

Observations on the Prefix *t-* in Malagasy*

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SUMMARY

Certain oblique phrases in Malagasy (PPs and adverbials) can take a prefix *t-*, which is usually analyzed as marking past tense, or agreement with a past-tense verb. In earlier work I showed that when the oblique is the complement of a past-tense motion verb and denotes an endpoint, it can appear without *t-* just in case the theme is understood to be at the endpoint (or on its way to the endpoint) at the time of utterance. In this paper I show that similar behavior obtains with oblique adjuncts (denoting an instrument, location, etc.), just in case the adjunct is contained within a temporally-dependent embedded clause selected by the past-tense verb.

RÉSUMÉ

Certains syntagmes obliques en malgache (les SP et les SAdv) peuvent prendre un préfixe *t-*, lequel est habituellement analysé comme marqueur du passé, ou comme un accord avec un verbe au passé. Dans des travaux précédents, j'ai montré que, lorsque le syntagme oblique est le complément d'un verbe au passé de mouvement et qu'il indique un aboutissement, il peut apparaître sans *t-* au cas où le thème se situerait à la limite finale (ou en chemin vers l'aboutissement) au moment d'énonciation. Dans cet article, je montre que les circonstants obliques (dénotant un instrument, un endroit, etc.) possèdent un comportement semblable, au cas où le circonstant se trouverait dans une proposition subordonnée temporellement dépendante que le verbe au passé sélectionne.

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1 INTRODUCTION

In Malagasy, certain spatio-temporal adverbials and prepositions can appear in one of two forms, characterized by the presence or absence of the prefix *t-* (Pearson 2008). For purposes of this paper, I will use the term OBLIQUE to designate any element which is capable of taking *t-*.¹ The unprefixated variant of the oblique will be referred to as the BARE FORM, while its prefixed counterpart will be referred to as the *t*-FORM.

To a first approximation, the choice between the bare form and the *t*-form is determined by the tense of the clause: the bare form occurs in non-past tense clauses, while the *t*-form occurs in past tense clauses. This is illustrated in (1) and (2) below, where the oblique is italicized. In (1) the oblique is the spatial deictic element ‘there’, which combines with the PP *anatin’ny ala* ‘inside the forest’ to form a locative predicate. The deictic appears in the bare form *any* when the clause receives a present-tense interpretation (1a) or an irrealis/future interpretation (1b). When the clause receives a past-tense interpretation, the *t*-form *tany* is used (1c). The examples in (2) feature a verbal predicate containing the instrumental PP *amin’ny antsy* ‘with the knife’, headed by the preposition *amin’*. As in the previous examples, the bare form is used when the clause is in the present (2a) or irrealis/future (2b) tense, while the *t*-form is used when the clause is in the past tense (2c).²

- (1) a. *Any* anatin’ ny ala ny gidro
 there inside.of Det forest Det lemur
 ‘The lemur is in the forest’
 b. Ho *any* anatin’ ny ala ny gidro
 Irr there inside.of Det forest Det lemur
 ‘The lemur will be in the forest’
 c. *Tany* anatin’ ny ala ny gidro
 T.there inside.of Det forest Det lemur
 ‘The lemur was in the forest’
- (2) a. Mandidy mofo *amin’ny antsy* Rabe
 AT.cut bread with Det knife Rabe
 ‘Rabe is cutting bread with the knife’
 b. Handidy mofo *amin’ny antsy* Rabe
 Irr.AT.cut bread with Det knife Rabe
 ‘Rabe will cut bread with the knife’
 c. Nandidy mofo *tamin’ny antsy* Rabe
 Pst.AT.cut bread T.with Det knife Rabe
 ‘Rabe cut bread with the knife’

As these examples show, tense distinctions may also be morphologically encoded elsewhere in the

¹ OBLIQUE is used merely as a term of convenience: not all phrases which might be characterized as syntactically or semantically oblique can take the *t-* prefix. For instance, *t-* does not appear on benefactive PPs (e.g., *ho an’ny zaza* ‘for the child’) or manner adverbials formed with the locative proclitic *an-* (e.g., *an-tsirambina* ‘carelessly’).

