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UMI

UP-ROOTING THE PREFIX *maha-* IN MALAGASY

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Vivianne Phillips 1996



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ABSTRACT

This thesis explains why the prefix *maha-* in Malagasy (a Western Austronesian language) can have either an abilitive or causative meaning. It is *not* the case that there is a causative *maha-* prefix and an abilitive *maha-* prefix. There is, in fact, only one prefix which is *both* causative and abilitive. The apparent difference in meaning arises because of a difference in the emphasis placed on what I shall suggest are the two components of this prefix: stativity and causation. Whether *maha-* receives an abilitive or a causative reading depends on whether it attaches to what I term an "eventive" root or a "non-eventive" root. In the former case, it receives an abilitive reading, in the latter case, a causative reading.

RESUME

Cette thèse présente une explication aux deux sens que possède le préfixe *maha-* en malgache: un sens causatif et un sens abilitif. Contrairement à l'idée qu'il y a deux préfixes (un préfixe causatif et un préfixe abilitif), il est montré que le préfixe *maha-* est à la fois causatif et abilitif. Les deux sens du préfixe *maha-* sont les résultats d'une insistance sur un des deux aspects différents du préfixe: la cause et l'état. Le sens du préfixe *maha-* dépend de la racine à laquelle *maha-* s'attache; une racine "eventive" (qui porte des arguments) donne le sens abilitif, alors qu'une racine "non-eventive" (qui n'a pas d'argument) procure le sens causatif.

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Chapter 1: INTRODUCTION

1.0 Issues and Outline

The prefix *maha-* in Malagasy, a Western Austronesian language spoken in Madagascar, has several meanings: an abilitive meaning and a causative meaning (note that the word order in Malagasy is VOS):¹

- (1) Abilitive: *Mahaongotra ny ravina Rabe.*
 maha-pull out DET root Rabe
 `Rabe can pull out the root.'
- (2) Causative *Mahafinaritra an'i Soa Rabe.*²
 maha-happy ACC-Soa Rabe.
 `Rabe makes Soa happy.'

One account, a very superficial account, of this equivocal prefix might hold that there are in fact two different prefixes: an abilitive *maha-* and a causative *maha-*. The proposal made in this thesis is precisely the opposite: there is only one *maha-* predicate that is *both* causative and abilitive. The two meanings of *maha-* arise in

¹ The following abbreviations are used in this thesis: DET (determiner), NOM (nominative), ACC (accusative), GEN (genitive), N (noun), V (verb), ADJ (adjective), VPass (verbal passive), CIR (circumstantial), FOC (focus morpheme), FUT (future tense), Pst (past tense), 1/2/3psg (1st/2nd/3rd person singular), LOC (location morpheme), * (bound root), NEG (negation morpheme) and QUEST (question marker), STAT (stative marker). If not stated otherwise, the examples are taken from my own field notes.

² Proper nouns can be preceded by a definite marker *i* or in certain cases *ra*. I will leave these morphemes unglossed in the examples.

translation due to the different emphasis of the two components inherent to this prefix, namely stativity and causation. I will further argue that the difference in emphasis is predictable from the nature of the root to which the prefix attaches; *maha-* attached to a non-eventive root will give rise to the causative reading and *maha-* attached to an eventive root will give rise to the abilitive reading.

The *maha-* prefix also has an achievement meaning which is illustrated in (3) below. By "achievement" we shall see that I mean a specific group of verbs such as 'to notice' and 'to remark.'

- (3) Achievement: *Mahatazana ny sakaizany Rabe.*
maha-seen DET friendGEN3psg Rabe
'Rabe notices his friend.'

The achievement meaning has not been included along with the causative and abilitive meanings in (1) and (2) above, as it will be shown that the achievement meaning of *maha-* is subsumed by the abilitive meaning.

This thesis is laid out as follows: we will begin in Chapter 2 by refuting a purported relation between *maha-* and the verb *mahay* which itself has various meanings such as 'to know' and 'to be able to'. Having shown what *maha-* is not, we will proceed to show what it is. In particular, we will deal with the resultative nature of *maha-* and the issue of the voluntary/involuntary role of the agent in bringing about the result. We will also discuss in some detail what

it means to say that *maha-* expresses an ability. From here we will turn directly in Chapter 3 to an explanation of the achievement meaning of *maha-*. Chapter 4 will show that it is simply *not* the case that *maha-* has two separate meanings. Any *maha-* predicate is *both* causative and abilitive. This insight rests upon the further claim that *maha-* is in fact two morphemes: *ma-*, a stative morpheme, and *ha-*, a causative morpheme. Evidence for this split will be taken from Malagasy as well as from the related languages of Tagalog, Ilokano and Kimaragang Dusun.³ In Chapter 5 we will argue for a distinction between eventive and non-eventive roots. Of relevance to this distinction will be the behaviour of roots in the genitive construction and their selection of active morphology. In Chapter 6 we will give a syntactic account of *maha-* predicates based on the syntactic structure of simple *ma-* adjectives. In doing so, we will refine our understanding of the *ha-* morpheme, analysing it more correctly as an overt realization of the aspectual operator BECOME. We will show how eventive and non-eventive roots interact with *maha-* to give the abilitive and causative readings respectively. In the former case, the external argument of the root is *realized*, whereas in the latter case, an external argument is actually *added*. We will also show that this analysis of *maha-* makes the correct

³ Tagalog, Ilokano and Kimaragang Dusun are all languages spoken in the Philippines.

predictions for unaccusative roots and roots that are *both* eventive and non-eventive. Finally, we will discuss in detail the precise nature of the external argument of *maha*-predicates based on non-eventive and eventive roots respectively.

Before proceeding with the actual thesis, however, I would like to present a brief outline of the Malagasy language and its people.

1.1 Madagascar and Its Language

In order to give the language discussed in this thesis a socio-historical context, I have sketched below a brief history of the island and its people. Following this is an introduction to the Malagasy language with, as it is most relevant, an emphasis on the language's verbal morphology.

1.1.1 A Brief History of Madagascar

Madagascar was most likely settled by a migration of peoples from Indonesia (6,400 km away) that started some centuries before the Christian Era began (perhaps as early as 1200 B.C.). The reason for the migration is not clear. It may have been due in part to other migrations of people from Thailand or China that pushed the Indonesian people toward the west. It may also have arisen from an interest

in opening up new trade markets in India and beyond.^{4 5}

Linguistic and anthropological evidence suggests that the migratorial route of the Indonesian people that were to eventually settle Madagascar followed the northern coastlines of the Indian Ocean (possibly including Sumatra, Ceylon, India, Sri Lanka and the Maldive Islands) and continued onto the east coast of Africa (Tanzania and Kenya) before finally ending in Madagascar. One of the compelling reasons for a migration via eastern Africa is that, although the language is unequivocally Indonesian, there is a small Bantu influence *common to all dialects* of the Malagasy language (notably words for animal husbandry are Bantu in

⁴ At the root of the Austronesian expansion, as suggested by Peter Bellwood in an article on the Austronesian dispersal, may have been the need for farmable land. About 10,000 years ago, the Neolithic Revolution took place in southern China (among other places in the middle latitudes of the earth). Brought about by a warming of the climate, this revolution saw the transformation of people as hunters and gatherers into people who began to use the land to produce food. The consequences of this development were dramatic increases in population and more complex societies. Another consequence was the expansion of people from southern China into Taiwan which Robert Blust (1988) has suggested is the homeland of Proto-Austronesian. From here the expansion encompassed the Philippines, Borneo and Sulawesi before splitting in two directions to the east (towards the islands in the Pacific) and to the west (towards Madagascar). Bellwood is quick to point out, however, that although the development of agriculture was most likely at the root of the Austronesian expansion, the reasons for the dispersal, taking place over thousands of years, involved much more than the simple need for land.

⁵ Himla Soodyall, a molecular evolutionary biologist at Penn State University, has also suggested that what may of happened is that a group of sea-faring Indonesians simply got lost and eventually ended up in Madagascar. I do not know of any other proponents of this scenario.

origin - for instance, *omby* 'ox', *akoho* 'chicken').⁶

Furthermore, African physical traits are dominant amongst the Malagasy people (although, this is certainly due, in part, to later immigration of African people). Malagasy culture also retains some evidence of a period of contact with the African mainland (including some musical instruments, some forms of ancestral worship and the use of cattle as symbols of prestige). The final move from eastern Africa to Madagascar was probably made during the first millenium of the Christian Era (500 AD is usually cited as the first significant occupation of the island). Once established the island's people underwent several other influences; in the 11th-13th centuries there was contact with Afro-Arabic peoples and European contact began as early as the 16th century as a search for trading routes to the Far East began. By far the most significant European presence has been the French. Madagascar was proclaimed a French colony in 1895 and regained its independence from the French only in 1960. Consequently the French language (as will be apparent in some of the examples below), culture and education have played a significant role in Madagascar,

⁶ The survival of the language of the Indonesian people that made it to Madagascar suggests that these people enjoyed an advantageous position over the cultures that they encountered. One possibility is that the people they encountered did not possess their agricultural know-how. This brings up the point that crucial to Bellwood's picture of the Austronesian expansion (see footnote 3) is the general assumption that the areas into which the migrating Austronesian-speaking people moved were empty or sparsely populated by foragers.

especially in the urban areas of the country.

1.2.1 The Malagasy Language

The Malagasy language is immediately related to the Borneo languages of the Western Malayo-Polynesian language family.⁷ It is presently spoken by approximately twelve million people on the island. Some eighteen dialects comprise the Malagasy language of which the Merina dialect, spoken on the central plateau by about four million people, is considered the standard dialect (not surprisingly, the Merina, who were the first to unite the island in the 18th century, have traditionally made up the ruling class).

The nature of the language is one which places the emphasis on the internal arguments of the verb (for example, the theme or goal) as opposed to the agent. Very often an active sentence in English will be given a passive treatment in Malagasy.

