# CLAUSAL ARCHITECTURE AND MOVEMENT VERBS IN MALAGASY

Charles Randriamasimanana

*Massey University*

The purpose of this paper is to show that a Malagasy clause involving a movement verb typically comprises a complex, two-layer predicate, i.e., a lexical upper verb *an(a)* meaning 'do' and a lower predicate making up an equative type of clause. The upper predicate is typically a Control type of verb and can take a tense-marker, whereas the lower predicate is ambiguously stative and usually takes an aspect-marker: in the nonperfective aspect, only the locative interpretation of the nonControl predicate is possible whereas in the perfective aspect, a movement interpretation of the same nonControl predicate is also a possibility. Some background information on Malagasy equative clauses, tense and aspect and their distribution in this language will be provided. The crucial role of the notion of Control in complex constructions will be highlighted. For lack of space, an analysis of di-transitive verbs comprising both a direct and an indirect object will not be attempted and will be left for future research.

## 1. INTRODUCTION

My main purpose in this paper is to show that (i) all Malagasy sentences[1] involving movement[2] verbs are bi-clausal in nature, and comprise a higher as well

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[1] The abbreviations used in this paper include: Art: Article, Caus: Causative, Comp: Complementizer, DO: Direct Object, Fut: Future, Neg: Negation, Nonperf: Non-perfective, Part: Particle, Perf: Perfective, Prf: Verbal prefix, Pres: Present, Spec: Specifier.

[2] For the purpose of the present paper, movement verbs are distinguished from so-called action verbs like 'kill' in that the first is accompanied by NPs representing thematic roles like 'experiencer' encoded as the subject, 'source' encoded as a starting point and 'destination' encoded as an oblique in the active voice; whereas the second involves two thematic roles, i.e., 'agent' and 'patient' symbolizing two different entities and where the activity described by the verb emanates from the first and affects the second. In addition, movement verbs are different from so- called Control predicates since the latter in Malagasy require that the embedded predicate contain the feature [+Control]. In other words, as abundantly illustrated in Randriamasimanana (1986), a stative or [-Control] kind of predicate canNOT be embedded under a control or [+Control] predicate:

(i) * M-i-kasa      Ø-any      Antsirabe   i   Paoly.
     Pres-prf-intend Nonperf-to Antsirabe   Art   Paul
     ?'Paul intends to be at Antsirabe.'

(ii) M-i-kasa       ho any Antsirabe   i     Paoly.
     Pres-Prf-intend Fut-to    Antsirabe   Art   Paul
     'Paul intends to go to Antsirabe.'

The first sequence above is irretrievably ungrammatical since the embedded predicate is stative; whereas the second, which involves a [+Control] predicate in the embedded position, is fine. This contrasts with the following situation involving a complex movement verb:

(iii) M-ank-any Antsirabe   i      Paoly.

as a lower predicate and that (ii) the higher predicate is typically a Control predicate, i.e., involving a human agent[3] and some deliberate activity whereas the lower predicate prototypically designates an autonomous type of event, i.e., without an agent and not involving deliberate intent and can therefore be considered a nonControl predicate. Location predicates and root predicates, especially those with a passive-like meaning, represent two typical subsets of autonomous kind of predicates in Malagasy. The generalization just stated holds even in the following complex sentence involving Movement verbs:

(1)  N-an[4]-deha  t-any      Antsirabe  i    Paoly
     Past-Prf-go  Perf-to  Antsirabe  Art  Paul
     'Paul went to Antsirabe.'

which can be decomposed into two separate simple clauses:

(2)  N-an-deha    i      Paoly
     Past-Prf-go  Art   Paul
     'Paul went'

and

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     Pres-go-to  Antsirabe   Art  Paul
     'Paul goes to Antsirabe.'
  where the higher predicate is *m-ank-* and where the lower predicate can only be a [- Control ] or stative predicate belonging in the category of prepositional phrases like *any* 'there', etc. Such prepositional phrases participate in so-called 'equative clauses'.

[3]  A human agent is required since the relevant verbs, as illustrated in (1), (2) and (3) will lose their   movement verb interpretation when the subject is inanimate:
  (i) N-an-deha   ny   raharaha.
      Past-Prf-go  the   affair
      'The affair went well.'
  (ii) T-any    Antsirabe ilay  boky/raharaha.
      Perf-at   Antsirabe the   book/affair
      'The book/affair was in Antsirabe.'
  It is absolutely impossible for the second utterance to acquire a movement verb interpretation although the first will allow a figurative meaning. Furthermore, the following sequence is irretrievably             ungrammatical:
  (iii) * N-an-deha    t-any     Antsirabe   ny    raharaha.
         Past-prf-go   Perf-to  Antsirabe   the    affair
         'The affair went to Antsirabe.'

[4]  A typical Malagasy verb comprises a tense-marker, in this case the prefix n indicating the past tense, followed by the verbal prefix *an*, and the verbal radical deha itself derived from the root *leha*; such a root *leha* becomes apparent in circumstantial passive forms like the one shown in (8). In cases like (6), the verbal prefix *an* corresponds to a higher predicate *anao* 'do' compressed into *an*.