² The following abbreviations are used in the glosses – 1i: first person inclusive pronoun, 1s: first person singular pronoun, 3: third person (singular or plural) pronoun, Acc: accusative, AT: actor-topic voice, Det: determiner, Irr: irrealis/future, Loc: locative marker, Nom: nominative, Pst: past, T: *t-* prefix, TT: theme-topic voice.

clause. In verbal predicates the verb carries tense inflection: present tense is unmarked (2a), while irrealis/future is marked by the prefix *h-* (2b) and past tense by the prefix *n-* (2c) (*h-* and *n-* replace the voice prefix *m-* in the actor-topic form). Hence we get the appearance of tense concord between the verb and its oblique modifier. In non-verbal predicates, irrealis/future is indicated by the particle *ho* (1b); however, there is no overt marking for present or past tense (Malagasy is a zero-copula language), and so the presence or absence of *t-* is the sole indicator of tense in (1a) and (1c).

On the basis of data such as (1) and (2), it would appear that *t-* is a tense morpheme, subject to the simple distributional rule in (3). A rule of this sort is often volunteered by native speakers when presented with the contrast between the bare form and the *t-*-form.

- (3) a. An oblique is unprefixed when it appears in a [–PAST] clause.
 b. An oblique is prefixed with *t-* when it appears in a [+PAST] clause.

In previous work on this topic (Pearson 2001, 2008) I noted that this generalization is only partially correct. The restriction in (3a) appears to hold without exception: *t-* never appears on the oblique in present or irrealis/future clauses, and hence examples like (4) are robustly ungrammatical.

- (4) a. *Mandidy/handidy mofo *tamin'* ny antsy Rabe
 AT.cut/Irr.AT.cut bread T.with Det knife Rabe
 'Rabe is cutting bread with the knife'
 b. *Handidy mofo *tamin'* ny antsy Rabe
 Irr.AT.cut bread T.with Det knife Rabe
 'Rabe will cut bread with the knife'

However, (3b) appears to be too strong. Under certain conditions, a past tense clause may include an oblique dependent in its bare form. Consider the examples below (from Pearson 2008:147), where the deictic adverbial *ao* '(in) there' selects a locative complement *an-trano* 'at the house' to express the goal in a motion event. In (5a) a past tense verb co-occurs with the *t-*-form *tao*, while in (5b) it co-occurs with the bare form *ao*.

- (5) a. Niditra *tao* an-trano ny vehivavy
 Pst.AT.enter T.there Loc-house Det woman
 'The woman went into the house'
 b. Niditra *ao* an-trano ny vehivavy
 Pst.AT.enter there Loc-house Det woman
 'The woman has gone into the house'

The presence or absence of *t-* on the oblique correlates with a semantic contrast. In the case of (5b) it is understood that the woman is still inside the house at the moment when the sentence is uttered, whereas (5a) does not imply anything about the current location of the woman. Examples like (5b) occur in textual data, and their grammaticality has been confirmed in elicitation with multiple native speakers (who often express surprise at discovering that they find such sentences acceptable).

In this paper, I focus on examples like (5b). I consider their interpretation (in contrast to examples like (5a)), and discuss the structural conditions that license the bare form of the oblique in [+Past] clauses. I begin in section 2 with a brief overview of the class of elements capable of

taking *t-*. Then in section 3 I summarize my previous findings on this topic, which point towards an asymmetry between oblique complements (denoting the goal of a motion event) and oblique adjuncts (denoting an instrument, location, etc.). This earlier work suggested a generalization whereby oblique complements can appear in the bare form in [+Past] contexts whereas oblique adjuncts cannot. However, in section 4 I present some recently-collected data which calls for refinements to this generalization. This new data shows that the availability of the bare form in [+Past] environments is extended to oblique adjuncts when those adjuncts occur in certain types of embedded clauses that are temporally dependent on the superordinate clause.