Verbs in Malagasy are derived from bound roots, nouns, adjectives, verbal passives and even prepositions. The major Malagasy dictionaries up to the present day are organized according to roots whose entries list the various affixes (verbal, nominal, adjectival) that the root takes. As we shall see in great detail in Chapter 5, a split between the eventive and non-eventive nature of these roots

⁷ The language of the present day Maanjan tribe of Central Borneo closely resembles Malagasy (Dahl 1951). The ancestors of these people may have been the ones who first left for Madagascar.

will play an important role in the analysis that we will be proposing for the various meanings of *maha-* predicates.

Verbal morphology presents perhaps the most complicated aspect of the Malagasy language (at least from the perspective of a second language learner) and from it follows some of the more unique characteristics of the language. The verbal system contains three "voices": active, passive and circumstantial. Respectively, these voices have an agent, a theme and a circumstance of an action as their subject. A circumstance of an action can be many things: the time of the action, the instrument of the action, the place of an action, the manner in which an action is carried out etc. Such sentences are not translatable word for word into English.

The verb itself carries no agreement for number or gender. The present tense is not overtly marked on the verb.⁸ In front of a vowel the past tense is indicated by *n-* and the future tense by *h-*. In front of a consonant, *n-* and *h-* take their full form, *no* and *ho*. There are some exceptions: verbal roots take *ho* as future tense and, along with roots prefixed by *voa-* or *tafa-* (see section 1.2.1.2 below), take no past tense marker (context determines past from present).

⁸ One might argue that the present tense actually shows up on the verb as a *m-* prefix. However, we will show in section 1.2.1.1 that this prefix is correctly understood as an Actor topic marker.

Before going on it is worth noting that root words in Malagasy are either of one, two or three syllables. Root words of three syllables end in the extrametrical syllables of *-ka*, *na-*, or *-tra* (the final *a* not being present underlyingly). These endings undergo phonological change (or simply dropped) when suffixation, reduplication or compounding occurs. The phonological changes will be evident in the examples that follow and we will go into some of their detail when relevant (in particular, in section 5.2).

We shall now briefly address in turn the morphology of the active, passive and circumstantial voices. The examples given in the three proceeding sub-sections are taken from Rahajarizafy (date unknown).

1.2.1.1 The Active Voice

The prefixes *man-* and *mi-* are the most common active prefixes in Malagasy. Both prefixes indicate an *action*:

- | | | | | |
|-----|-----------------|--------------------|------------------|---------------|
| (4) | <i>milaza</i> | `to say/to report' | <i>manao</i> | `to do' |
| | <i>mijery</i> | `to watch' | <i>manafaka</i> | `to liberate' |
| | <i>mijanona</i> | `to stop oneself' | <i>manohitra</i> | `to resist' |
| | <i>miakanjo</i> | `to dress oneself' | <i>manapitra</i> | `to finish' |
| | <i>miakatra</i> | `to go up' | <i>manidy</i> | `to close' |

In general, *mi-* the most common of the two active prefixes, is intransitive (often translating a reflexive

verb) and *man-* is transitive.⁹ Though there are exceptions to this intransitive split between *mi-* and *man-*, a root that takes both prefixes will almost certainly have *man-* as its transitive form and *mi-* as its intransitive form. Malagasy has many other active prefixes such as *mampa-*, *mif-*, *mana-*, *manka-* whose individual uses we will not go into. The prefixes *mana-* and *manka-* will, however, be relevant to our discussion of eventive and non-eventive roots in section 5.4 below. Further discussion of these two prefixes will wait until we can situate the discussion within the context of the analysis given below.

It will have been noticed that all verbs in the active voice begin with a *m-* prefix. We shall assume in this thesis that *m-* marks Actor topic and hence its involvement

⁹ Various phonological changes occur when *man-* is prefixed to a root: if the root begins with a voiceless consonant (and exceptionally [v]) then this consonant completely assimilates the nasal feature (though not the place of articulation) of the alveolar nasal of *man-*. For example,

man+simba -> *manimba* 'to ruin'
man+takona -> *manakona* 'to hide'
man+posaka -> *mamosaka* 'to show'
man+hantona -> *manantona* 'to suspend' (if [h] is not present
underlyingly)

Initial consonants that are voiced (and exceptionally [h] when it is present underlyingly) undergo assimilation of continuancy and are prenasalized, as the following examples illustrate:

man+lany -> *mandany* 'to use up'
man+re -> *mandre* 'to hear'
man+zehy -> *mandzehy* 'to limit'

Verbal stem that already begin with nasals are not, of course, prenasalized and the alveolar nasal of *man-* is simply dropped.

with active morphology.¹⁰ However, *m-* also shows up prefixed to derived adjectives (as we shall see in detail in section 4.2.1 below) and agency is, of course, not relevant to states. One answer to this problem might be that the *m-* has been extended to indicate all initially external arguments (as opposed to derived external arguments as in the passive and circumstantial voices). This is suggested by the fact that in Kimaragang Dusun which, like Malagasy, is in the Borneo language family, *m-* does not appear with adjectives; the reflex of *ma-* (the stative marker in Malagasy) is simply *o-* (*a-* if the following vowel of the stem is low). This explanation needs, of course, further support, but it is an explanation that I will assume here. Thus, for our purposes, *m-* in Malagasy indicates an initially external argument, be it either an agent (in the case of active morphology) or a theme (in the case of derived adjectives).

¹⁰ The *m-* prefix only shows up in the present tense of active verbs. This might suggest that *m-* in fact marks present tense. There is evidence, however, that it is in fact marking Actor topic. First, *m-* does not show up in the present tense of the passive or circumstantial voices. In these cases, there is no overt marker for present tense. This suggests that *m-* indicates Actor topic. But there is further support for this claim from the morphology of related languages. In Tagalog and Kimaragang Dusun, Actor topic (or Actor "pivot" in the words of Kroeger (1990)) is indicated by the infix *-um-*. If the root begins with a vowel, however, *-um-* is prefixed as *m-*. Thus, in Kimaragang Dusun, we have *r-um-ikot* 'come' from the root *rikot*, but *m-uli* 'go home' from the root *uli*. *m-* and *-um-*, then, are essentially allomorphs, which is the same conclusion that Maclachlan (1989) draws for Tagalog. The suggestion being made here, then, is that Malagasy has lost the *-um-* infix, the *m-* prefix uniquely marking Actor topic.

Before we turn to the passive and circumstantial voice it should be remarked that there are a few verbal roots in Malagasy that are themselves active verbs. They tend, however, to be defective in certain ways:

- (5) *avy* `to come'
 tamy `to come'
 tonga `to arrive'
 tia `to like/love'

1.2.1.2 The Passive Voice

The passive verbs can be divided into those that indicate an action and those that indicate a result. In the former case the verb, similar to active verbs (section 1.2.1.1), describes an unfolding action (an action in progress), but in the latter case describes the result or termination of an action (as we will discuss this distinction more thoroughly in section 2.2 below, I will not go into it any further here). Passive verbs that describe an action are formed with the suffixes *-ana*, *-ina* and the prefix *a-*. Those that describe a result are formed with the prefixes *voa-* and *tafa-*. There are also a fair number of verbal roots that are themselves passive and indicate a result. Below are examples of each of these passive forms.

(6) Passive verbs (action)

-ina

raisina (*ray*) `is being received'

tapahina (*tapaka*) `is being cut'

-ana

rakofana (*rakotra*) `is being recovered'

sasana (*sasa*) `is being washed'

a-

atao (*tao*) `is being done'

aorina (*orina*) `is being built'

(7) Passive verbs (result)

voa-

voavory (*vory*) `assembled'

voaendy (*endy*) `grilled'

tafa-

tafarina (*arina*) `levelled'

tafalentika (*lentika*) `submerged'

Root Passive

tapitra `finished'

rakotra `covered'

A few verbs formed with *-ina*, *-ana*, or *a-* are in the circumstantial voice and not the passive voice. Verbs suffixed with circumstantial *-ina* or *-ana* take as a subject the location of an action or the person to whom something is attributed. In the case of the *a-* circumstantial, the subject expresses the means by which an action is carried out. For example:

- (8) *Fafazana vary ny saha.*
sweeping-CIR rice DET field
`The field is sown (with) rice.'

- (9) *Adidy ny hena ny antsy.*
CIR-cut DET meat DET knife
`The knife cuts the meat.'

The verbs with *-ina* or *-ana* that have a circumstantial sense have their regular passive meaning with the prefix *a-*. Similarly, those verbs with *a-* that have a circumstantial

sense have their regular passive meaning with *-ina* or *-ana*. The circumstantial verbs with *-ina*, *-ana* and *a-* do not form a large group. More typically, the affixation of *-ina*, *-ana* and *a-* to a root carries the normal passive meaning.