(3)  T-any      Antsirabe   i     Paoly
     Perf-to   Antsirabe   Art   Paul
     'Paul went to/was in Antsirabe.'

Note the relevant interpretation of the lower predicate in (3), i.e., a Movement verb in isolation normally indicates location. However, it can also mean 'Paul went to Antsirabe'. What this suggests is that in (1) the embedded structure enters into combination with the higher Control predicate and that its ultimate meaning results from the combination of the higher and the lower predicates. For the process of clause-combining to be successful with complex Movement verbs, the lower predicate which may have initially had the feature   [-Control] has to be in a position to acquire or shift to the same feature [+Control] as the higher predicate.

This paper is organized as follows. Section 2 will provide some crucial background information necessary for an adequate understanding of the notion of Control as it manifests itself in Malagasy syntax – specifically in certain causative constructions. Section 3 will present a bi-layer analysis for Movement verbs and relate the distribution of tense and aspect to the notion of Control whereas section 4 will address the issue of distinguishing between embedding and adjunction in this language. Such a distinction will allow us to account for the obligatory use of passive morphology when an argument of the governing verb is fronted, as illustrated in (8) and (9) below; while allowing the fronting of an adjunct without triggering passive morphology on the verb, as illustrated in (10). Here again, the feature [+/- Control] associated with the predicate(s) plays a crucial role in determining whether a constituent of the sentence is an argument of the verb or a mere adjunct.

## 2. BACKGROUND INFORMATION

As explained in Randriamasimanana (1986: 421-454), Malagasy has three main classes of verbs: typically transitive, typically intransitive and optionally transitive verbs. The first subset of verbs, which are typically transitive, refer to deliberate kinds of activity. Malagasy verbs also comprise a second subset of verbs which are intransitive and which can refer to states rather than activities. In between those two typical classes, we have optionally transitive verbs.

As noted in Rajaona (1972), there also exists a different kind of stative or autonomous type of structures in Malagasy, which does not involve verbs at all. One subcategory of such non-verbal predicates is made up of a location preposition of the kind illustrated in (3) above. Another subcategory of non-verbal predicates yields so-called equative clauses of the type *NP = NP*, for instance, as

can be illustrated in

(4)  Zazakely i   Paoly
     child    Art Paul
     'Paul is a child.'

which does not involve the use of a verb within the Malagasy sentence. A third subcategory uses a sequence made up of the sequence *Adj - NP*, illustrated in (23), (24) and (25) below.

The importance of the distinction between typically transitive verbs involving some kind of deliberate activity and typically autonomous kinds of events not involving any agent nor any kind of intent relates directly to how complex causative constructions are formed in Malagasy. It was shown in Randriamasimanana (1986) that prototypically causative prefixes restrict the kind of predicates that can be embedded under them and that the different kinds of restrictions can be subsumed under the notion of Control: in a so-called 'directive' causative construction, for instance, as in

(5)  N-amp-an-deha an'    i   Petera   i   Paoly
     past-caus-prf-go  part  art Peter     art Paul
     'Paul made Peter go'

the embedded predicate is one denoting Control and the Causee or referent of the embedded initial subject retains Control. By contrast, in a structure like

(6)  N-an$^5$-(v $\Rightarrow$ ø)aky   ny  fitaratra i    Paoly
     Past-caus-broken    Art glass     Art  Paul
      'Paul broke the glass.'

the embedded predicate *vaky* 'broken' is one denoting an autonomous kind of event and the Causee or referent of the embedded initial subject does not retain any Control over Paul's activity; in the latter case, we have a 'manipulative' type of causative resulting in the form *n-amaky,* the combination of *an* + *vaky*.

Our evidence suggests that sentences comprising Movement verbs form an intermediate structural pattern between those containing transitive verbs, on the one hand, and intransitive or stative predicates, on the other: this is evident from the distribution of tense-markers as opposed to that of aspect-markers in

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[5]  Initially the higher verb *anao* 'do' in the process of clause union drops the ending /ao/, then the dental nasal undergoes a place assimilation to *m* before the initial consonant *v* of the verb radical *vaky* 'broken' is dropped.

Malagasy. In general, a transitive verb takes a tense-marker, whereas a typical stative predicate (specifically non-verbal predicates and root verbs showing no affix of any kind and with a passive meaning) can only accommodate an aspect-marker.[6] It is absolutely crucial to note that sentences involving Movement verbs can accommodate both a tense-marker as well as an aspect-marker and that the latter has a tendency to be re-analyzed as a tense-marker, as will be shown in section 3.

With respect to typically transitive verbs, like *n-amono* 'past-kill' illustrated in (7) below, suffice to recall that in Randriamasimanana (1986) it was shown that all causative constructions of this language have to be derived from bi-clausal sources. I will address this issue immediately below. Typically transitive verbs occupy one end of a continuum, whereas intransitive and stative predicates occupy the other end of the same continuum. In between those two ends, we have the so-called Movement verbs. The main purpose of the present paper is to show that sentences like (1) above comprising Movement verbs have a bi-clausal source.[7]

## 2.1 Bi-clausal analysis for 'kill' in Malagasy

First, we illustrate the bi-clausal nature of a sequence comprising a lexical manipulative causative verb like *n-amono* 'past-kill'. In Randriamasimanana (1986) it was shown that all causative constructions of Malagasy must be derived from bi-clausal sources. Such an analysis will enable us to understand the true meaning of a typical Malagasy sentence such as the following, involving the literal equivalent of the English lexical item 'kill':

(7)  N-amono    tsy n-aha-faty        i      Paoly.
     Past-kill     not Past-cause-dead  Art    Paul
     L  i ' t P. ak  ui  l bl  ed din dœ  ta  u( s  œ  m  et oordie ')
     i.e., freely  translated into English: 'Paul tried to kill (someone) but did not manage to.'

