVERBAL TENSE/ASPECT. A syntactic position close to the right margin of the verb complex (TA2 in (7)) may be occupied by one of two tense/aspect markers:

(27) a. *=to*   'present tense'
      b. *gito*   'completive aspect'

The form *to* is an enclitic marking present tense (not to be confused with the past tense/definite irrealis suffix *-to* discussed in §2.3, which occurs in a different location in the verb complex). However, present *to* is not obligatory in clauses expressing events occurring at the moment of speaking, as realis clauses may be interpreted as referring to past or present events depending on context. Instead, *to* is used when the speaker wishes to make it clear that the events are occurring right at the moment of speaking:

(28)   na   tabi... ta   taa≈tanisi=e-la=ma=**to**
        SG   child   PRF.3SGS   RD≈cry=IPFV-3SGS=hither= PRS
        'A child… is coming crying (right now).' SUG037-037A

In addition marking present tense, *to* carries an evidential component, in that a clause may only be marked with *to* if the speaker can actually see or hear the event occurring as they speak:

(29) a. laa≈lauma=e-dia=**to**
         RD≈come=IPFV-3PLS=PRS
         'They are coming now.' (I can see them.)

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b. e≈era=e-dia=**to**
      RD≈sing=IPFV-3PLS=PRS
      'They are singing now.' (I can hear them.)

Although typically occurring in realis clauses, *to* may cooccur with irrealis marking to indicates that the event is about to happen immediately, as discussed above and exemplified in (10), and that the speaker can hear or see that it is about to happen.

The form *gito* occurs as an independent particle in the same syntactic position as present *to*, and marks the event as complete at the time referred to:

(30) a. balusu   ma   lao   **gito**
         plane   RL.3SGS   go   COMPL
         'The plane has already gone.'

      b. balusu   ta   lao   **gito**
         plane   PRF.3SGS go   COMPL
         'The plane had already gone.'

3 REDUPLICATION

3.1 PHONOLOGICAL CHARACTERISTICS OF TORAU INFLECTIONAL REDUPLICATION. Derivational reduplication in Torau is phonologically unpredictable, involving either a CV reduplicant copying an initial syllable, or disyllabic copying of an entire initial foot. In contrast, inflectional reduplication is entirely regular. Only the initial mora of the base is copied, accompanied by any preceding onset consonant present. This copied single mora then lengthens to generate a complete bimoraic foot with the melody of the copied vowel. This occurs even when the initial syllable of the base is bimoraic, as shown in (29)a. and in clause 2 of (12)a. above, where only the melody of the first V of the diphthong is copied but then lengthens. However, where the copied mora of the base is not preceded by an onset consonant and the reduplicant vowel is therefore immediately adjacent to the base vowel with its identical melody, lengthening does not occur, as in (29)b. above and (31)a. below. A more detailed discussion of the phonology of Torau reduplication is beyond the scope of this paper.

3.2 MORPHOSYNTACTIC CHARACTERISTICS OF INFLECTIONAL REDUPLICATION. The inflectional reduplicant is not a prefix but a proclitic. Evidence from the presence of preverbal aspectual particles (discussed in §2.4 above) shows reduplication applying to the first syntactic word following the preverbal TAM/SBJ particle. This may mean that the verb stem itself provides the base for reduplication, as in (31)a. and (32)a. However, if one of the preverbal aspectual particles is present immediately following the modal/subject particle, it is that which

provides the reduplicative base, as in (31)b. and (32)b. In this context reduplication of the stem itself is ungrammatical, as in (31)c. and (32)c.

(31)   a.   pa=ka   **o**≈ose
             2S.IRR=NEG   RD≈paddle
             'Don't paddle.'

       b.   pa=ka   **maa**≈mala   ose
             2S.IRR=NEG   RD≈a.little   paddle
             'Don't paddle for a little while.'

       c.   *pa=ka **mala o**≈ose

(32)   a.   ta   **o**≈ose=e-la=to
             PRF.3SGS   RD≈paddle=IPFV-3SGS=PRS
             'He is paddling.'

       b.   ta   **boo**≈boo   ose=e-la=to
             PRF.3SGS   RD≈previously   paddle=IPFV-3SGS=PRS
             'He has already been paddling.'

       c.   *ta **boo o**≈ose=e-la=to

Inflectional reduplication is therefore associated with a particular syntactic position in the clause, rather than a morphological position relating to the verb stem, and is therefore a clitic.