The passive is also formed, although very rarely, with the infix *-in-*. Below are some examples:

- (10) *v-in-idy* `to be bought'
 v-in-aky `to be broken'
 t-in-apaka `to be cut'

1.2.1.3 The Circumstantial Voice

As mentioned above, the circumstantial voice takes as a subject a circumstance of the action. Such a circumstance can be anything from the goal of the action, to the manner in which it is carried out, to even the time the action takes place. Typically, the circumstantial is used in situations where in English one would employ a preposition such as *with*, *for*, *about*, *in*, etc. Since the circumstantial voice is not found in Indo-European languages, I have illustrated its use in examples (11) and (12) below (note that a word for word translation is not possible):

- (11) *Andidianao ny hena ny antsy.*
 cut-2psgGEN DET meat DET knife
 `The knife cuts the meat by you.'
 (ie. you cut the meat with the knife)
- (12) *Nanaovako tsihy i Dada.*
 pst-make-1psgGEN mat Dad
 `Dad is made a mat by me.'
 (ie. I made a mat for Dad)

Active verbs form the circumstantial voice by dropping the initial *m-* and adding the suffix *-ana* (with some idiosyncratic morpho-phonological changes occurring as well):

(13)	<u>Active</u>	<u>Circumstantial</u>	<u>Active</u>	<u>Circumstantial</u>
	<i>milaza</i>	-> <i>ilazana</i>	<i>manohitra</i>	-> <i>anohirana</i>
	<i>mikosina</i>	-> <i>ikosenana</i>	<i>manasa</i>	-> <i>anasana</i>
	<i>mijery</i>	-> <i>ijerena</i>	<i>manapitra</i>	-> <i>anaperana</i>
	<i>mijanona</i>	-> <i>ijanonana</i>	<i>manidy</i>	-> <i>anidiana</i>

Interestingly, verbal passives, adjectives and verbs with the prefix *tafa-* take the circumfix *aha-...-ana* in the circumstantial voice. Their circumstantial form is formed with the prefix *maha-* (the *m-* dropping as with the active prefixes since an internal argument is externalized). Unlike the circumstantial formed with the active prefixes, the *maha-* based circumstantial expresses, as do verbal passives, adjectives and verbs with the prefix *tafa-*, a result and not an action. We will not be able to investigate the circumstantial circumfix formed with *maha-* in this thesis. The resultative nature of *maha-* and its circumstantial form, however, will be explained by the analysis that follows.

Chapter 2: The Semantics of *maha-*

2.0 Introduction

One of the defining characteristics of the *maha-* prefix is its resultative nature in the past tense (be it either the causative or the abilitive meaning). We shall first illustrate the prefix's resultative nature and then turn to a voluntary/involuntary interpretation of agency that also arises with *maha-* predicates. From here our discussion will lead us to consider in more detail in section 2.4 what exactly is meant by saying *maha-* expresses an ability. In doing so, we will refer to work done by Dell (1983) on *maka-* (*maha-* cognate) in Tagalog.

Before addressing what *maha-* is, however, I would like to briefly consider what it is not. This latter consideration is warranted because of an erroneous conclusion reached by certain researchers and lexicologists that *maha-* is derived from the verb *mahay* which has various meanings including 'to know', 'to be able', 'to be able to do.' For example, in the Dictionnaire Malgache-Francais, *maha-* is said to be a "contraction" of *mahay*. Besides the phonetic similarity of the two, one might also be drawn to this conclusion by the obvious similarity of meaning.

However, a serious consideration of this claim quickly leads one to reject the putative kinship of these two morphemes. Such a consideration is what we shall now undertake.

2.1 What *maha-* is Not: Why *maha-* is not a Simplified Form of the Verb *mahay*

First, it is striking that languages related to Malagasy do not have a cognate for *mahay* 'to know.' *maha-*, however does have cognates in every language that I have looked at (admittedly, I have had access to a limited number of languages: Marshallese, Bontok, Hiligaynon, Cebuano Visayon and Tagalog). It would seem unlikely that if *maha-* were derived from *mahay* that the latter would not be present along with its derivative.

Furthermore, the similarity between *mahay* and *maha-* begins to break down if one looks at the distribution of the two. Most active verbs can appear with *mahay*, whereas *maha-* never occurs with active verbs¹⁰ (though, unlike *mahay*, it can take resultative verbs beginning with *voa-* and *tafa-*).

¹⁰ It might be argued that this difference in distribution between *maha-* and *mahay* suggests that they are in complementary distribution and are, in fact, allomorphs. The difficulty of this position is that one would have to motivate such a distribution for which there does not seem to be any obvious explanation.

For example:

- (1) *mahay*
 manasa `to wash'
 mahay manasa `to know how to wash'
 `able to wash'
 manoratra `to write'
 mahay manoratra `to know how to write'
 `able to write'
 mijery `to watch'
 mahay mijery `to know how to watch'
 `able to watch'
 manatsara `to improve'
 mahay manatsara `to know how to improve'
 `able to improve'

- (2) *maha-*
 **maha-manasa*
 **maha-manoratra*
 **maha-manatsara*
 **maha-mijery*

On the other hand, *maha-* readily combines with nouns (as we shall see in detail in Chapter 5), whereas *mahay* is found with only a few common nouns:

- (3) *mahay* + Noun
 vava `mouth'
 mahay vava `to know how to talk'/'able to talk'
 rano `water'
 mahay rano `to know how to swim'/'able to swim'
 taratasy `letter'
 mahay taratasy `to know how to write'/'able to write'
 olona `people'
 mahay olona `to know how to get along with people'/'able to get along with people'

maha- also readily combines with adjectives (again, as we shall see in detail in chapter 5), whereas *mahay*, from what I can tell, is found with only a few adjectives.

Furthermore, those adjectives that do combine with *mahay*

have a very different meaning from their *maha-* counterparts. For example, in (4) and (5) below, *maha-* has a causative meaning, whereas as *mahay* has the meaning of '(able) to do'.

- (4) *ratsy* (ADJ) `bad, ugly'
 maharatsy `to make bad, ugly'
 mahay ratsy `(able) to do bad'
- (5) *tsara* (ADJ) `good, beautiful'
 mahatsara `to make beautiful/good'
 mahay tsara `(able) to do good'/'to know well'

This is not an insignificant semantic difference if one wants to hold that *maha-* is a contraction of *mahay*.

Clearly, we cannot be dealing with the same morpheme.

One might ask why then is it possible for *mahay* to have an abilitive sense as in (1) and (3) above? The answer for this, I believe, is that *mahay* is essentially the cognitive verb 'to know' and that the abilitive sense of *mahay* is an extension of this cognitive sense. That is, knowing-how to swim can be used in the sense of being able to swim. Similarly, knowing-how to write can be used in the sense of being able to write etc.¹¹ As essentially a cognitive verb one would predict that *mahay* could only occur with an animate subject since things simply can't think. *maha-* should follow suit if there is a connection between the two morphemes. Once again they part ways:

¹¹ Bybee, Perkins & Pagliuca (1994) point out that diachronically it is not uncommon for a verb with the meaning of 'to know' to be extended to include physical ability as well.

- (6) *Mahay tsara ny trano *ny voninkazo/Rabe.*
mahay well DET house DET flowers/Rabe
 'Rabe/*the flowers know(s) the house well.'
- (7) *Mahatsara ny trano ny voninkazo/*Rabe.*
maha-beautiful DET house DET flowers/Rabe
 'The flowers/*Rabe make the house beautiful.'

Not only do we have a very different meaning between a causative and a cognitive verb in (6) and (7) above, only an animate subject is possible with *mahay*, while only an inanimate subject is possible with *maha*- (why *maha*- can only take an inanimate subject in (7) above will be explained in section 5.2 below). In fact, *mahay* can occur with an inanimate subject, but this has an anthropomorphic effect on the subject. In (8) below the cyclone is presented as being a conscious entity and not merely a thing.

- (8) *Ny rivo-doza dia nanimba ny tananan'i Toamasina:*
 DET water-angry FOC ravaged DET city of Tamatave
mahay ratsy mihitsy ilay izy.
 know bad very that he
 'The cyclone ravages Tamatave: he does a lot of bad.'

There are also phonological reasons why one would not want to say the two are related. For one thing, *mahay* is pronounced in rapid speech [maai]. Even in rapid speech the diphthong of the second syllable is retained and not reduced to a simple low central vowel [a]. Stress also clearly falls on the diphthong which is not the case with the second syllable of *maha*-. Since the second syllable of *mahay* carries stress and is not reduced in rapid speech, it would

be unlikely that this segment would ever undergo the changes necessary to produce *maha-*.

A serious consideration of what has been all too simply assumed reveals that it is not the case that *maha-* is a derivative of *mahay*. Clearly, *maha-* and *mahay* are two separate morphemes.¹² Having shown what *maha-* is not, we will now show what it is.

2.2 The Resultative Nature of *maha-*

maha- participates in an important distinction between action and result predicates. This is clearly seen if we contrast *maha-* with active morphology in the past tense.¹³ As examples (1) and (2) illustrate, *maha-* in the past tense is resultative. That is, in (1) it is actually the case that the roots were pulled out by Rabe with his hands and that in (2) Soa was made happy by Rabe.

- (1) *Nahaongotra ravina amin'ny tanana Rabe.*
*naha-*pull out roots with DET hands Rabe
'Rabe was able to pull out the roots with his hands.'
- (2) *Nahafinaritra an'i Soa Rabe.*
*naha-*happy ACC-Soa Rabe
'Rabe made Soa happy.'

¹² In fact, Rabenilaina (1985, p.372) remarks that *mahay* is a contracted form of *mahahay* 'to know'. The situation then is just the reverse of what has been suggested above; *maha-* is not a contraction of *mahay*, rather *mahay* is a contraction of *mahahay*.

¹³ *maha-* does *not* express an action and can, therefore, be contrasted with active morphology. As we shall see more convincingly below, *maha-* is stative.

Active morphology in the past also expresses a result. In example (3), where the verbal root is prefixed by the active prefix *ni-*, it is understood that the dog was caught by the child. However, as example (4) shows, this result is only a conversational implicature and can be negated.

- (3) *Nisambotra ny alika ny zaza.*
ni-captive DET dog DET child
'The child caught the dog.'
- (4) *nisambotra ny alika ny zaza, nefa faingana loatra*
ni-captive DET dog DET child, but quick too
ilay alika.
that dog
'The child tried to catch the dog, but the dog was too quick.'

It is evident from example (4) that the active form in Malagasy can express the sense of "to try to" or "attempt to". Contrary to example (4), negating the result of *maha-* is impossible:

- (5) **Nahasambotra ny alika ny zaza, nefa faingana*
naha-sambotra DET dog DET child, but quick
loatra ilay alika.
too that dog
'The child was able to catch the dog, but the dog was too quick.'