Note that the verb *n-amono* 'killed' does not entail that the patient is dead in

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6   Strictly speaking, there are two types of aspect-markers in Malagasy: type 1 shows aspect-markers that are bound to the verb radical as a prefix like no or a suffix line *ina* or even a circumfix like *no...ina*. Type 2 represents cases where the aspect-marker is an independent word like *efa* 'already' for perfective aspect, mbola for nonperfectiveaspect, etc. In this short paper, we will confine ourselves to Type 1 aspect-markers, which are relevant for our present purposes.

7   An explanation for the distribution of Empty Categories in subject position is offered in Randriamasimanana (1997 and 1998a). We will not address this issue in the present paper.

Malagasy since the continuation as shown in (7) is perfectly acceptable in this language. Given such a consideration, the lexical item *n-amono* under the analysis proposed in this paper will have to be decomposed into a two-layer complex predicate, i.e., the upper abstract predicate being -*an*-, an abbreviated variant of   -*anao* meaning 'do' whereas the lower predicate is a root word *vono*, English 'killing'. The actual meaning of the first verb in the Malagasy sentence given in (7) relates to the fact that the upper verb -*an*- 'do' refers to an interval of time – in other words, is durative in nature – and focuses specifically upon the inception –not the outcome – of the activity designated by the verb. Also note that the upper predicate -*an*- is a Control predicate and that it is significant that this type of predicate can combine with a tense-marker. On the other hand, the lower predicate *vono* 'kill, killing' is a bare NP and serves as a predicate in an embedded clause in an equative type of structure.

Thus with the first verb of (7), *n-amono* 'killed', we have a lexical causative made up of two different layers of predicate: the upper layer is n-*anao* 'do' compressed into -*an*- and the lower layer is *vono* 'kill' a noun phrase which is used predicatively inside the embedded equative clause.

The same analysis applies to the second verb inside (7), *n-aha-faty* 'caused to be dead', made up of the causal causative prefix -*aha*-, which represents the upper verb; whereas *faty* 'dead' is a noun used predicatively in an equative type of clause embedded under the higher predicate. The lower predicate describes the ultimate result of the activity described by the upper verb and is a resultative.

What transpires from the above analysis is that in the first clause inside (7), the activity of killing is described from the vantage point of the inception of the attempt to kill, whereas in the second clause, the same activity is described from the viewpoint of the ultimate outcome. The linguistic strategy used to convey the first message consists in a complex verb combining the lexical causative upper verb 'do' and an equative type of lower predicate; what is used for the second message is the causal causative upper verb combined with a resultative type of lower predicate.

## 2.2 Bi-layer analysis for movement verbs

Additional support for the bi-layer analysis for each one of the apparently simple verbs in the sentence shown in (7) above comes from a description of so-called Movement verbs in Malagasy. These are predicates which describe movement towards or away from a location in space. This is an extremely interesting class of predicates since they seem to bridge the division between on the one hand, typically transitive predicates, usually referring to a deliberate type

of activity, and on the other hand, typically stative predicates, hence typically referring to an autonomous type of event, i.e., not involving an agent and not intentional .

We assume with Chomsky (1981) that the head of a clause is a functional category such as tense and/or aspect. If so, then it becomes evident that in a sentence such as (1) above, we have two functional heads, *n*- 'past' and *t*- 'perfective', which each should in theory be able to have their own projection. However, note that the morpheme *t*- under normal circumstances, i.e., in isolation and in the location reading of the relevant clause as illustrated in (15) below, represents aspect and not tense. Note also that the constituent *t-any Antsirabe* in (1) has combined with the upper verb *n-andeha* 'went' on which it is now totally dependant and has become an argument of the higher verb, as indicated by the presence of the tense-marking *t*- prefix on it. This may be an instance of incorporation[8] construed in a very broad sense since the constituent *t-any Antsirabe* could be fronted and this necessarily triggers circumstantial passive morphology on the upper verb:

(8)  T-any     Antsirabe  no   n-a-leha-n'      i     Paoly.
     Perf-to   Antsirabe  Part Past-Pass-go-by  Art   Paul
     'Antsirabe is where Paul went.'