I propose that the symbol '≈' be used to indicate that a reduplicant is a clitic, corresponding to the conventional use of '~' to represent affixed reduplicant concatenation, in parallel with the conventional use of '=' to represent non-reduplicant clitic concatenation corresponding to '-' for affixes.

3.3   FUNCTIONS OF INFLECTIONAL REDUPLICATION. Inflectional reduplication is confined to exactly three morphosyntactic environments, occurring in:

(33)   a.   all clauses displaying the negation marker *ke* on a preverbal TAM/SBJ
             particle (as in (31));
       b.   all clauses displaying the imperfective marker *e-* (as in (32));
       c.   some clauses displaying the imperfective marker *sa-* (as in (5)c. above).

4   FUNCTIONAL CHARACTERISTICS OF THE TWO IMPERFECTIVE MARKERS AND REDUPLICATION. The precise aspectual reading of each individual clause with imperfective aspect marking depends on a range of factors

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including which imperfective marker is present, whether or not reduplication is present, the aspectual semantics of the verb itself, and the presence of any other modal, aspectual or tense markers. This section teases apart these factors in an effort to determine the aspectual function of each off the two imperfective markers and the functional role of reduplication in the imperfective construction.

To identify the semantic effects of each combination of imperfective marker and reduplication, each has been investigated in conjunction with verbs with a range of diverse aspectual semantics, and with a set of combinations of additional modal, aspectual and tense combinations. The verbs investigated, with their aspectual semantic type, are:

(34) a. *geesi*   'be big'   (stative)
      b. *beesu*   'be hungry'   (experiencer)
      c. *peko*   'like'   (psych)
      d. *tegese*   'stand'   (postural)
      e. *sobii*   'walk'   (activity)
      f. *paru*   'build'   (accomplishment)
      g. *kaisi*   'take, get'   (achievement)

Imperfective aspect was investigated in conjunction with the following combinations of other modal, aspectual and tense markers:

(35) a. irrealis
      b. irrealis plus perfect aspect
      c. irrealis plus definite irrealis
      d. realis
      e. realis plus perfect aspect
      f. realis plus past tense
      g. realis plus present tense

This is not an exhaustive set of possible combinations, but is intended to provide a sufficient range to investigate the interplay of imperfective aspect with each of realis and irrealis modality, perfect aspect, and past and present tense, and to some extent their interplay with each other, along with their interaction with verbal aspectual semantics.

The semantics of each combination in (34) and (35) in clauses displaying imperfective marking are presented in Tables 7-13. Each TAM combination investigated is represented by a column in the tables.

The rightmost column in each table represents the semantics identified here as common across each row. This therefore represents the aspectual semantics of each imperfective marker/reduplication combination for each verb, once the common

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effects of each other TAM combination represented by each column has been stripped away. For example, futurity in the IRR column may be attributed to the presence of irrealis marking and may be stripped away. Conditionality in the IRR+PRF column may be attributed to the combination of irrealis and perfect marking, and obligation in the IRR+DEFIRR column to the presence of definite irrealis marking, and so on. The residual semantics in each cell that is shared with other cells in the same row is assumed to be the semantics of the imperfective marker/reduplication combination represented by that row.

An asterisk indicates that the combination of imperfective marking, reduplication, and other TAM marking represented by a particular cell is unacceptable to speakers.

4.1 IMPERFECTIVE ASPECT WITH STATIVE, EXPERIENCER, PSYCH AND POSTURAL VERBS. The stative, experiencer, psych and postural verbs investigated broadly pattern in the same way in the aspectual semantic effects of the various TAM combinations investigated here, as the findings in Tables 7-10 show.