The use of *nahasambotra* in (5) entails that the dog was actually caught by the child. The added '*nefa...*' clause renders the sentence nonsensical since it tells us, contradictory to '*nahasambotra*', that the dog also got away.

Perfectivity is in other languages also related to the abilitive. In their crosslinguistic study of modality,

Bybee, Perkins & Paglucia (1994) cite Worora, Alawa, Loá and Nung as languages that have a perfective morpheme that is also used to signal ability.¹⁴ For example, *kol* in Worora means 'finished'. If it is suffixed with an irrealis morpheme, then the meaning becomes one of 'able to.' In Lao, *dai:* (colon indicates short vowel) means 'already, did', but also 'can'. The use of the perfective to signal ability should not be completely surprising; the completion of an act in fact demonstrates ability.

2.3 Underspecification of Volitionality

maha- predicates can be interpreted as having a volitional or nonvolitional reading:

- (6) *Nahahitsaka ny biby kely Rabe.*
naha-footprint DET animal small Rabe
 'Rabe accidentally stepped on the insect.'
 'Rabe deliberately stepped on the insect.'
- (7) *Nahasosotra an'i Soa Rabe.*
naha-vexed ACC-Soa Rabe
 'Rabe deliberately vexed Soa.'
 'Rabe accidentally vexed Soa.'

Context determines the (non)volitional role of the agent in bringing about the result, as may the semantics of the root to which *maha-* attaches. For instance, a root such as *refy* 'a unit of measure' from which we have *maharefy* 'able to measure', would not allow a nonvolitional reading of the

¹⁴ As will be shown in section 4.1, even causative *maha-* expresses an ability.

agent. One could be understood as having accidentally measured the wrong amount or the wrong thing, as in *Rabe accidentally measured the salt, instead of the sugar*. However, in this case, although acting on the wrong assumption, Rabe is still understood as acting *voluntarily*. It would be incorrect, therefore, to say that volitional and nonvolitional *maha-* each have their own lexical entry since (non)volitionality is determined from context or the semantics of the root. One might understand the underspecification of agency in *maha-* predicates as arising because a result is emphasized and the precise role of the agent in bringing about the result is left open. However, in Malagasy even active forms of verbs can express either a volitional or nonvolitional agent:

- (8) *Nanitsaka ny biby kely Rabe*
nan-footprint DET animal small Rabe
 'Rabe accidentally stepped on the insect.'
 'Rabe deliberately stepped on the insect.'

We are dealing, then, with a general underspecification of volitionality.

Examples (6) and (7) are a little misleading, however. If we put *manao fanahiniana* 'deliberately' or *tsy nahy* 'accidentally' in (6), for example, we get an asymmetry; only *tsy nahy* produces a grammatical sentence.

- (9) *Nahahitsaka tsy nahy ny biby kely*
naha-footprint NEG on purpose DET animal small
Rabe.
Rabe
 'Rabe accidentally stepped on the insect.'

- (10) **Nanao fanahiniana nahahitsaka ny biby kely*
 made spirit naha-footprint DET animal small
Rabe
Rabe.
 'Rabe deliberately stepped on the insect.'

Note, however, that either *manao fanahiniana* or *tsy nahy* would be fine in (8) where the active prefix *man-* is used. The grammatical judgements amongst my consultants of pairs of sentences *similar* to examples (9) and (10) were not always consistent (although there was unanimous agreement in the judgement of examples (9) and (10)). A pattern, however, did emerge which suggests that *maha-* does not accept, or at least strongly resists, *manao fanahiniaina* 'deliberately', but does readily accept *tsy nahy* 'accidentally.'

Interestingly, in the case where the agent is acting deliberately, yet has no *direct* involvement in the result of an event, *maha-* does accept the overt expression of the volitionality of the agent (here, again there was uniformity of judgement). This is illustrated with *mahazo* 'to catch' from *azo* 'obtained.'

- (11) *Nanao fanahiniana nahazo ny gripe Rabe mba*
 made spirit naha-obtain DET flu Rabe so that
tsy hianatra.
 NEG study
 'Rabe deliberately caught the flu in order to not study.'

Compare this with (12) where Rabe's efforts are directly responsible for the outcome.

- (12) **Nanao fanahiniana nahahinana ny poizina Rabe*
 made spirit naha-eat DET poison Rabe
mba tsy anatrehany ny valin'ny
 so that NEG face DET effects DET
nataony.
 actions3psgGEN
 'Rabe deliberately ate the poison in order not to
 face the consequences of his actions.'

Crucially in (11), Rabe may have placed himself in a situation where his chances of getting the flu virus were great (staying in the rain or visiting a sick friend, for example), but as far as actually "catching" the virus, he had no hand in it. In fact, the virus actually "caught" him, so to speak. Though encouraged by Rabe's actions, the result was not directly controlled or affected by them. *nanao fanahiniana* has no direct bearing on *nahazo* in (11) above. In (12), however, where overt expression of volitionality is ungrammatical, we have a situation where Rabe did play a direct role in his having swallowed the poison.

What is evident from the examples above is that *maha-* has a non-agentive focus. That is, if we go back to the action/result distinction made in section 2.1 above, it is the active prefixes like *mi-* and *man-* that can explicitly express the agent's efforts in bringing about a result (that might or might not be obtained) and therefore the active prefixes are compatible with an overt expression of deliberateness. *maha-* stands opposite of this in that the *efforts* of the agent are not expressed by the *maha-* prefix

itself. What *maha-* does describe is, I would suggest, a stative agent (as opposed to an active agent). What is exactly meant by a stative agent will become much clearer from the discussion that follows. For the moment, however, let us remark that the effort of an agent in bringing about a result is antithetical to a *maha-* predicate. Hence, volitionality, which suggests active involvement on the part of the agent, cannot overtly appear with a *maha-* predicate. The stativity that is found in the present tense of *maha-* (as in (13)) is also present even in the past resultative (as in (14)).

- (13) *Mahasambotra ny akoho i Soa.*
maha-caught DET chicken Soa
 'Soa is able to catch the chicken.'

- (14) *Gaga i Faly fa nahasambotra ny akoho i Soa.*
 surprised Faly that *naha-caught* DET chicken Soa
 'Faly was surprised that Soa was able to catch the chicken.'

In (14) it is Soa's *ability* to catch the chicken that surprises Faly and not the circumstances surrounding the catching of the chicken, nor Soa's action of catching the chicken.

The fact that volitionality can always be *implied* with *maha-* (as in example (6)) should not lead to the conclusion that *maha-* itself is compatible with volitionality. The volitionality of the agent can be overtly expressed only in the case where the active efforts of the agent play no role in directly bringing about the result (example (11)). *tsy*

nahy, on the other hand, does not have these circumstantial restrictions and can overtly occur with *maha-* since, in the case of *tsy nahy*, the efforts or active participation of the agent in bringing about a result are not invoked. *tsy nahy* is not in conflict with the stative nature of the *maha-* prefix. I would suggest that the *implied* volitionality found with *maha-* is extra-syntactic; by virtue of the fact that a result is expressed, one can understand the agent as having acted deliberately in bringing about that result, but this has nothing to do with the prefix itself.

2.4 The Ability of *maha-*

To say *maha-* expresses an ability of someone/something may seem quite straightforward. However, a result is the culmination of many factors and one of these factors is the circumstances surrounding the action. Dell (1983) suggests that *maka-* in Tagalog is essentially a circumstantial prefix. That is, the prefix often carries with it the sense that *circumstances were such that they enabled* a person to do something. Dell presents the Tagalog data in the passive form of *maka-* (cognate of *maha-*). Briefly, for we shall see this alternation in more detail below, the passive of *maka-* is formed with the *ma-* prefix as in example (15) below. Note that volitionality is also underspecified in the passive form (*n-* also marks past tense (or "started action" Maclachlan (1989)) in Tagalog.

- (15) *Nahipo niya ang dingding.*
na-touch 3psgGEN NOM wall
 'He managed to touch the wall.'
 'He accidentally touched the wall.'

Dell suggests that, whether it is the deliberate ('managed to') or accidental interpretation, the *ma-* (or *maka-*) prefix should be understood as a circumstantial prefix where it is not so much the efforts of the agent that are important as are the enabling conditions of the surrounding circumstances (Dell's use of the term "circumstantial" is, of course, different from its use in section 1.2.1.3. where the circumstantial voice in Malagasy is discussed). This is clearly shown in (16) where *ma-* is used to express a result which comes about not so much because of the ability of the agent, but because of the proximity of the two participants:¹⁵

- (16) *Malabo ang paningin ko, pero mapakalapit*
dim NOM eyesight GEN-1psg, but very-close
niya sa akin, kaya nabaril ko siya nang
GEN-he DAT me hence na-shoot GEN-I NOM-he nang
walang kahirap-hirap.
no difficulty
 'My eyesight is bad, but he was so close I shot him without any difficulty.'

Dell goes on to comment that "what always seems to be present - and the 'managing to' nuance is just a particular

¹⁵ When I presented this scenario to my consultants they still got an abilitive reading for *maha-* and not merely the reporting of a result as suggested by Dell with his gloss of *nabaril* 'shot'. Of course, the Malagasy and Tagalog data could very well differ. At least for Malagasy, the abilitive meaning is always present in *maha-*.

case of it - is some special emphasis on the fact that the circumstances were such as to allow the agent to achieve his goal. We never have total control over the result of our actions" (1983, pg. 191). So, although in (17) below Ben himself managed to push the rock, one may also consider in this instance such enabling circumstances as the fact the rock was not solidly wedged into the ground, but was loosely resting on top.

- (17) *Naitulak ni Ben ang bato.*
na-push GEN Ben NOM rock
'Ben managed to push the rock.'

If the rock had been cemented to the ground, Ben would not have succeeded in moving it. Circumstances always play a certain role in bringing about (or not bringing about) a result.