(9)  *T-any     Antsirabe  no   n-an-deha  i   Paoly.
      Perf-to   Antsirabe  Part Past-Prf-go Art Paul

If the oblique constituent is fronted and if the upper verb is not passivized, the sequence, as shown in (9) becomes irretrievably ungrammatical. Note that the prefix *t*- on *t-any* is analyzed as a perfective aspect-marker and that this is consistent with the constituent *t-any Antsirabe* being embedded under the higher verb *n-andeha*.[9]

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8   It looks as though the process of clause union in Malagasy utilizes some kind of feature-checking mechanism rather than affixation per se. So, for example, a [+Control] predicate will not be allowed to be embedded under the upper verb *anao* 'do'. The feature-checking nature of this process becomes obvious when one considers Incorporation in Malagasy. For relevant details, see Randriamasimanana (1998b).

9   The perfective aspect-marker *t- on t-any* could also be used on an adjunct which is then linearly ordered after the grammatical subject; in such a case, linear ordering rules out embedding. Consider the following example:
    (i) N-an-deha t-any     Antsirabe   i    Paoly t-aloha.
        Past-Prf-go Perf-to Antsirabe   Art  Paul   Perf-before
        'Paul used to go to Antsirabe.'
    If the constituent t-aloha were to be fronted, we get
    (ii) T-aloha//n-an-deha        t-any    Antsirabe   i     Paoly.

We also know that by contrast, if an oblique constituent like *t-any Antsirabe* was not an argument of the upper verb, then it should be possible to front it without changing the voice appearing on the verb, as in:

(10) T-any     Antsirabe  no  n-i[10]-petraka  i    Paoly.
     Past-at   Antsirabe  Part Past-Prf-stay  Art  Paul
     'It was at Antsirabe that Paul was living.'

Where the upper verb *n-i-petraka* 'stayed' does not strictly subcategorize for *t-any Antsirabe*. This sequence therefore is not an argument of the verb 'stay', but rather an adjunct. In this connection, note that the prefix *t-* on *t-any* is analyzed as past tense and not an aspect-marker. See section 4.1 below on the distinction Argument vs. Adjunct.

Last, it transpires that the distribution of tense – as opposed to that of aspect – is highly constrained by Control, i.e., as can be illustrated by the degree of Control retained by the Causee in a causative type of construction, for instance. In other words, in Malagasy as a rule a tense-marker will take as its complement a Control predicate – as is clearly suggested by the data involving typical Control verbs including Movement verbs (see (27) *Ho any Antsirabe i Paoly* 'Paul will go to Antsirabe') – whereas an aspect-marker may also take as its complement a non-Control predicate, i.e., a non-verbal predicate – as will be shown below in (26) *Any Antsirabe i Paoly* 'Paul is in Antsirabe' and to borrow the terminology used by Rajaona (1972). In between those two endpoints, we have the so-called Movement verbs, which can show features of Control, as in (27), in the nonperfective aspect as well as features of nonControl, as in (26), in the perfective aspect, as will be illustrated in section 3.2.2.

## 3. BACKGROUND INFORMATION

In this section, we outline and illustrate the tense and aspect system of Malagasy before considering the interaction of each with the notion of control.

## 3.1 Tense and aspect in Malagasy

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      Past-before//Past-Prf-go Perf-to  Antsirabe   Art  Paul
      'Paul used to go to Antsirabe.'
   with a pause indicated by the sign //, but no passive morphology on the verb.

[10] This prefix *i* is a possible verbal prefix preceding the radical of the verb, in this case *petraka*. In this instance, the prefix denotes a stative kind of situation, as opposed to a deliberate kind of activity.

In this section, we identify and illustrate the different tense-makers as well as the aspect-markers found in this language. The tense system shows a three-way distinction, whereas aspect involves only a two-way distinction.

### 3.1.1 Malagasy tense

Malagasy tense represents a <u>three-way</u> formal system:

(11) M-an-deha   i      Paoly.
     Pres-Prf-go     Art   Paul
     'Paul goes.'

(12) N-an-deha        i      Paoly.
     Past-Prf-go          art   Paul
     'Paul went.'

(13) H-an-deha    i      Paoly.
     Fut-Prf-go   Art   Paul
     'Paul will go.'

In the active voice,[11] the present tense marker is *m-*, the past tense marker is *n-* and the future tense marker is *h-*, as illustrated respectively in (11), (12) and (13) above. Note that, as was indicated in Randriamasimanana (1997), in the passive voice the past tense marker could take the form *no*, whereas the future tense marker could look something like *ho*. In addition, in the present tense in the passive voice, the marker is ∅.

### 3.1.2 Malagasy aspect

Malagasy aspect typically is a <u>two-way</u> formal system (i) whether we deal with nonverbal predicates like those illustrated in (14) and (15) below or (ii) whether we deal with verbal predicates that are transitive like those in the sentences shown in (16) and (17) or (iii) whether we deal with verbal predicates that are intransitive like those in (18) and (19) below:

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[11]   As explained in Randriamasimanana (1997), the tense prefixes found in the active voice being functional heads behave rather differently from passive affixes with respect to case-assignment. For instance, they do not carry case and do not assign case to the subject of the clause. As such, Empty Categories are permissible under the present tense, the future tense and the past tense in the active voice, especially in an embedded clause position, as in (45) and (46). In a matrix clause, however, there is always the possibility of having an AGR(eement) projection involving lexical items such as *ity* 'this, singular' and *ireto* 'these, plural' and so on. See opus cited for further detail.