2 THE CLASS OF OBLIQUES

A variety of elements which encode peripheral semantic roles may appear with the prefix *t-*. These include spatial deictic adverbials, equivalent to ‘here’ and ‘there’ in English, examples of which are given in Table 1 (adapted from Pearson 2008). As this table shows, spatial deictic adverbials distinguish several degrees of distance relative to the speaker (and addressee), and also indicate whether the location in question is visible to the speaker or not.

Table 1: Spatial deictic adverbials

BARE		<i>t</i> -FORM		
visible	invisible	visible	invisible	
<i>ety</i>	<i>aty</i>	<i>tety</i>	<i>taty</i>	‘here’ (in contact with speaker)
<i>eto</i>	<i>ato</i>	<i>teto</i>	<i>tato</i>	‘here’ (close to speaker)
<i>eo</i>	<i>ao</i>	<i>teo</i>	<i>tao</i>	‘here’ (near speaker/addressee)
<i>eny</i>	<i>any</i>	<i>teny</i>	<i>tany</i>	‘there’ (away from speaker)

Table 2: Other obliques

BARE	<i>t</i> -FORM	
<i>aiza</i>	<i>taiza</i>	‘where?’
<i>amin’</i>	<i>tamin’</i>	‘with, to/at’
<i>aloha</i>	<i>taloha</i>	‘before, earlier’
<i>aoriana</i>	<i>taoriana</i>	‘after, later’

Table 2 (also adapted from Pearson 2008) lists other elements capable of taking the *t-* prefix. *Aiza* is the locative wh-operator, while *aloha* and *aoriana* express spatial or temporal relations and may function either as adverbials or as prepositions. *Amin’* is a sort of default preposition which forms PPs encoding a variety of participant roles, including instrument (6a), manner (6b), and temporal location (6c), respectively (the first two examples are from Pearson 2008:144):

- (6) a. Manoratra taratasy *amin'* ny penina ny mpianatra
 AT.write letter with Det pen Det student
 'The student is writing a letter with the pen'
- b. Miteny *amim*-panetran-tena foana izy
 AT.speak with-modesty always 3Nom
 'S/he always speaks modestly'
- c. Mamela azy mivoaka *amin'* ny alina aho
 AT.let 3Acc AT.go:out in Det evening 1sNom
 'I let him/her go out in the evening(s)'

One peculiarity of Malagasy is that oblique phrases denoting a location in space must be introduced by a deictic adverbial. As shown in (7a) below, the adverbial can occur by itself. Alternatively, it can select a complement consisting of a noun marked with the locative proclitic *an-* (7b), or a PP headed by a preposition such as *amin'* 'at' (7c) or *ambony* 'over, on top' (7d) (the first two examples are from Pearson 2008:144–145).³

- (7) a. *Ety* ny boky
 here Det book
 'The book is here'
- b. *Any* am-pianarana ny ankizy
 there Loc-school Det children
 'The children are at school'
- c. Nihaona *tany* amin' ny tetezana isika
 Pst.AT.meet T.there at Det bridge 1inNom
 'We met at the bridge'
- d. *Eo* ambonin' ny latabatra ilay boky
 here on:top.of Det table that book
 'The book is on the table'

3 OVERVIEW OF PREVIOUS DATA: A COMPLEMENT-ADJUNCT ASYMMETRY

In Pearson (2008) and earlier work, I argued that whether an oblique phrase can appear in the bare form in a [+Past] clause is dependent on its semantic role. The *t*-form is generally required in [+Past] contexts when the oblique phrase denotes a role such as INSTRUMENT, spatial or temporal LOCATION, or MANNER. Thus speakers systematically reject sentences like (8) below, where a past-tense verb combines with an instrumental oblique phrase in the bare form (Pearson 2008:146). Compare (8) with the grammatical example in (2c) above, where the oblique appears in the *t*-form.⁴

³ Notice from example (7c) that when a deictic adverbial selects a complement headed by *amin'*, it is the deictic that is prefixed with *t-* in [+Past] clauses while *amin'* remains bare. *Amin'* carries the *t-* prefix only when it is the initial element in an oblique phrase.