In order to better understand *maha-*, and in particular, the role of the agent vis-a-vis the circumstances, I think it would be helpful to consider more broadly the issue of ability. The background for the following discussion comes from work done by Bybee, Perkins and Paglucia (1994) (henceforth BP&P) on modality. In what follows we will be concerned with the precise use of the abilitive sense of *maha-* with respect to the various instances of ability mentioned in their work.

2.4.1 Degrees of Ability

BP&P place the abilitive within a larger crosslinguistic and diachronic discussion of modality. Modality, which is not easily defined (one might think of it, although this is an insufficient definition, as the grammaticization of a speaker's attitudes and opinions), is regarded by BP&P as a set of of diachronically related functions. BP&P divide modality into speaker-oriented, subordinating, agent-oriented and epistemic modalities. Only the latter two modalities, however, are relevant to our discussion of the abilitive.

The agent-orientated modality, which deals with internal and external conditions on an agent with respect to the completion of an action, includes the modalities of **ability** (enabling conditions internal to the agent), **root possibility** (general enabling conditions including internal as well as external social and physical conditions) and **permission**.

Vendler (1973) discusses in some detail the difference between internal and external enabling conditions. He illustrates the difference by describing two "cans": CAN1 and CAN2. CAN1 applies in situations which are not dependent on physical or external circumstances. Contrarily, CAN2 is dependent on such circumstances. Thus, for example, if a person were bound to a chair with ropes, one would be able to say of that person that although she

The epistemic modality, which is concerned with the extent to which a speaker holds to the truth of a proposition, is comprised of (among other things) the modality of possibility. In this case, we are concerned with the possibility that a proposition is true. The modality of possibility carries with it a degree of doubt.

[illegible]

That a *maha*- predicate expresses an internal ability is quite clear. In (19) - (21) below, an internal ability is being attributed to Rabe.

- (19) *Mahateny Rabe.*
maha-word Rabe
 'Rabe can talk.' (ie. he is not mute)
- (20) *Mahavaky Rabe.*
maha-read Rabe
 'Rabe can read.'
- (21) *Matanjaka be i Rabe ka nahahemotra tsy*
 strong very Rabe that naha-draw back NEG
nahy ny fiara.
 on purpose DET car
 'Rabe is so strong that he was able to move the car
 back.'

maha- also expresses (non-)enabling circumstances external to the agent as is shown in (22) and (23) below:

- (22) *Tsy mahateny Rabe izao - marary ny vavany.*
 NEG *maha-word Rabe* now sick DET mouth3psGGEN
 'Rabe cannot talk at this moment, his mouth hurts.'
- (23) *Tsy mahavaky aho raha tsy misy amin'ny solomaso.*
 NEG *maha-read I* if NEG there with DET glasses
 'I can't read if I don't have these glasses.'

Note that internal ability is also present in (22) and (23) above. For example, in (23) there is a sense where the person speaking obviously CAN1 read even without the glasses. Otherwise, even with them that person wouldn't be able to read.

If we were to juxtapose Vendler's CAN1 and CAN2 together using a *maha-* predicate, we might get a rather awkward, though grammatical sentence as in the following:

- (24) *Io zazalahy io izay manana vava mibontsina dia*
 this boy this that have mouth swollen FOC
mahateny, fa tsy mahateny izy izao.
maha-word, but NEG maha-teny he now
 'This boy that has a swollen mouth can talk, but he
 cannot talk now.'

maha- does not, however, capture the idea of possibility. Possibility can be expressed *along side* the ability of *maha-* if a word expressing possibility is added. This is the case with *mety* 'possible'. In (25) and (26) below *mety* cannot be removed without also losing the idea of possibility.

- (25) **(Mety) haharesaka amin'i Soa rahampitso.*
 possible *haha-speak* with Soa tomorrow
 'It is possible that Soa will be able talk to him tomorrow.'
- (26) **(Mety) hahatsidika ny sakaizany Rabe*
 possible *haha-visit* DET friend3psgGEN Rabe
rahampitso.
 tomorrow
 'It is possible that Rabe will be able to visit his friend tomorrow.'

Without *mety* in (25) and (26) it is certain that Soa will be able to speak to the person in question and that Rabe will be able to visit his friend.

Permission is also not expressed with *maha-*. *afaka* 'free' (which can also express possibility), *mahazo* 'able' (from *azo* 'understood/able') or *mety* 'permitted' are used instead:

- (27) *Afaka misakafo/*mahasakafo any amin-dRaso*
 free *mi-meal/*maha-meal* there at Soa
ve aho rahariva?
 QUEST I tonight
 'May I go to Raso's for dinner tonight?'
- (28) *Mahazo mamaky/*mahavaky ny bokinao ve aho?*
 able *man-read/*maha-read* DET book2psgGEN QUEST I
 'May I read your book?'

A *maha-* predicate, then, expresses internal as well external enabling conditions (ie. root possibility), but neither possibility nor permission. External enabling conditions make up what Dell is calling the circumstantial nature of *maka-* in Tagalog. The circumstantial sense is certainly part of the semantics of *maha-*, but it is not the only factor that *maha-* encapsulates; internal ability, what one might consider as qualitative, is also present in the meaning of *maha-* (we will see this clearly in section 4.1 below).¹⁶ Of course, the circumstantial aspect of the prefix is compatible with the inactive role of the agent as discussed in section 2.3. That is, where the efforts of the agent are absent, external conditions can become important in achieving a result.

Before endeavoring to show that the causative and the abilitive *maha-* are in fact the same prefix, I would like to immediately address the achievement meaning of *maha-*, since it is possible, as I will argue, to understand its achievement meaning in terms of the prefix's abilitive meaning.

¹⁶ It may still be true for Tagalog (although I doubt it) that *maka-* uniquely expresses external ability.

Chapter 3: The Achievement Meaning of *maha-*

3.0 Introduction

As far as I know, the achievement meaning of *maha-* has been uniquely mentioned in Rabenilaina (1985) where he discusses a class of verbs which, when prefixed with *maha-*, take on a resultative meaning that is not present in their active form. I have termed this class of resultative verbs achievement verbs since, *in general*, they express a telic, instantaneous event. The following is an explanation of why the achievement meaning of *maha-* arises.

3.1 The Achievement Meaning of *maha-* as an Entailment of the Abilitive

I propose that the achievement meaning of *maha-* is a special entailment of the abilitive *maha-*. I take an achievement to be an event which happens instantaneously and terminates in some point. For e.g. 'to recognize a photo' involves the instantaneous event of recognizing a certain photo. Achievements also include such events as 'to reach a summit' or 'to find a dollar'. However, the achievement sense of *maha-* is restricted to a well-defined subclass of the abilitive meaning which in turn defines a smaller class

within the class of achievement verbs. More precisely, the achievement meaning of *maha-* groups together roots that in the active form are verbs of mental and physical perception or inquiry. The roots in question are listed in (1) below followed by their respective active form and achievement meaning of *maha-* in (2) and (3).

- | | | | | | |
|---|----|--------------------------------------|-----------------------------------|----|----------------------|
| (1) <u>Roots of Physical Perception</u> | | | <u>Roots of Mental Perception</u> | | |
| <i>jery</i> | N | `a look' | <i>dinika</i> | N | `examination' |
| <i>joko</i> | ?? | | <i>fantatra</i> | VP | `known' |
| <i>tsinjo</i> | VP | `seen' | <i>marika</i> | N | `mark/sign' |
| <i>tily</i> | N | `watchman' | <i>tadidy</i> | VP | `remembered' |
| <i>taratra</i> | N | `a beam of light'
(like an X-ray) | <i>fototra</i> | N | `basic
principle' |
| <i>tazana</i> | VP | `seen' | | | |
| <i>tsapa</i> | VP | `touched' | | | |
| <i>hazangazana</i> | N | `action of spying' | | | |
-
- | | | | | | |
|---|--|--------------------|----------------------------|--|----------------|
| (2) <u>Active form (Physical Inquiry)</u> | | | <u>Achievement Meaning</u> | | |
| <i>mijery</i> | | `to look at' | <i>mahajery</i> | | `to notice' |
| <i>mijoko</i> | | `to spy' | <i>mahajoko</i> | | `to notice' |
| <i>mitsinjo</i> | | `to watch out for' | <i>mahatsinjo</i> | | `to notice' |
| <i>mitily</i> | | `to survey' | <i>mahatily</i> | | `to notice' |
| <i>mitaratra</i> | | `to spy' | <i>mahataratra</i> | | `to notice' |
| <i>mitazana</i> | | `to observe' | <i>mahatazana</i> | | `to notice' |
| <i>mitsapa</i> | | `to inspect' | <i>mahatsapa</i> | | `to notice' |
| <i>manazangazana</i> | | `to spy' | <i>mahahazangazana</i> | | `to
remark' |
-
- | | | | | | |
|---|--|----------------------------|----------------------------|--|------------------|
| (3) <u>Active form (Mental Inquiry)</u> | | | <u>Achievement Meaning</u> | | |
| <i>mandinika</i> | | `to examine' | <i>mahadinika</i> | | `to remark' |
| <i>mamantatra</i> | | `to examine' | <i>mahafantatra</i> | | `to know' |
| <i>mamototra</i> | | `to inquire' | <i>mahafototra</i> | | `to remark' |
| <i>manamarika</i> | | `to inquire' ¹⁸ | <i>mahamarika</i> | | `to notice' |
| <i>mitadidy</i> | | `to try to remember' | <i>mahatadidy</i> | | `to
remember' |

The achievement meanings in (2) and (3) have been glossed fairly uniformly (especially in the case of verbs of physical inquiry). There are, however, nuances between the

¹⁸ It is not clear how *manamarika* 'to inquire' is related to the meaning of its root *marika*, from the English word 'mark.'

various achievement senses of noticing and remarking, nuances that reflect the specific semantics of the root (for example, *mahatily* from *tily* 'watchman' carries an agentive sense which is absent in *mahatazana* from *tazana* 'seen'). These nuances will, however, be left uncovered since the general meaning suffices to illustrate their achievement sense.