TABLE 7: *GEESI* 'BE BIG' (STATIVE)

	IRR	IRR + PRF	IRR + DEFIRR	RL	RL + PRF	RL + PST	RL + PRS	
sa-	will be big	if continue to be big	must be big	when were big	*	were big	are big	PRG
sa- +RD	*	*	*	are always big	are always big	*	*	HAB
e- +RD	will be becoming big	if are becoming big	must be becoming big	*	*	were becoming big	are becoming big	PRG INCH

TABLE 8: *BEESU* 'BE HUNGRY' (EXPERIENCER)

	IRR	IRR + PRF	IRR + DEFIRR	RL	RL + PRF	RL + PST	RL + PRS	
sa-	will be hungry	if are hungry	must be hungry	when were hungry	*	were hungry	are hungry	PRG
sa- +RD	*	*	*	are always hungry	are always hungry	*	*	HAB
e- +RD	will always be hungry	if are becoming hungry	must be becoming hungry	*	*	were becoming hungry	are hungry	HAB/ PRG INCH/ PRG

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TABLE 9: *PEKO* 'LIKE' (PSYCH)

	IRR	IRR + PRF	IRR + DEFIRR	RL	RL + PRF	RL + PST	RL + PRS	
sa-	will like	if will like (don't now)	must always like	when liked	*	used to like	like	PRG
sa- +RD	*	*	*	always like	always like	*	*	HAB
e- +RD	will always like	if are starting to like	must be starting to like	*	*	were starting to like	are starting to like	HAB/ PRG INCH

TABLE 10: *TEGESE* 'STAND' (POSTURAL)

	IRR	IRR + PRF	IRR + DEFIRR	RL	RL + PRF	RL + PST	RL + PRS	
sa-	will be standing	if are standing	must be standing	when were standing	*	were standing	are standing	PRG
sa- +RD	(will be starting to leave)	*	*	(are starting to leave)	are always standing	*	*	HAB
e- +RD	(will be starting to leave)	if are starting to stand	(must be starting to leave)	*	*	were starting to stand	are starting to stand	PRG INCH

On the basis of their similar patterning, the stative, experiencer, psych and postural verbs investigated may be treated as 'stative' type verbs in relation to their aspectual behaviour.

For each verb of this type investigated, the imperfective marking combination of the form *sa-* and a lack of reduplication gives a simple progressive reading, indicating that the state, experienced sensation, psychological process, or posture is ongoing.

For combinations with reduplication the picture is more complex. *Sa-* only occurs with reduplication in realis clauses that lack overt tense marking (past or present). *E-* only occurs with reduplication, but does not occur in tenseless realis, occurring only in irrealis, or in realis with tense marking.

The combination of *sa-* and reduplication always gives a habitual reading with these verbs. The postural verb *tegese* 'stand' has a lexicalised non-literal alternative meaning 'start to leave' that emerges in certain TAM combinations, the details of which have not been fully investigated at this stage. This is semantically distinct from its literal postural meaning, and instances in Table 10 involving the non-literal meaning have been bracketed. When this reading emerges in clauses with *tegese*, *sa-*

and reduplication, the reading appears not to represent habitual aspect. Aside from this, *sa-* and reduplication always expresses habitual aspect with 'stative' type verbs, and this appears to be the basic semantic effect of this combination with verbs of this type.

The combination of *e-* and reduplication generally gives a progressive inchoative reading, indicating that a process of change is underway in which the state, experience, psychological process or posture is developing or intensifying. Aside from the non-literal meaning of *tegese*, there are two exceptions to this generalisation. In one, the combination gives a habitual reading to experiencer and psych verbs in irrealis clauses that lack other marking such as perfect or definite irrealis.[4] The other exception is the apparent simple progressive reading for the combination of *e-* and reduplication with realis and present marking on the verb *beesu*. This last apparent anomaly requires further investigation.

In summary, with 'stative' type verbs the imperfective marking and reduplication combinations have the following aspectual effects:

(36)   a. *sa-* with no reduplication: progressive aspect;
       b. *sa-* with reduplication: habitual aspect;
       c. *e-* with reduplication: progressive inchoative aspect, habitual aspect (experiencer/psych verbs in some TAM contexts), progressive aspect (in one TAM context with one verb).