(14) Ø - a n y Antsirabe Paoly. [N o n p e r f e c t i v e    a s p e c t]
     Nonperf-at/to Antsirabe   Art Paul
     'Paul is at Antsirabe.'

(15) T - a n y Antsirabe   Paoly.        [P e r f e c t i v e    a s p e c t]
     Perf-at Antsirabe   Art   Paul
     'Paul has been/was at Antsirabe.'

(16) No-didi-n'    i  P a o l y  ny  mofo.       [    N o n p e r f e c t i v e]
     nonperf-cut-by art Paul  the  bread
     'The bread was cut by Paul.'

(17) Voa-didi-n'  i    Paoly  ny  mofo. [Perfective]
     perf-cut-by    art  Paul    the  bread
     'The bread has been cut by Paul.'

(18) N - i - p e i t r a k a Paoly [N o n p e r f e c t i v e    a s p e c t]
     past-prf-sit  art  Paul
     'Paul sat.'

( 1 9 ) Tafa-petraka i    Paoly. [P e r f e c t i v e    a s p e c t]
     perf-sit        art  Paul
     'Paul managed to sit' or 'Paul found himself seated/sitting.'

First, we have the opposition between the nonperfective aspect marker ∅ in (14) as opposed to the perfective aspect marker *t-* in (15). Note that this is an equative type of clause comprising a preposition as its predicate. On the other hand, in (16) to (19), we have verbal predicates except that in (16) and (17) the verb is transitive, whereas in (18) and (19) the verb is intransitive. In addition, as far as the transitive verb in (16) and (17) is concerned, the form *no-* indicates nonperfective aspect as contrasted with the perfective marker with *voa-* , whereas for the intransitive verb, the opposition between nonperfective and perfective is signalled by the contrast between the verbal prefixes *n-i-* vs *tafa*.

## 3.2 Control and distribution of tense vs. aspect

Given our bi-clausal analysis of a typical Movement verb sequence like (1) into two clauses such as (2) and (3), we now need to relate the distribution of tense and aspect markers to the semantic feature of Control[12] inherent in or absent from each

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[12] In addition to Randriamasimanana (1986: 29-74),  there is one test which can help distinguish between a [+Control] an a [-Control] predicate. If a predicate can appear in the  following environment, then it is a  [+Control] predicate:

predicate. The higher predicate, which is a Control type of predicate, can accommodate tense, whereas the lower predicate, which is an autonomous type of predicate, can only typically take an aspect-marker.

### 3.2.1 Control and tense

We define Control as in Randriamasimanana (1986: 29-74). Typically transitive verbs in Malagasy are Control predicates and as such will accommodate tense, as can be seen in the first part of sentence (7) above. Of the intransitive predicates, only those that involve Control – some kind of activity or deliberate intention, as in (20), (21) and (22) below or some causal construction, in the sense of a Causal causative – the form *n-aha-faty* in the second clause within sentence (7) above as explained in Randriamasimanana (1986) and illustrated as in (7) above – can typically take a tense-marker.

(20) M-i-petraka i     Paoly.
     Pres-Prf-sit  Art   Paul
     'Paul sits.'

(21) N-i-petraka i     Paoly.
     Past-Prf-sit  Art   Paul
     'Paul sat.'

(22) H-i-petraka i     Paoly.
     Fut-Prf-sit  Art   Paul
     'Paul will sit.'

(23) M[13]-aty    i   Paoly.
     Pres-dead   Art  Paul
     'Paul is dead.'

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     (t)eo     amp  +  verb in circumstantial passive voice
     (perf)there prefix +   circumstantial passive
    Examples:
    (i) T-eo    amp + an-didi-ana     mofo i   Paoly.
       Perf-there   amp + Prf-cut-passive bread Art   Paul
       'Paul was in the middle of cutting bread.'
    (ii) * T-eo     amp + i - petrah-ana    i     Paoly.
        Perf-there amp + Prf-stay-passive    Art   Paul
        'Paul was in the middle of staying.'
    In the first utterance, the base form of the verb is *m-an-didy* 'to cut'; in the second, it is *m-i-petraka* 'to stay, to sit.'
[13] This putative segmentation of *maty* 'dead' into a prefix *m* and a radical *aty* is simply impossible in Malagasy since the word *aty* exists in the language, belongs in the grammatical

(24) *N-aty       i    Paoly.
     Past-dead  Art  Paul
     'Paul was dead.'

(25) *H-aty      i     Paoly.
     Fut-dead  Art   Paul
     'Paul will be dead.'

In (20), (21) and (22) we have a typically intransitive verb involving Control and as such, it can take tense-markers. In (23), (24) and (25) we have a typical autonomous event type of predicate and it cannot accommodate tense-markers at all as the ungrammaticality of (24) and (25) suggests.

### 3.2.2 NonControl and aspect

The semantics associated with Movement verbs helps disambiguate between Control and absence of Control in equative clauses comprising such nonverbal predicates:

(26) Ø-any       Antsirabe i     Paoly.       [State/Location       only]
     Nonprf-at  Antsirabe   Art  Paul
     'Paul is at Antsirabe.'