There are two observations worth making. First, the majority of the active forms of the roots of physical/mental perception in (2) and (3) are verbs that can be said to have a specific goal as their end result. That is, one spies, inspects, examines, inquires, tries to remember something in order to ascertain something. Secondly, it must also be remarked that *mahafantatra* 'to know' has been included underneath the heading of achievement. It is of course not correct to call it an achievement; 'to know' is stative and not a delimited event (*mahatadidy* 'to remember' is also a little difficult to classify as an achievement. The act of remembering, however, is achievement-like, as in *I just remembered something!*).

What all of the *maha*- predicates in (2) and (3) do have in common, however, is an agent that is a passive participant; a person cannot control what she remarks, knows, remembers or notices. "No one can be accused of or held responsible for having seen something, though one can be accused of or held responsible for having looked at or

watched something" Vendler (1967, p. 115). Even though "achievement" does not cleanly encompass all of the meanings of *maha-* in (2) and (3) I will continue to refer to this class of *maha-* predicates as achievements since the majority of them do fall into this class and simply because it is convenient to do so.

Examples (4) and (5) illustrate the alternation between the active verbs and their achievement counterparts. Here, the active verb is *mitazana* 'to observe' and its achievement counterpart *mahatazana* 'to notice'.

- (4) *Mitazana eo an-tanimbary ny reniny* Rabe.
 mi-seen LOC in field-rice DET mother/GEN3psg Rabe
 'Rabe observes his mother in the rice field.'
- (5) *Mahatazana eo an-tanimbary ny reniny* Rabe.
 maha-seen LOC in field-rice DET mother/GEN3psg Rabe
 'Rabe notices his mother in the rice field.'

An important difference between the active verbs and their achievement counterparts in (2) and (3) is the fact that the achievement verbs can take a *that* complement, while their active counterpart can only take a *whether* complement. Underlying this difference is a opposition between factivity and non-factivity (briefly, factive predicates are predicates that express a proposition that is true of the world, whereas a non-factive verb expresses only an *assertion* about the world). This non-factive/factive alternation is illustrated below in (6) and (7).

(6) Active Form (Non-Factive)

*Mitazana i Vao raha/*fa* *manao ny asany*
mi-seen *Vao whether/*that do* *DET work-GEN3psg*
Rabe na tsia.
Rabe or not
*'Vao looks to see whether/*that Rabe is doing his*
work or not.'

(7) Achievement (Factive)

*Mahatazana i Vao fa/*raha* *manao ny asany Rabe*
maha-seen *Vao that/*whether do* *DET work Rabe*
*Rabe (*na tsia).*
*Rabe (*or not)*
*'Vao notices that/*whether Rabe is doing his work.'*

The active verb *mitazana* 'to look' in (6) cannot take a *that* complement. However, its achievement counterpart *mahatazana* 'to notice' in (7) can. Also note that *mitazana* allows *na tsia* 'or not', whereas *mahatazana* does not (since it is expressing something which is true of the world). As in English, negating a factive verb does not affect the truth value of the proposition expressed by the *that* clause. For example, even if Vao does not notice it, it is, in fact, the case that Rabe in (8) is doing his work.

- (8) *Tsy mahatazana i Vao fa* *manao ny asany* *Rabe.*
NEG *maha-seen* *Vao that do* *DET work/GEN3psg Rabe*
'Vao does not notice that Rabe is doing his work.'

What has not been mentioned up to this point is that the roots upon which the achievement meanings are based may also have the expected abilitive sense when prefixed with *maha-*. This is shown in (9) and (10) below where the abilitive sense of *dinika* 'examination' is given followed by its achievement sense.

- (9) *Mahadinika ny gazety Faly rehefa mangina.*
maha-examination DET paper Faly when silent
'Faly can examine the newspaper only in silence.'
- (10) *mahadinika i Solange fa manao ny akanjo mena.*
maha-examination Solange that wear DET dress red
i Haingo.
Haingo
'Solange notices that Haingo is wearing a red
dress.'

Example (9) describes a general condition and is true of any situation where Faly is reading the newspaper. Example (10), however, is true of a specific situation, namely that situation where Solange sees Haingo who at that moment is wearing a red dress. In (11) and (12) below, the abilitive meaning of the active verbs in (2) and (3) are given along with their co-occurring achievement meanings.

- (11) Roots of Physical Perception
- | | | <u>Achievement</u> |
|------------------------|-------------------------|--------------------|
| <i>mahajery</i> | 'able to look' | --> 'to notice' |
| <i>mahajoko</i> | 'able to spy' | --> 'to notice' |
| <i>mahatsinjo</i> | 'able to watch out for' | --> 'to notice' |
| <i>mahatily</i> | 'able to survey' | --> 'to notice' |
| <i>mahataratra</i> | 'able to spy' | --> 'to notice' |
| <i>mahatazana</i> | 'able to observe' | --> 'to notice' |
| <i>mahatsapa</i> | 'able to inspect' | --> 'to notice' |
| <i>mahahazangazana</i> | 'able to spy' | --> 'to remark' |
- (12) Roots of Mental Perception
- | | | <u>Achievement</u> |
|---------------------|---------------------------|----------------------|
| <i>mahadinika</i> | 'able to examine' | --> 'to remark' |
| <i>mahafantatra</i> | 'able to examine' | --> 'to know' |
| <i>mahafototra</i> | 'able to inquire' | --> 'to remark' |
| <i>mahamarika</i> | 'able to inquire' | --> 'to notice' |
| <i>mahatadidy</i> | 'able to try to remember' | --> 'to
remember' |

The fact that the abilitive counterpart of the achievement reading of *maha-* is also possible suggests that the achievement reading is semantically subordinate to the

abilitive reading in the following way: if one is able to observe, examine, survey etc. a situation then it follows that one *but can't help* to remark/notice some truth value of that situation (the factive and non-volitional nature of the achievement verbs in (11) and (12)).

As mentioned already, the agent in the entailed achievement senses of the abilitive are passive participants; 'to notice', 'to remark', 'to know', 'to remember' are events/states that someone undergoes and cannot be held responsible for. Note that the entailment under question could never be the *actual* activity, such as spying, examining, watching etc., since these activities require the active, willful participation of an agent which would be contrary to the stativeness of *maha-*. In a fundamental way the entailed class of *maha-* predicates in (11) and (12) are *automatic* entailments of their abilitive counterparts.

It is instructive to consider a case where an entailment such as we have been describing above is not possible. The verb *mitady* 'to look for/to search' can be said to have as a goal the achievement of discovering something. This entailment would be expected on the grounds that 'to discover' is non-volitional, telic and factive. However, its *maha-* counterpart, *mahatady* does not carry such an entailment. Based on what we have said above, the reason for this is because 'able to look for/search' does not

automatically entail that one is going to discover what one is looking for. However, although one may never find what one is looking for, one can't help but notice what one is looking at, or remark something about which one is inquiring.

There are other verbs that, although they do not fit the abilitive/achievement alternation described above, do have a similar automatic entailment. These verbs are not surprisingly verbs of perception such as *mahahita* 'able to see'¹⁸ and *mahare* 'able to hear.' But *mahahita* can also simply mean 'to see' and *mahare* 'to hear.' It is clear that if one can see one is seeing. Likewise, if one can hear, one is hearing. (13) and (14) below can be uttered in the same context with the same meaning. The same goes for (15) and (16).

- (13) *I can hear the music.* (15) *I can see the ship.*
(14) *I hear the music.* (16) *I see the ship.*

Again, the entailment is possible because the agent is an automatic undergoer in the acts of seeing and hearing in the same way that the agent is an undergoer in the acts of remarking, noticing, knowing etc.

Having subsumed the achievement meaning of *maha-* under its abilitive meaning, we will now turn our attention to the

¹⁸ *mahahita* is usually understood as *mahita*. Rabenilaina (1985, p. 372) suggests that the shorter *ma-* form has supplanted the *maha-* form. This is the same contraction that we saw with *mahahay/mahay* in section 2.1 above.

prefix's abilitive and causative meanings. We will show that, contrary to the idea that there is a causative *and* an abilitive *maha-*, there is in fact only one *maha-* which is *both* causative and abilitive. The first step (section 4.1) which we shall take on the path to this conclusion is rather an easy one.

Chapter 4: *maha-* is Both Causative and Abilitive

4.0 Introduction

The idea that there is a causative and an abilitive *maha-* arises partly from an imprecise translation of the causative reading. It also arises from a failure to consider *maha-* as a complex prefix. We shall first look at the correct interpretation of the causative meaning, showing that the causative *maha-* also involves an ability, and then turn to the proposal that *maha-* is in fact composed of the stative morpheme, *ma-*, and the causative morpheme, *ha-* (we shall slightly revise this last statement in section 6.2 below). How we get from this complex predicate to the actual abilitive and causative readings will be taken up in Chapters 5 and 6.

4.1 Causative *maha-* also Expresses an Ability

In order to understand the full meaning of the causative *maha-* it is instructive to compare examples (1) and (2) and examples (3) and (4).

- (1) **Mahatsara ny trano Rabe.*
 maha-beautiful DET house Rabe
 'Rabe makes the house beautiful.'