⁴ Occasionally a speaker will randomly accept a sentence like (8), but this is rare. In Pearson (2008) I claimed that some speakers allow the bare form when the clause receives a past habitual reading (i.e., 'Naivo used to cut bread with the knife'). However, subsequent fieldwork has not supported this claim: nearly all of the speakers I have consulted reject sentences like (8) consistently and without hesitation, even in contexts that force a habitual reading. (However, cf. the

- (8) *Nandidy ny mofo *amin'* ny antsy i Naivo
 Pst.AT.cut Det bread with Det knife Det Naivo
 'Naivo cut the bread with the knife'

However, when the oblique phrase denotes the GOAL or ENDPOINT of a motion event, speakers accept both the *t*-form and the bare form in past-tense contexts, with a systematic difference in meaning. Consider the examples below (repeated from (5) above): In (9a) it is understood that the woman is inside the house at the moment when the sentence is uttered (hereafter abbreviated 'UT' for UTTERANCE TIME). In the case of (9b) no assumption is made about the woman's location at UT, and the hearer is likely to derive the implicature that she is no longer in the house. Given the semantic contrast between (9a) and (9b), the former could be given as an answer to the question "Where is the woman (now)?", while the latter would not be felicitous in such a context.⁵

- (9) a. Niditra *ao* an-trano ny vehivavy
 Pst.AT.enter there Loc-house Det woman
 'The woman has gone into the house'
 b. Niditra *tao* an-trano ny vehivavy
 Pst.AT.enter T.there Loc-house Det woman
 'The woman went into the house'

The contrast in (9) is replicated in (10) below, this time with a transitive verb of motion. In (10a) it is understood that the book is still on the table at UT, and hence the sentence could be used to answer the question "Where is the book?". However, there is no such inference in the case of (10b): the book may or may not be on the table at UT.

- (10) a. Napetrako *ao* ambony latabatra ilay boky
 Pst.TT.put.1s there on.top table that book
 'I (have) put the book on the table'
 b. Napetrako *tao* ambony latabatra ilay boky
 Pst.TT.put.1s T.there on.top table that book
 'I put the book on the table'

In (9) and (10) the motion verbs ('enter' and 'put', respectively) denote punctual events: the theme makes a (near-)instantaneous transition from not being at the goal to being at the goal. When the verb instead denotes a durative motion event—one where it takes time for the theme to reach the goal—the range of interpretations associated with the use of the bare form is slightly different. Consider examples (11) and (12) below (both from Pearson 2008:148). Sentence (11a), where the oblique is in the bare form, is ambiguous between two readings: either the lemur is at the top of the tree at UT, or it is on its way to the top of the tree at UT (note the two possible translations for this sentence).⁶ In (11b), where the oblique is in the *t*-form, it is understood that the lemur made it to

data in section 4 below for complications.)

⁵ Note how the difference in meaning between (9a) and (9b) may be rendered in English by varying the tense/aspect of the verb (present perfect *has gone* versus simple past *went*).

⁶ To explain why past tense marking on the verb *niakatra* is compatible with an interpretation where the lemur is currently ascending the tree, we might assume that tense in Malagasy can be construed as ordering the initiation point of the event

the top of the tree, but there is no implication that it is still at the top of the tree at UT.

- (11) a. Niakatra *eny* amin' ny tompon' ilay hazo ilay gidro
 Pst.AT.ascend there at Det top.of that tree that lemur
 'The lemur { is going / has gone } up to the top of that tree'
 b. Niakatra *teny* amin' ny tompon' ilay hazo ilay gidro
 Pst.AT.ascend T.there at Det top.of that tree that lemur
 'The lemur went up to the top of that tree'

An analogous contrast obtains in (12), featuring the transitive verb of motion 'send'. In (12a) it is understood either that the children are at school at UT, or that they are currently in transit and have not yet reached the school. In (12b), by contrast, it is understood that the children reached the school but are probably no longer there at UT.