4.2 IMPERFECTIVE ASPECT WITH ACTIVITY, ACCOMPLISHMENT AND ACHIEVEMENT VERBS. The activity, accomplishment and achievement verbs investigated also broadly pattern alike in their aspectual semantics under the effect of the various TAM combinations investigated here, as shown in Tables 11-13.

TABLE 11: *SOBII* 'WALK' (ACTIVITY)

	IRR	IRR + PRF	IRR + DEFIRR	RL	RL + PRF	RL + PST	RL + PRS	
sa-	will continue walking	if continue walking	must continue walking	*	*	were continuing to walk	are continuing to walk	PERSIST
sa- +RD	(some will walk ahead)	*	*	are always walking	are always walking	*	*	HAB
e- +RD	will be walking	if are walking	must start walking	*	*	were walking	are walking	PRG/ PRG INCEPT

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[4] This shared behaviour may indicate that verbs such as *beesu* 'be hungry' and *peko* 'like' in fact have shared experiencer semantics as expressions of physical or psychological experience.

TABLE 12: *PARU* 'BUILD' (ACCOMPLISHMENT)

	IRR	IRR + PRF	IRR + DEFIRR	RL	RL + PRF	RL + PST	RL + PRS	
sa-	will continue building	if continue building	must continue building	*	*	were continuing to build	are continuing to build	PERSIST
sa- +RD	(some will start building)	*	*	are building	are always building	*	*	PRG/ HAB
e- +RD	will be building	if are building	must always be building	*	*	were building	are starting to build	PRG/ PRG INCEPT

TABLE 13: *KAISI* 'TAKE, GET' (ACHIEVEMENT)

	IRR	IRR + PRF	IRR + DEFIRR	RL	RL + PRF	RL + PST	RL + PRS	
sa-	will continue getting	if continue getting	must continue getting	*	*	were continuing to get	are continuing to get	PERSIST
sa- +RD	*	*	*	are getting	are always getting	*	*	PRG/ HAB
e- +RD	will be getting	if are getting	must start getting	*	*	were getting	are starting to get	PRG/ PRG INCEPT

On the basis of their similar patterning, the activity, accomplishment and achievement verbs investigated may be treated as 'active' type verbs in relation to their aspectual behaviour, although there are some differences on the basis of telicity.

For each 'active' type verb investigated, the imperfective marking combination of the form *sa-* and a lack of reduplication gives a persistive reading. This indicates that the event occurs as a continuation of a prior occurrence of that same event.

As with 'stative' type verbs, with 'active' types in imperfective combinations with reduplication the picture is more complex. As with 'stative' types, *sa-* with reduplication is largely confined to realis clauses lacking overt tense marking, and *e-* only occurs with reduplication in irrealis clauses or in realis clauses with tense marking.

However, with two of the three 'active' type verbs investigated, *sa-* occurs with reduplication in one other context investigated: irrealis without perfect or definite irrealis. This is the only TAM context investigated where reduplication can occur with either *sa-* or *e-*, with differing readings. In this context *sa-* with reduplication has several additional semantic elements, which are shared by both verbs. This

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combination in this context indicates that the event will begin to be carried out (thus akin to inceptive aspect), but that only a subset of all ultimate subjects will initially participate. A journey or the building of a structure is planned. This process will begin. Some of those who will be involved will set off on foot first, or begin work before the others. The others will follow later or join in later in the construction. It's not clear at this stage why the combination of *sa-* and reduplication only in otherwise unmarked irrealis should prompt this reading, and why it is confined to these two verbs out of those investigated. The distribution suggests that the reading is confined to 'active' type verbs, and within that only to verbs expressing inherently durative events (activity and accomplishment verbs) as opposed to those expressing non-durative events (achievement verbs). Beyond those observations, this issue requires further investigation.