- (2) *Mahatsara ny trano ny voninkazo.*
maha-tsara DET house DET flowers
 'The flowers make the house beautiful.'
- (3) **Mahamena ny akanjo Rabe.*
maha-red DET clothes Rabe
 'Rabe makes the clothes red.'
- (4) *Mahamena ny akanjo ity loko ity.*
maha-red DET clothes this colour this
 'This colour makes the clothes red.'
 (ie. it's a property of the colour (dye) that it
 turns the clothes red)

Rabe in (1) and (3) cannot be the subject. *Rabe* could be taken as the subject but only with the bizarre understanding that in (1) he *himself* adorns the house as some sort of decoration and in (3) that he *himself* possesses some sort of bodily chemical that turns the clothes he touches red (a variation on the King Midas syndrome). Clearly, what we are dealing with here is a causative *ability* of something/someone to bring about a certain result. In other words, it is an ability of the flowers to make the house beautiful and an ability of the dye to make the clothes red due to a certain quality which each possesses (with respect to the discussion of ability in section 2.4.1 above, the qualitative abilities described in (2) and (4) are instances of internal ability). We are not to understand 'to make' in examples (2) and (4) in an eventive sense but in a stative sense. Being qualitative, the causative *maha-* is, like the

abilitive *maha-*, stative¹⁹. A causative state exists between the flowers and the house in (2) and between the dye and the clothes in (4). We would not expect, then, to find the causative *maha-* in a situation where it is clearly the case that a dynamic event is being described. This is shown in (5) below where, given the context of two people in the process of dying clothes, only the active verbal form of *mena* 'red' is possible and not its *maha-* form.

- (5) *Haingana! asory ao anaty rano ny akanjo.*
 quick! lift out from water DET clothes
*Manamena/*mahamena azy ny loko.*
mana-red/maha-red them DET dye
 'Quickly! Take the clothes out of the water.
 The dye is making them red.'

So, if causative *maha-* expresses a causative *ability*, how are we to understand the abilitive *maha-* as also involving a causative (since our claim is that any *maha-* is *both* causative and abilitive)? In order to see this we must first turn to the claim that *maha-* is comprised of a stative morpheme, *ma-*, and a causative morpheme, *ha-*.

4.2 *maha-* as Two Morphemes, *ma-* and *ha-*

4.2.1 The Morpheme *ma-* as a Stative Marker

The prefix *ma-* is very common in Western Austronesian

¹⁹ In the causative interpretation of *maha-*, the ability has been left latent within the translation.

languages as a marker of stative aspect (for example, Malagasy, Tagalog, Bontok, Ilokano, Kiamaragang Dusun) and is reconstructible for Proto-Philippine and most likely Proto-Austronesian as well (Gerdtz (1979)). In Malagasy, for example, *ma-* forms adjectives and some stative verbs from nouns and bound roots:²⁰

(6)	<i>tanjaka</i>	N	'force'	<i>ma-tanjaka</i>	ADJ	'strong'
	<i>tsiro</i>	N	'taste'	<i>ma-tsiro</i>	ADJ	'tasty'
	<i>loto</i>	N	'filth'	<i>ma-loto</i>	ADJ	'filthy'
	<i>tsatso</i>	*		<i>ma-tsatsso</i>	ADJ	'tasteless'
	<i>tory</i>	N	'sleep'	<i>ma-tory</i>		'to sleep'
	<i>nofy</i>	N	'dream'	<i>ma-nofy</i>		'to dream'
	<i>anana</i>	*		<i>manana</i>		'to have'

In such languages as Tagalog and Ilokano, *ma-* also marks verbs of involuntary action. For example, in Tagalog *ma-* is found with the following verbs:

(7)	<i>ma-dapa</i>	'to stumble'
	<i>ma-laglag</i>	'to fall'
	<i>ma-pula</i>	'to blush'
	<i>ma-buhay</i>	'to live'

²⁰ *ma-* also forms about fourteen non-stative verbs:

<i>handro</i>	N ->	<i>mahandro</i>	'to cook'	<i>iray</i>	N ->	<i>miray</i>	'to unite'
<i>hary</i>	N ->	<i>mahery</i>	'to create'	<i>ody</i>	N ->	<i>mody</i>	'to back home'
<i>ita</i>	N ->	<i>mita</i>	'to traverse'	<i>omba</i>	N ->	<i>momba</i>	'to follow'
<i>iditra</i>	N ->	<i>miditra</i>	'to enter'	<i>onina</i>	* ->	<i>monina</i>	'to reside'
<i>idina</i>	N ->	<i>midina</i>	'to descend'	<i>ety</i>	? ->	<i>mety</i>	'to accept'
<i>indrana</i>	N ->	<i>mindrana</i>	'to borrow'	<i>aka</i>	* ->	<i>maka</i>	'to take'
<i>andry</i>	N ->	<i>mandry</i>	'to go to bed'	<i>andro</i>	N ->	<i>mandro</i>	'to wash oneself'

Notice that all these roots (with the exception of *handro* and *hary*) begin with a vowel which suggests that perhaps some phonological account can be given to account for these verbs. It might be that at least some of these verbs are formed with the active prefix *mi-* of which the *i* has been lost.

This is similar to data found in Ilokano (taken from Gerdts (1979)):

- (8) *ma-tennag ti danum.* (9) *na-regreg ni John iti kayo.*
ma-fall DET water na-fall DET John DET tree
'The water falls.' *'John fell from the tree.'*

Gerdts proposes that in Ilokano the stative morpheme, *ma-*, has been reanalyzed as a marker of involuntary action. The same, of course, could be said for Tagalog. It can be easily seen how a stative marker could be reinterpreted as a marker of involuntary action since states are by nature involuntary. However, *ma-*, in Malagasy has not undergone this reanalysis into a marker of involuntary action. Verbs of involuntary action in Malagasy take an active prefix, either *mi-* or *man-*:

<i>mitombo</i>	(<i>tombo</i>)	'to grow up'
<i>mitohina</i>	(<i>tohina</i>)	'to stumble'
<i>mipararetra</i>	(<i>pararetra</i>)	'to tremble'
<i>manoaka</i>	(<i>hoaka</i>)	'to yawn'
<i>mianjera</i>	(<i>zera</i>)	'to fall'

We shall make the claim in this thesis that the *ma-* morpheme in the *maha-* prefix is the stative prefix *ma-*. This is entirely compatible with (and in chapter 6 we will propose that it is responsible for) the abilitive reading of the prefix (which section 4.1 showed is always present).

We will now address the claim that *ha-* is a causative morpheme. The argument for this analysis is more persuasive if we turn to crosslinguistic data from Tagalog and

Kimaragang Dusun. Malagasy, as we shall see, no longer has a certain paradigm that is found in these other two languages that is crucial in understanding the make-up of the *maha-* prefix and, in particular, in arguing for *ha-* as a causative morpheme.²¹

4.2.2 The Morpheme *ha-* as a Causative Morpheme: Evidence from Active/passive Forms in Tagalog and Kimaragang Dusun

In Tagalog, it can be seen that *maka-* (cognate of *maha-*) participates in a "flip" between object and actor focus. Unlike Malagasy, *ma-* in Tagalog is found in what has been called the passive form of *maka-* (Gerds (1979)). This flip between passive *ma-* and active *maka-* is shown in (10) and (11) respectively. As we saw in section 2.4, each example (taken from Schachter & Otnes (1972)) is ambiguous between an involuntary and voluntary reading.

(10) Passive Form

Na-gamit niya ang mangang hilaw.
na-use GEN NOM mango green
 'The green mango was deliberately used by him.'
 'The green mango was accidentally used by him.'

(11) Active Form

Naka-gamit siya ng mangang hilaw.
naka-use NOM ACC mango green
 'He deliberately used the green mango.'
 'He accidentally used the green mango.'

²¹ I realize that by arguing for an analysis of *ha-* in Malagasy by turning to data from other related languages the argument is open to the risk that *ha-* may simply not work the same way crosslinguistically. However, the data from Tagalog and Kimaragang argues for *ha-* as a causative morpheme in so far as I can find no contrary evidence to suggest that *ha-* in Malagasy is somehow different.

I would argue that this "flip" between active *maka-* and passive *ma-* is possible because of a causative element, namely *ka-* (*ha-* in Malagasy). In (10) there is no causative *ka-* morpheme, only the stative prefix *ma-*. In this case we get the Passive form where the theme is the subject of the sentence. In (11) where we do have the prefix, *ka-*, we get an agentive reading with the agent as the subject of the sentence. In other words, it takes a causative morpheme (ie. *ha-*) to "focus" the agent (as opposed to the theme) and give it the position as subject of the sentence.²²

Kroeger (1990) provides similar data for Kimaragang Dusun. In Kimaragang Dusun the cognates of *maha-/ma-* are *ko-/o-* and *noko-/no-* in the past tense ([o] lowers to [a] when the vowel of the following syllable is [a]).²³

Kroeger analyzes the *ka-* morpheme as an Actor Pivot which is compatible with the causative interpretation that we are arguing for here. For example, Kroeger breaks down the Passive and Active forms of *akan* 'to eat' as follows. Note that the *o-/a-* prefix in the Passive and Active forms is

²² The passive *ma-* form in (10) can take an agent in the genitive case. I assume that a zero morpheme allows the realization of this agent. The presence of an agent in the passive should not, however, weaken the argument that *ka-* is itself causative and responsible for the "flip" from the passive to the active. Of course, this raises the question of how theta role assignment is carried out in the active form. We will address this issue in chapter 6.

²³ Kroeger (1990) suggests that the *ko-* prefix was historically **oko-*. The initial *o-*, being unstressed, was dropped. This would explain why the present day prefix does not appear with the stative marker *o-*.

glossed by Kroeger as a stative marker:

(12) Passive Form

na-akan

Pst-STAT-eat

'was able to be eaten'

(13) Active Form

n- a- ka- akan

Pst-STAT-ACTOR-eat

'was able to eat'

That *ka-* (*ha-*) is in fact a causative morpheme nicely explains a subtle difference we find in the nominal system in Malagasy as illustrated in (14) and (15) (both these examples are instances of the genitive construction which we will consider in detail in section 5.2. In (14) and (15) the genitive construction is expressing possession).²⁴

(14) *ny hamailaky ny saka*. 'the (innate) skill of the cat.'

(15) *ny fahamailaky ny mpiasa*. 'the (acquired) skill of the worker.'