- (12) a. Nalefan' ny vehivavy *any* am-pianarana ny ankizy
 Pst.TT.send Det woman there Loc-school Det children
 'The woman (has) sent the children to school'
 b. Nalefan' ny vehivavy *tany* am-pianarana ny ankizy
 Pst.TT.send Det woman T.there Loc-school Det children
 'The woman sent the children to school'

Finally, compare the examples below: (13a) entails that the child is still lying in bed, whereas (13b) strongly implies that the child is no longer in bed. Past tense inflection on the verb is felicitous in both sentences because *matory* is systematically ambiguous between a durative reading ('sleep') and an inceptive reading ('go to sleep, begin to sleep') (cf. footnote 6). In (13a), where past-tense marking on the verb combines with the bare form of the oblique, it is understood that the sleeping event began prior to UT and continues up to UT. In (13b), by contrast, the entire sleeping event is assumed to precede UT.

- (13) a. Natory *ao* am-pandriana ny zaza
 Pst.AT.sleep there Loc-bed Det child
 'The child has gone to sleep in the bed'
 b. Natory *tao* am-pandriana ny zaza
 Pst.AT.sleep T.there Loc-bed Det child
 'The child slept in the bed'

In Pearson (2008) I propose that an oblique denoting a goal/endpoint merges low in the structure, as the resultative complement of the motion verb; whereas an oblique denoting an instrument, location, manner, etc., merges higher in the structure as a vP-adjunct. If this is correct, then the data in (8)–(13) above suggest that the generalization in (3b) should be refined as follows:

(rather than the event as a whole) relative to UT. Note that although past-tense predicates in Malagasy are normally interpreted as denoting completed events, Travis (2010, chapter 7) has shown that, in the absence of special telicizing morphology, this interpretation is a matter of implicature rather than entailment.

- (14) a. When an OBLIQUE ADJUNCT (denoting an instrument, location, etc.) occurs in a [+Past] clause, it must appear in the *t*-form.
 b. When an OBLIQUE COMPLEMENT (denoting the endpoint in a motion event) occurs in a [+Past] clause, it may appear in either the bare form or the *t*-form:
 (i) If the oblique appears in the bare form, it is understood that the theme is at the endpoint at UT, or has not yet reached the endpoint as of UT.
 (ii) If the oblique appears in the *t*-form, it is implicated that the theme is no longer at the endpoint at UT.

A tentative proposal to account for this pattern is presented in Pearson (2008). However, subsequent fieldwork has revealed that even the refined generalization (14) is descriptively inadequate. In particular, I have discovered that the restriction in (14a) is too strong, inasmuch as there are contexts where an oblique adjunct does occur in the bare form within a [+Past] clause. The remainder of this paper discusses one of those contexts.

4 NEW DATA: OBLIQUE ADJUNCTS IN EMBEDDED CONTEXTS

4.1 COMPLEMENTS OF ‘BEGIN’

Consider the sentences in (15) where the matrix verb *manomboka* ‘begin’ selects an embedded clause complement (in brackets). As these examples show, the tense marking on the embedded verb must match the tense marking on the main verb, which suggests that the embedded clause lacks an independent tense specification and instead inherits its tense feature through an agreement relation with a higher Tense head.⁷ Arguably, this tense dependency reflects an inherent temporal connection between the event denoted by the embedded clause and the event denoted by the matrix clause: the EVENT TIME (ET) of ‘begin’ (which may be visualized as a point on a timeline) is identical to the initial point of the ET of ‘cut’ (visualized as a span on a timeline).