Aside from the occurrence of *sa-* and reduplication in otherwise unmarked irrealis, which have been bracketed in Tables 11 and 12, *sa-* with reduplication is confined to tenseless realis, as with 'stative' type verbs. And as with 'stative' types, this combination with realis and perfect aspect gives a habitual reading. However, unlike with 'stative' types, this combination with realis but no perfect marking does not necessarily give a habitual reading. Instead, it gives a simple progressive reading for *paru* 'build' and *kaisi* 'take, get', while carrying the habitual sense with *sobii* 'walk'. This represents a generalisation that cross-cuts the 'stative'/'active' type division. Being accomplishment and achievement verbs, *paru* and *kaisi* express telic events, while being an activity verb, *sobii* expresses an atelic event. In this respect *sobii* resembles the 'stative' types, all of which express atelic events. Imperfective marking with *sa-* and reduplication is therefore sensitive to telicity. This combination with otherwise TAM-unmarked realis gives a habitual reading with atelic verbs and a simple progressive reading with telic verbs, regardless of 'stative'/'active' typing.

The combination of *e-* and reduplication with 'active' type verbs gives a simple progressive reading in most contexts. However, two contexts show different aspectual semantics. With the combination of irrealis and definite irrealis marking, *e-* and reduplication have a progressive inceptive reading for *sobii* 'walk' and *kaisi* 'take, get', and a habitual reading for *paru* 'build'. With the combination of realis and present tense marking, *e-* and reduplication give a progressive inceptive reading for the two telic verbs *paru* 'build' and *kaisi* 'take, get' (but a simple progressive reading for *sobii* 'walk').

In summary, with 'active' type verbs the imperfective marking and reduplication combinations have the following aspectual effects:

(37) a. *sa-* with no reduplication: persistive aspect;
      b. *sa-* with reduplication: habitual aspect, progressive aspect (telic
                                            verbs in otherwise unmarked realis);
      c. *e-* with reduplication: progressive aspect, progressive inceptive
                                            aspect (in some TAM contexts).

4.3 SUMMARY OF IMPERFECTIVE FORM AND REDUPLICATION DISTRIBUTION. Conflating the findings presented in (36) and (37), the aspectual functional characteristics of each combination of imperfective marker and reduplication may be summaries as follows:

(38) a. *sa-* with no reduplication: progressive   aspect   ('stative'   verbs),
                                            persistive aspect ('active' verbs);
      b. *sa-* with reduplication: habitual aspect, progressive aspect (telic
                                            verbs in otherwise unmarked realis);
      c. *e-* with reduplication: progressive inchoative/inceptive aspect,
                                            progressive aspect ('active' verbs in most
                                            TAM   contexts),   habitual   aspect
                                            (experiencer/psych verbs in some TAM
                                            contexts).

These findings allow the attempt to tease apart the aspectual functional characteristics of each imperfective marker and of reduplication presented in §4.4 and §4.5.

4.4   IMPERFECTIVE   FUNCTIONAL   CHARACTERISTICS   OF REDUPLICATION. The distribution of reduplication shown in (38) is summarised in Table 14.:

TABLE 14: ASPECTUAL FUNCTIONAL DISTRIBUTION OF REDUPLICATION IN IMPERFECTIVE ASPECT

No reduplication	progressive aspect ('stative' verbs), persistive aspect (active verbs)
Reduplication	habitual aspect; progressive inchoative/inceptive aspect; progressive aspect ('active' verbs)

Broadly speaking (38) and Table 14 reveal that 'active' type verbs require reduplication to encode simple progressive aspect (along with most other subtypes of imperfective), while stative verbs do not require reduplication to encode simple progressive aspect. This means that in terms of reduplication, simple progressive is the unmarked aspectual status for 'stative' verbs, but a marked aspectual status for 'active' verbs. The marked and unmarked aspectual status of each overall verb type is shown in Table 15.

**TABLE 15: REDUPLICATIVE MARKED AND UNMARKED ASPECTUAL STATUS
BY VERB TYPE**

	unmarked	marked
'stative' type verbs	simple progressive	all other imperfective subtypes
'active' type verbs	persistive	all other imperfective subtypes including simple progressive

**4.5 FUNCTIONAL CHARACTERISTICS OF IMPERFECTIVE MARKER
CHOICE.** The markers *sa-* and *e-* both mark imperfective aspect. The findings
summarised in (38) suggest no generalisation about distinct functional characteristics
of each marker: each occurs with all subtypes of imperfective represented in (38),
other than persistive. However, the key to interpreting the distribution of the two
markers lies in the superficially anomalous occurrence of *sa-* with reduplication in
realis clauses that lack overt tense marking. Once that is taken into account, two
observations are possible.