(27) Ho any Antsirabe  i    Paoly.     [Movement      verb       only]
     Fut at    Antsirabe   Art Paul
     'Paul will go to Antsirabe.'

(28) T-any     Antsirabe i   Paoly.    [Perfective    &     ambiguous]
     Perf-at   Antsirabe  Art Paul
     'Paul went to Antsirabe' or 'Paul was at Antsirabe.' [Either a Movement interpretation or a Location   reading]

In (26), (27) and (28) we have an equative type of clause with a preposition serving as the predicate within each one of the relevant sentences: In (26), the predicate is in the nonperfective aspect , as indicated by the *Ø* aspect marker and it refers exclusively to a state or location; by contrast, in (27) with the emergence of the future tense marker *ho* on the nonverbal predicate, only the movement verb interpretation is possible; last but not least, with the perfective aspect marker *t-*,

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category of preposition and means 'here'. Now, prepositions usually can take an aspect-marker. Furthermore, most adjectives, which tend to be root words like *kamo* 'lazy', *adala* 'crazy' cannot lend themselves to such an analysis. In fact, the putative pattern shown in (23), (24) and (25) is as un-Malagasy as can possibly be imagined!

either a locative or a movement verb interpretation is possible, as illustrated in (28).

### 3.2.3 NonControl and equative clauses

From the above section, we deduce that an equative type of clause correlates in the nonperfective aspect with lack of control, i.e., that the predicate describes an autonomous[14] kind of event; in the specific case of (26), a mere location. Now tense-marking cannot as a rule accompany an autonomous kind of predicate involving, for instance, the non-verbal predicate in the structure *Adjective - NP*, as illustrated in:

(29)  Ø-adala i    Paoly.
      Ø-crazy Art Paul
      'Paul is crazy.'

(30)*?Ho adala   i    Paoly.
       Fut crazy  Art Paul
      'Paul will be crazy.'

(31) *N-adala     i     Paoly.
      Past-crazy  Art   Paul
      'Paul was crazy.'

Sentence (31), where an autonomous type of predicate combines with the past tense marker is irretrievably ungrammatical: no native speaker of Malagasy will ever utter a sequence of this kind. Even (30) is of dubious grammaticality and is only conceivable if the context of situation is rich enough to justify the use of the future tense marker *ho* to indicate the outcome of a previously and explicitly described process over which the entity referred to by the grammatical subject has some degree of control.

### 3.2.4 Equative clauses, tense & nonproductivity

It is true that there exist a few instances where an autonomous event type of predicate can exceptionally accommodate a tense-marker, as can be seen in (32), (33) and (34) below. However note that this possibility may be due to the historical origins of the lexical item in question. Nevertheless, it remains equally

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[14]  There is a tendency to use non-bound, independent words to indicate aspect with this type of structure, with the possible exception of equative clauses whose predicates are prepositions.

true that the presence of a tense-marker on an autonomous event kind of predicate is subject to idiosyncracies of the lexicon and, in general, such a process is far from being productive.

(32)  M-avesatra   ilay entana.
       Pres-heavy     the  luggage
       'The luggage is heavy.'

(33)  N-avesatra    ilay entana.
       Past-heavy      the  luggage
       'The luggage was heavy.'

(34) ?H-avesatra    ilay entana.
       Fut-heavy     the  luggage
       'The luggage will be heavy.'

In the above sentences, the predicate has the prefix *ma*, characteristic of adjectives in other Malayo-Polynesian languages like Tagalog. So, by and large, it looks as though whether an autonomous kind of predicate, i.e., an adjective/adverb will combine with a tense-marker in Malagasy is subject to the idiosyncracies of the lexicon and, most importantly, we are dealing here with a finite, nonproductive set of non-verbal predicates.

## 4. CONTROL

In this section, we distinguish the notions of embedding vs. adjunction.

### 4.1 Argument vs. adjunct

One major consequence of the notion of Control is that one and the same oblique constituent may constitute an argument of the governing verb with predicates involving Control, whereas it is a mere adjunct when accompanying a similar predicate not comprising the feature Control.

With respect to the oblique constituent *t-any Antsirabe* 'perf-at/to Antsirabe' in (1), we saw that it now depends crucially on the higher predicate *n-andeha* 'went' since when it is fronted, circumstantial passive morphology, as shown in (8) has to appear on the verb; otherwise, the irretrievably ungrammatical sequence seen in (9) ensues.

The above situation contrasts with the grammaticality of (10), where the same oblique constituent *t-any Antsirabe* 'perf-at/to Antsirabe' appears in a fronted position in the sequence and the higher verb *n-i-petraka* 'stayed, lived' remains in

the active voice and yet the sequence is perfectly grammatical.

On the surface, it looks as though we are dealing in both cases with examples of adjunction since the constituent *t-any Antsirabe* 'perf-at/to Antsirabe' can be left out of each sentence without affecting the grammaticality of the output: this is obvious in (2), where the oblique constituent has been omitted. As far as sentence (10) is concerned, we can have

(35)  N-i[15]-petraka  t-any    Antsirabe  i    Paoly.
       Past-Prf-stay  Perf-at Antsirabe   Art  Paul
       'Paul stayed at Antsirabe.'