- (15) a. Manomboka [mandidy mofo] aho
 AT.begin AT.cut bread 1sNom
 ‘I am beginning to cut bread’
 b. Nanomboka [nandidy mofo] aho
 Pst.AT.begin Pst.AT.cut bread 1sNom
 ‘I began to cut bread’

When *manomboka* is in the past tense and its clausal complement contains an oblique adjunct, that oblique can appear in either the *t*-form or the bare form, contrary to the generalization in (14a). Examples are given in (16), where the embedded oblique denotes an instrument. Compare the grammatical example in (16b) with the ungrammatical example in (8) above, where the bare oblique occurs in a [+Past] matrix clause rather than embedded under *nanomboka*.

⁷ Cf. Pearson (to appear). Note that tense matching is found in various kinds of control constructions in Malagasy, as discussed briefly in Paul and Ranaivoson (1998) and Potsdam (2009).

- (16) a. Nanomboka [nandidy mofo *tamin'* ny antsy] aho
 Pst.AT.begin Pst.AT.cut bread T.with Det knife 1sNom
 'I began to cut bread with the knife'
- b. Nanomboka [nandidy mofo *amin'* ny antsy] aho
 Pst.AT.begin Pst.AT.cut bread with Det knife 1sNom
 'I { began / have begun } cutting bread with the knife'

It appears that (16a) and (16b) differ in interpretation with respect to the temporal relationship between UT and the event denoted by the embedded clause. In the case of (16b), it is understood that the cutting event overlaps with the time of utterance: the cutting event began in the past but is still ongoing at the time of utterance. In other words, the ET of 'begin' properly precedes UT, but the ET of 'cut' does not precede UT (in spite of the past tense marking on the embedded verb). In the case of (16a), it is assumed that the cutting event has been completed. In other words, the ETs of both 'begin' and 'cut' properly precede UT.

The same contrast obtains in (17) below, where the embedded clause contains an oblique adjunct denoting a spatial location. In (17b) it is understood that Rabe is still swimming in the river at UT, while in (17a) Rabe is no longer in the river at UT.

- (17) a. Nanomboka [nilomano *tao* anaty renirano] Rabe
 Pst.AT.begin Pst.AT.swim T.there inside river Rabe
 'Rabe began to swim in the river'
- b. Nanomboka [nilomano *ao* anaty renirano] Rabe
 Pst.AT.begin Pst.AT.swim there inside river Rabe
 'Rabe { began / has begun } to swim in the river'

In short, when an oblique adjunct occurs inside the clausal complement of 'begin', it patterns very much like a goal-denoting oblique complement with respect to presence or absence of *t*-marking in the scope of a [+Past] verb. If we conceptualize an oblique complement as identifying the RESULT STATE of the motion event (see Pearson 2008 for discussion), then it becomes clear why we might get this parallelism. In a motion event like *sit on the chair* or *put the book on the chair*, the beginning of the ET of the result state (*on the chair*) corresponds to the end of the ET of the motion event (*sit, put*). Similarly, in an event like *begin to cut bread*, the beginning of the ET of *cut the bread* corresponds to (the end of) the ET of *begin*. In this respect, the event of cutting the bread could be regarded (loosely) as the 'result' of the event of beginning. If this is along the right lines, then we end up with a generalization like the following:

- (18) When an oblique phrase occurs in the resultative complement of a [+Past] verb:
- a. The bare form is used when the ET of the resulting state or event overlaps with UT.
 - b. The *t*-form is used when the ET of the resulting state or event precedes UT.

Note the examples below, where the particle *vao* has been added to the matrix clause. Among other functions, *vao* can be used to indicate close proximity between ET and some REFERENCE TIME (RT), in the sense of Reichenbach (1947) (cf. *just* in English). Sentence (19a), where the embedded oblique appears in the bare form, is fully acceptable. Here it is understood that the cutting event

overlaps with the utterance time, and this appears to trigger a reading where the utterance time is identified as the reference time for purposes of interpreting *vao*, yielding an ‘immediate past’ interpretation (ET of ‘begin’ is right before RT, and RT = UT). By contrast, my speakers report that (19b) sounds incomplete when the sentence is presented in isolation. In (19b) the oblique is in the *t*-form, which indicates that the entire cutting event is ordered before UT. This in turn makes it pragmatically implausible that the ET of ‘begin’ would immediately precede UT. Consequently, *vao* must be interpreted with respect to some other choice of RT besides UT—but there is no element in the sentence that identifies such a RT.