E- does not occur in clauses with unmarked modal and tense status. As discussed in
§2.1, realis is the unmarked and default modal status. While all finite clauses in Torau
have some modal status, they have no status involving tense unless tense is overtly
marked (see §2.3 and §2.6). This means that in the absence of overt past or present
tense marking, the event expressed by a realis clause is located in time on the basis of
temporal adverbs, or failing that, discourse context, and not by means of the
grammatical feature tense. Similarly, the event expressed by an irrealis clause is
located in time (future versus past or present hypothetical, counterfactual, habitual
etc) on the basis of temporal adverbs or discourse context, and not by tense. The
imperfective marker *e-* may only occur in clauses with irrealis modality (ie. marked
modality) or with overt tense marking (ie. marked tense). It cannot occur in realis
clauses with no tense marking (ie. unmarked modality and tense). This means that
regardless of the resulting aspectual semantics (which emerges from the interplay of
imperfective marking, reduplication and other TAM categories present) *e-* marks
imperfective aspect only in marked modal or tense contexts. This explains the striking
observed phenomenon of *sa-* occurring in place of *e-* with reduplication in clauses
with realis marking and no overt tense.

In addition, *e-* only occurs in clauses also displaying inflectional reduplication. As
discussed in §4.4, reduplication occurs with marked subtypes of imperfective, and not
with unmarked subtypes (depending on the aspectual semantics of the verb). *E-*
therefore only occurs with marked subtypes of imperfective aspect.

In summary, *e-* occurs in clauses with both a marked modal or tense status and a
marked subtype of imperfective aspect. In contrast, *sa-* occurs in clauses that are
unmarked either in modal and tense status or in subtype of imperfective aspect. *Sa-*

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can therefore be seen to be the default imperfective marker, with *e-* occurring in specific marked contexts. This is summarised in Table 16.

TABLE 16: FUNCTIONAL DISTRIBUTION OF IMPERFECTIVE MARKERS

	modality and tense	subtype of imperfective
e-	marked	marked
sa-	marked	unmarked
	unmarked	marked

5 CONCLUSION. Imperfective aspect is marked in Torau using a combination of imperfective markers and reduplication. The precise aspectual semantics of clauses bearing imperfective marking varies widely. It is determined by a highly complex interaction of interdependent factors, including choice of the two imperfective markers, the presence or absence of reduplication, the aspectual semantics of the verb itself, and the presence or absence of other markers of aspect, modality and tense.

On the basis of their aspectual characteristics in imperfective, Torau verbs pattern broadly into two groups: a 'stative' type, including stative, experiencer, psych and postural verbs; and an 'active' type, including activity, accomplishment and achievement verbs. While most relevant phenomena pattern on that basis, one set of functional distinctions pattern on the basis of the telicity of the verb, with atelic activity verbs pattering with the 'stative' type, in contrast with telic accomplishment and achievement verbs, which pattern separately.

With 'stative' types the simple progressive subtype of imperfective aspect is unmarked, and other types, including progressive inchoative/inceptive and habitual aspect, are marked. With 'active' types all subtypes of imperfective including simple progressive are marked, while persistive aspect is unmarked.

Reduplication functions to encode imperfective aspect of a marked subtype, dependent on the aspectual semantics of the verb itself.

The imperfective marker *e-* encodes marked subtypes of imperfective (depending on the semantics of the verb), in clauses with marked modal or tense status (irrealis modality, or overtly marked past or present tense). The imperfective marker *sa-* is the default, occurring in clauses with either unmarked modality and tense (all realis clauses lacking overt tense marking), or expressing an unmarked imperfective subtype (simple progressive with 'stative' type verbs, persistive aspect with 'active' types).

The analysis presented here demonstrates the interdependence of aspectual, modal and tense features in general, and that the functional characteristics of individual features are determined to a substantial extent by the interaction of multiple features.

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In order to understand the functional characteristics of any one category of aspect, modality or tense it is necessary to examine a range of such features and categories in conjunction with each other.

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