(36)  N-i-petraka      i    Paoly.
       Past-Prf-stay    Art  Paul
       'Paul sat down/Paul was sitting.'

where in (35) the oblique constituent *t-any Antsirabe* 'perf-at/to Antsirabe' shows up in its initial position to the right of the higher verb whereas in (36), the constituent has been omitted altogether and this does not affect in any way the grammaticality of the sequence. Note the substantial difference in meaning shown for (35) and for (36), which may render the relationship between the two predicates rather implausible at first sight: in (35), the verb *n-ipetraka* can only have a stative meaning, whereas (36) *n-ipetraka* is ambiguous between a stative meaning, 'Paul was sitting', and a deliberate activity kind of meaning, 'Paul sat down.' However, in the former interpretation, there is little doubt that the oblique constituent can be added to the clause as an option.

To supplement the above analysis of the oblique constituent in (8) and in (10) respectively, we will note that the higher verb *n-andeha* 'went' in (8) is a Control predicate, whereas the higher verb *n-i-petraka* 'stayed, lived' in (10) is not a Control predicate. As such, the oblique constituent in the first is strictly subcategorized by the higher verb, given that the thematic role encoded in the directional oblique is required by the Movement verb. By contrast, the stative verb *n-i-petraka* 'stayed' does not strictly subcategorize for a directional oblique at all. Therefore, in (8) the directional oblique is an argument of the higher verb, whereas in (10) it is a mere adjunct.

The sharp contrast in behavior between an adjunct and an argument of the higher verb can be illustrated thus:

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[15]  In this instance, the prefix *i* denotes a stative predicate, i.e., not involving a deliberate kind of activity; whereas in the subsequent (36), the same prefix refers to a deliberate kind of activity. This is one reason why it is imperative to have a classification of Malagasy verbs of the type proposed in Randriamasimanana (1986).

(37) N-aninona[16]   no  tsy  n-i-anatra        i    Paoly?
     Past-why       Part Neg  Past-Prf-study  Art   Paul
     'Why did Paul not study ?'

(38) T-aiza        no[17] n-a-lehan'              i    Paoly?
     Perf-where    Part    Past-Prf-go-Pass-by    Art  Paul
     'Where did Paul go?'

(39) *T-aiza       no   n-an-deha   i    Paoly?
     Perf-where  Part   Past-Prf-go  Art  Paul
     'Where did Paul go?'

In (37), the constituent *n-aninona* 'past-why' is a mere adjunct – note the past tense-marker *n-* on the radical of *n-aninona* as well as on the higher verb *n-ianatra* 'studied' – and so, when it is fronted, the higher verb is not affected and retains the active voice morphology on its radical. On the other hand, in (38), the

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[16] The phrase *n-aninona* is a compression of the sequence *n-anao inona* 'past-do what?', which has come to mean 'for what reason?', 'why?'. As indicated in Randriamasimanana (1998b), *n-aninona* 'why' typically shows up to the right-hand side of the clause after the general complementizer *fa* 'that' or 'but' in Malagasy. In other words, without the fronting, we would have the following sequence:
(i) Tsy  n-i-anatra      i    Paoly fa  n-aninona?
    Neg  Past-Prf-study  Art  Paul  but  why?
    'Paul did not study. But why?'
Alternatively it is quite natural in Malagasy to say:
(ii) Fa  n-aninona  no   tsy   n-i-anatra      i      Paoly?
    Comp  Past-why   Part  Neg   Past-Prf-study  Art    Paul
    'But why did Paul not study?'
instead of sentence (37), where the complementizer *fa* has been left out.

[17] The particle *no* is the head of a focus projection, which will provide a landing site for a moved element along lines sketched in Randriamasimanana (1998c). If we had an equative type of construction, we would have the following sequences comprising the specifier (definite article) *ny*:
(i) * T-aiza    ny    n-alehan'      i   Paoly ?
      Perf-where  Spec  Past-Prf-go-passive Art  Paul
      'Where did Paul go?'
(ii) *T-any  Antsirabe  ny     n-a-lehan'    i      Paoly.
      Perf-to Antsirabe Spec    Past-go-Pass-by  Art   Paul
      'Antsirabe is where Paul went.'
However both of the above sentences are ungrammatical. Both characterize Foreigner Talk. This contrasts with the grammaticality of an equative clause of the following type:
(   iT  i-  ia n )i zyz a az  a  k  e  l  y                                    ?
    Perf-where  the  child
    'Where was the child?'

constituent *t-aiza* 'perf-where' is an argument of the higher verb *n-andeha* 'went' and so, when it is fronted, circumstantial passive morphology must appear on the radical of the governing verb, as shown in (38) since not doing so would yield the irretrievably ungrammatical sequence shown in (39).

The latter analysis is based on the way adjunction works in Malagasy. We now turn to a description of this process immediately below.

## 4.2 Adjunction vs. embedding in Malagasy

In general, we have cases involving adjunction when the tense or the aspect markers showing up on two adjacent verbs are exactly the same. The following are prototypical examples:

(40) N-i-anatra      n-amily      fiara   i    Paoly.
     Past-Prf-learn Past-drive  a car   Art  Paul
     'Paul was learning how to drive a car.'