- (19) a. Vao nanomboka [nandidy mofo *amin'* ny antsy] aho
 just Pst.AT.begin Pst.AT.cut bread with Det knife 1sNom
 ‘I have just (now) begun cutting bread with the knife’
 b. ?Vao nanomboka [nandidy mofo *tamin'* ny antsy] aho
 just Pst.AT.begin Pst.AT.cut bread T.with Det knife 1sNom
 ‘I just began cutting bread with the knife’

In (20) the sentence in (19b) is continued with another clause which can provide a reference time for the interpretation of *vao* in the first clause: RT = ET of ‘enter’. The sentence is thus fully acceptable, and receives a reading where the event of beginning to cut bread immediately precedes the event of Ranaivo entering.

- (20) Vao nanomboka [nandidy mofo *tamin'* ny antsy] aho dia niditra Ranaivo
 just Pst.AT.begin Pst.AT.cut bread T.with Det knife 1sNom then Pst.AT.enter Ranaivo
 ‘I had just begun cutting bread with the knife, and then Ranaivo came in’

Implicit here is the assumption that past-tense verb morphology in Malagasy does not encode a direct ordering relation between the event time of the verb and UT; instead, it encodes an ordering relation between the event time and a reference time: ET precedes RT.⁸ By default, the reference time is identified with the utterance time (RT = UT). However, when the clause includes a temporal modifier—e.g., a ‘when’ clause, or an adverbial such as *omaly* ‘yesterday’—that modifier identifies the reference time. The latter option is what we see in (20), where the event of Ranaivo coming in provides a RT for the event of my beginning to cut bread.

To account for the contrast between (19a) and (19b), and between (19b) and (20), we might postulate that *t*-marking on obliques (in resultative complements) is sensitive to the relationship between the reference time and the utterance time. This suggests the following refinement to (18):

- (21) When an oblique phrase occurs in the resultative complement of a [+Past] verb V:
 a. The *t*-form is used when the RT for V precedes UT.
 b. The bare form is used when the RT for V does not precede UT.

In this context, note the examples in (22) below. Here the matrix clause takes the temporal modifier *tamin'ny nandalo aho* ‘when I passed by’, formed by the preposition *amin'* selecting a nominalized

⁸ As potential support for this claim, note that a verb with past-tense morphology can be preceded by the irrealis/future particle *ho*, yielding a future perfect reading: e.g., *Ho nandidy mofo aho* ‘I will have cut bread’.

clause complement. When this temporal modifier is present, the embedded clause cannot include an oblique adjunct in the bare form, as shown by the unacceptability of (22b). Plausibly this is because (22b) introduces contradictory specifications with regard to the reference time for the matrix clause event (Rabe beginning to swim in the river): the temporal modifier identifies the RT with an event which precedes UT (the event of Ranaivo passing by), whereas the form of the oblique (*ao* instead of *tao*) indicates that the RT does not precede UT.

- (22) a. Nanomboka [nilomano *tao* anaty renirano] Rabe tamin' ny nandalo
 Pst.AT.begin Pst.AT.swim T.there in river Rabe T.at Det Pst.AT.pass
 Ranaivo
 Ranaivo
 'Rabe had begun to swim in the river when Ranaivo passed by'
- b. *Nanomboka [nilomano *ao* anaty renirano] Rabe tamin' ny nandalo
 Pst.AT.begin Pst.AT.swim there in river Rabe T.at Det Pst.AT.pass
 Ranaivo
 Ranaivo
 'Rabe has begun to swim in the river when Ranaivo passed by'

4.2 PERCEPTION VERB COMPLEMENTS

Another context where the bare form of an oblique adjunct can occur in the complement of a [+Past] verb involves the construction illustrated in (23), denoting direct perception of an event (this construction is discussed in detail in Pearson to appear):

- (23) Nahita [azy nandidy mofo] Rabe
 Pst.AT.see 3Acc Pst.AT.cut bread Rabe
 'Rabe saw him/her cut(ing) bread'

As in the 'begin' construction discussed above, this construction involves a tense-matching requirement: the tense of the verb in the embedded clause must match the tense of the perception verb, suggesting that the embedded clause lacks an independent tense specification. This makes sense given that the construction denotes direct perception, meaning that the time of the embedded event necessarily overlaps the time of the perception event.

Note that the examples in (24a) and (24b) below are both grammatical, where the difference in meaning parallels the contrast found in (16) and (17) above. In uttering (24a), the speaker implies that the bread is no longer being cut: i.e., both the cutting event and the seeing event precede UT. Consequently it is unclear whether Rabe witnessed the entire cutting event or only a portion of the event. In the case of (24b), however, it is understood that the bread is still being cut: i.e., only the seeing event properly precedes UT, whereas the cutting event overlaps with UT. Hence, it must be the case that Rabe witnessed only a portion of the cutting event.

- (24) a. Nahita [azy nandidy mofo *tamin' ny antsy*] Rabe
 Pst.AT.see 3Acc Pst.AT.cut bread T.with Det knife Rabe
 'Rabe saw him/her cut(ing) bread with the knife'

- b. Nahita [azy nandidy mofo *amin'* ny antsy] Rabe
 Pst.AT.see 3Acc Pst.AT.cut bread T.with Det knife Rabe
 'Rabe saw him/her cutting bread with the knife'

Of course, there is no sense in which the complement clause is interpreted as the 'result' of the perception verb, and hence this pattern cannot be subsumed under (21). It appears that, in order for the bare form of an oblique to occur in the complement of a [+Past] verb, all that is required is that the event denoted by the complement to be temporally dependent on the event denoted by the superordinate clause.

Note, finally, the contrast in acceptability between the sentences below, where *omaly* 'yesterday' has been added to the matrix clause to indicate the RT of the perception event:

- (25) a. Nahita [an-dRaso a nandidy mofo *tamin'* ny antsy] aho omaly
 Pst.AT.see Acc-Raso a Pst.AT.cut bread T.with Det knife 1sNom yesterday
 'Yesterday I saw Raso a cut(ting) bread with the knife'
 b. #Nahita [an-dRaso a nandidy mofo *amin'* ny antsy] aho omaly
 Pst.AT.see Acc-Raso a Pst.AT.cut bread with Det knife 1sNom yesterday
 'Yesterday I saw Raso a cutting bread with the knife'

Example (25b) is reminiscent of (22b) above. However, whereas my speakers judged (22b) to be ungrammatical, (25b) was judged to be grammatical but pragmatically bizarre, since it implies that Raso a is currently cutting bread and has been doing so continuously since I witnessed the event yesterday.

The fact that (25b) is ill-formed certainly supports the observation that when the oblique is in the bare form, the event denoted by the embedded clause is interpreted as overlapping with UT. But it is not clear how to explain the apparent difference between (25b) and (22b) with regard to the nature of the ill-formedness. One possibility is that the 'begin' construction and the direct perception construction differ somewhat with regard to the kind of temporal dependency that holds between the matrix clause and the embedded clause. Perhaps in the case of the 'begin' construction, the matrix clause event and the embedded clause event share a single RT; whereas in the direct perception construction, the matrix clause event and the embedded clause event have separate RTs which (due to the nature of direct perception) are required to overlap in time. I intend to pursue this question in future research as I continue to collect data on the distribution and interpretation of the *t-* prefix.

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