(41) M-i-anatra      m-amily      fiara   i    Paoly.
     Pres-Prf-learn Pres-drive  a car   Art  Paul
     'Paul is learning how to drive a car.'

(42) H-i-anatra       h-amily     fiara  i    Paoly.
     Fut-Prf-learn   Fut-drive  a car  Art  Paul
     'Paul was learning how to drive a car.'

(43) Ø-lasa        t-any       Antsirabe  i    Paoly.
     Perf-gone Perf-to Antsirabe   Art  Paul
     'Paul was gone to Antsirabe.'

(44) *M-i-anatra         h-amily     fiara  i     Paoly.
     Pres-Prf-learn   Fut-drive  car    Art  Paul
     'Paul is learning how to drive a car.'

In (40) we have a sequence of two verbs with exactly the same past tense-marker *n-* on the two verb radicals. In (41), the sequence of two verbs have exactly the same present tense-marker *m-* on the radicals. In (42), the sequence of two verbs have the exactly same future tense-marker *h-* on the radicals. In all three instances, the portion comprising the second verb represents an adjunct to the higher verb. Now, if an attempt is made to change the tense on the lower verb into a different one, as shown in (44) for example, the sequence becomes ungrammatical since we no longer have an adjunct.

The same analysis could be applied to the sequence of two verbs in (43), except

that in this case we are dealing with two nonControl predicates involving perfective aspect-markers[18] instead of tense-markers.

By contrast, in constructions involving embedding the lower verb shows a different tense or aspect-marker than the higher verb, as can be seen in the following typical examples:

(45) N-i-kasa       h-andeha i    Paoly.
     Past-Prf-intend Fut-go    Art Paul
     'Paul intended to go.'

(46) N-iangavy  an'  i     Jaona h-andeha i    Paoly.
     Past-request Part Art  John  Fut-go    Art Paul
     'Paul asked John to leave.'

Note that the higher verb in each Control structure strictly subcategorizes for the future tense showing up on the lower predicate. Any other tense on the lower verb would make the above sentences in (45) and (46) irretrievably ungrammatical. Furthermore, in cases where the lower predicate is an equative type of clause, there are also restrictions on which aspect-markers can appear on the lower nonControl predicate. For example, in Randriamasimanana (1986: 7) we have:

(47) N y  ditrany       no  n-aha-voa[19]-kapoka    an' i    Paoly.
     the    mischief-his Part Past-Caus-Perf-punish DO Art Paul
     'It was because of his mischief that Paul was punished.'

where the embedded clause comprises the perfective aspect-marker *voa-* and where it is absolutely impossible to have a nonperfective aspect-marker like *n-i-* 'past-nonperfective prefix' on the verb radical *kapoka*.

## 5. CONCLUSIONS

It transpires from the above observations that the notion of Control plays an absolutely crucial role in the syntax of complex constructions in Malagasy. Not only is the notion of Control central to the distribution of sentence types under causative prefixes, as was shown to be the case in Randriamasimanana (1986) and

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[18] There is at work here some kind of concord whose precise details remain to be worked out. However, the perfective-aspect marker *t-* will appear on the preposition each time the higher predicate shows a perfective aspect-marker. In the case of example (43) the root verb *lasa* 'gone' does not take a perfective aspect-marker but is nevetherless in the perfective aspect.

[19] We are dealing here not with a manipulative type of causative, but rather with some kind of indirect causation. For instance, the time of the causal action may be far apart from the manifestation time of the outcome resulting from the stated activity.

briefly illustrated in sections 2 and 2.1 above, it also plays a pivotal role in our understanding of complex structures involving Movement verbs.

Furthermore, given data such as those explored in section 4.1 the notion of Control seems to shed some light as to which ones of accompanying obliques are likely to qualify as arguments of a given higher verb and appears to provide a principled explanation couched in terms of thematic roles. This in turn helps account for the distinction between an argument and an adjunct.

Indeed, it was shown in Randriamasimanana (1986) that all causative constructions of this language have to be derived from bi-clausal sources. Judging from example (7) above, even lexical causative items such as *n-amono* 'killed' must be analyzed as involving two predicates, a higher Control predicate, the light V *an(a)* meaning 'do' and a lower equative type of predicate, here a bare NP *vono* 'kill/killing'.

Reinforcing such a bi-clausal analysis of sentence structure in Malagasy is the behavior of Movement verbs in this language. A typical construction associated with this class of predicates is the presence of a higher verb denoting Control as well as the presence of a lower predicate denoting an autonomous kind of event. Typically such an autonomous event type of predicate takes the form of a preposition, a bare NP or an adjective serving as the embedded predicate, thus forming an equative type of structure below the main clause. What was shown in this paper is the fact that embedded predicates made up of prepositions sometimes behave like Control predicates and can combine with tense even though under normal circumstances, they typically behave like autonomous, nonControl predicates and usually combine only with aspect.

Last but not least, the analysis proposed above for Movement verbs in Malagasy bears some resemblance to the so-called 'Split VP Hypothesis' proposed in Koizumi (1995), which reinforces the bi-clausal analysis of causative constructions presented in Randriamasimanana (1986).

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