In (14) the abstract noun *hamailaky* '(innate) skill' is predicated of the cat.²⁵ In (15), however, where we are referring to a worker, the *f-* nominalized form of *maha-* is used. Briefly, *f-* nominalization in Malagasy is a process that forms nominals from dynamic and stative verbs by "binding" the outermost morpheme. For example, when *f-* is

²⁴ My consultants did not get this difference in meaning when presented with the examples in (14) and (15). This difference in meaning is brought up in Rajemisa-Raolison (1971) and it is most likely the case that the difference between such pairs as (14) and (15) has been or is being lost for present day Malagasy speakers.

²⁵ In both (14) and (15) we have the genitive construction (to be explained in detail in Chapter 6) which in this instance sets up a possessor/possessee relationship between the subjects *ny saka* 'the cat' and *ny mpiasa* 'the worker' and the nominals *hamailaky* and *fahamailaky* respectively.

infixes to an active prefix beginning with the Actor topic marker *m-*, the derived nominal has the meaning 'the agent of the action':

- (16) *mividy* 'to buy' -> *mpividy* 'buyer'
mangalatra 'to steal' -> *mpangalatra* 'thief'

When the *f-* infix is added in place of the *m-* prefix the resulting nominal has the meaning 'the manner of the action' or 'the instrument of the action'. For example (taken from Rahajarizafy (date unknown)):

- (17) *Aiza ny famaky?* (18) *Ratsy famindra izy*
 where DET *f-an-cut* bad *f-an-walk* 3psgNOM
 'Where is the ax?' 'He is bad when it comes
 to his manner of walking.'

Returning to the examples in (14) and (15), the *f-* nominalized form in (15) has an acquired sense, contrary to the innate meaning of the abstract nominal in (14). Turning this acquired meaning around, we could say that the worker was "made skilled" (as opposed to being naturally skilled). The causative *ha-*, then, would explain this acquired meaning of the nominal in (15).²⁶ The difference between such

²⁶ Of course, one must also consider the involvement of the *f-* prefix in the meaning of *fahamailaky*. When *f-* occurs with the stative *aha-* prefix the resulting meaning, at least with certain roots such as *mailaky* (which we will later identify as "non-eventive"), is 'the caused quality described by the root' (although, again, the acquired aspect of the quality seems to be lost for present day Malagasy speakers, so that the current meaning is simply the quality described by the root). The data involving the *f-* morpheme is rather interesting and certainly more complicated than I present it here. Whatever that explanation is, however, I would suggest that the acquired meaning of *fahamailaky* (and any other such derived noun) is due to the causative

pairs as (14) and (15) is that the former is a state whereas the latter is a change of state.

However, example (14) raises an obvious question. The root for 'skill' in (14) and (15) is *mailaky*. Its abstract nominal form in (14) is formed with a *ha-* prefix, different from the causative *ha-* morpheme that we are arguing for in the case of *maha-*. That there should be two different *ha-* morphemes is not implausible and is something that we will assume in this thesis.

The above discussion up to this point has argued that any *maha-* prefix is both causative and abilitive. In the following chapter we will turn our attention to the nature of the root to which *maha-* attaches. In particular, we will be interested in the eventive and non-eventive nature of the roots to which *maha-* attaches.

nature of the *ha-* prefix.

Chapter 5: Eventive and Non-Eventive Roots

5.0 Introduction

Up to this point we have shown that the dual nature (the causative and abilitive aspects) of *maha-* arises because of imprecise translation (in the case of the causative reading) and the assumption that *maha-* is monomorphemic (instead of being comprised of the two morphemes *ma-* and *ha-*). In this chapter we will address the eventive/non-eventive nature of the roots to which *maha-* attaches. In particular, we will look at their different behaviour in the genitive construction and their difference in the selection of active morphology.

5.1 A Definition of Eventive and Non-Eventive Roots

One of the main claims of this thesis, which we will address in detail in chapter 6, is that the abilitive and causative meanings of *maha-* are predictable from the nature of the root to which *maha-* attaches; an eventive root will give rise to the abilitive reading and the non-eventive root will give rise to the causative reading. A rough (and rather simple) definition of an eventive and a non-eventive root is given below.

Eventive roots: a root that describes an action or the result of an action.

Non-Eventive roots: a root that does *not* describe an action or the result of an action.

I will assume that associated with eventive roots are certain argument structures (which we will elucidate below). Non-eventive roots, on the other hand, crucially lack argument structure. Part of the reasoning for the latter claim comes from work by Walinska de Hackbeil (1986), Amberber (1994) and more importantly Jackendoff (1983). Jackendoff proposes, and I will assume this here, that roots can be identified by ontological categories such as THING, PROPERTY, EVENT etc. Each category has an unmarked realization as a syntactic category; THING is typically realized as noun, PROPERTY as adjective and EVENT as verb. Unexceptionally, THING and PROPERTY take the argument structures <R> and <TH> respectively. EVENT, however, must carry information of its argument structure since its argument structure depends not on its ontological category but on the semantics of the verb (for example, both *eat* and *give* are an EVENT, but the former internally takes a theme, whereas the latter takes a theme as well as a goal).

Essentially, I would like to claim that these ontological categories can be grouped as either eventive or non-eventive (in the sense of the definitions above). The category EVENT is obviously eventive and PROPERTY obviously non-eventive. The category THING, as we shall see in more

detail in section 5.3, can be either eventive or non-eventive. Examples of eventive and non-eventive roots are given in (1) and (2) below.

(1) Eventive Roots (Abilitive *maha-*)

Nouns (THING)	Verbal Passives (EVENT)
<i>havokavoka</i> 'action of hitting'	<i>tapaka</i> 'cut'
<i>kafara</i> 'complaint'	<i>tapitra</i> 'finished'
<i>sava</i> 'action of separating'	<i>laitra</i> 'penetrated'
<i>tohitra</i> 'resistance'	<i>resy</i> 'vanquished'
<i>hoby</i> 'acclamations'	<i>rovitra</i> 'used'

(2) Non-Eventive Roots (Causative *maha-*)

Nouns (THING)	Adjectives (PROPERTY)
<i>loto</i> 'filth'	<i>tsara</i> 'good'
<i>dio</i> 'cleanliness'	<i>finaritra</i> 'content'
<i>tsatso</i> 'tastelessness'	<i>kamo</i> 'lazy'
<i>ando</i> 'moistness'	<i>hendry</i> 'prudent'
<i>hery</i> 'strength'	<i>ratsy</i> 'bad, ugly'
	<i>maina</i> 'dry'

5.2 The Genitive Construction: Evidence for Eventive and Non-Eventive Roots.

Besides a semantic difference there are other differences that distinguish non-eventive roots from eventive roots in Malagasy. Malagasy has a genitive construction which "bonds" together two constituents: nouns, verbs, adjectives and prepositions with a genitive NP.²⁷ Depending on the root to which it attaches, the second constituent (the NP) is interpreted as either an agent, a

²⁷ The use of the terminology of "genitive construction" and "bonding" is taken from Keenan (1993) where he describes this particular construction as a morphological bonding between the two constituents just described.

possessor or a cause.²⁸ There are several phonological changes that take place to give the various forms of the genitive construction. The "bonding" of the two constituents involves in some cases a floating nasal. With respect to the first constituent of the construction there are two relevant word classes to consider: words that end in *-ka*, *-na*, or *-tra* and words that do not. We will briefly look at the phonological processes involved in each class.

When the words of the first constituent *do not* end with *-ka*, *-na* or *-tra*, a floating nasal is realized as either the onset of the second constituent if it begins with a vowel, or as prenasalization if the second constituent begins with a consonant. In the latter case, the consonant, if [+continuant], becomes [-continuant]. If the second constituent begins with the determiner *ny*, no floating nasal is realized since the nasal of *ny* serves as a liaison between the two constituents.²⁹ Below are some examples

²⁸ A genitive NP never expresses a complement of time or place. In order to express a complement of time or place a preposition must be used, as in the following examples:

- (1) *`ny fivoriana tao Mahamasina.* The meeting at Mahamasina.
- (2) *`ny sakafo amin'ny hariva.* The meal of the evening.

²⁹ Regardless of the nature of the second constituent, the floating nasal is orthographically represented as the final coda of the first constituent. The syllabic structure of Malagasy, however, does not allow codas. In actual speech, this nasal is pronounced as the onset of the following constituent (if the second constituent begins with a vowel), as prenasalization (if the second constituent begins with a consonant), or not at all (if the second constituent begins with *ny*).

illustrating these contexts.

volon'akoho
feather-N-chicken
'feather of a chicken'
(from *volo*)

hitan'ny zaza
seen-N-DET child
'seen by the child'
(from *hita*)

resin-jaza
conquered-N-child
'conquered by a child'
(from *resy*)

When the words of the first constituent *do* end in -ka, -na, or -tra (the final a not present underlyingly), -k, -tr, and -n become the onset of the second constituent if it begins with a vowel. If the second constituent begins with the determiner *ny*, -k and -tr become the onset of an inserted *i* (vowel harmony with *ny*). -n is simply dropped.³⁰ Finally, if the second constituent begins with a consonant, -k and -tr are dropped (the consonant agrees in continuancy, however, and becomes [-continuant], if not so already). -n also drops, but only in front of a nasal. In front of any other consonant -n is realized as prenasalization and, once again, the consonant, if not already [-continuant], becomes so. Below are some examples of these contexts.

satrok'iza
hat-who
'whose hat'
(from *satroka*)

oron'ny saka
nose-DET cat
'nose of the cat'
(from *orona*)

satro-bavy
hat-women
'the hat of the woman'
(from *satroka* and *vavy*)

³⁰ Again, the -n of the first constituent is retained for orthographic purposes and is not actually pronounced. The nasal of *ny* serves as a liaison between the two constituents.

When non-eventive and eventive roots are used in the genitive construction in Malagasy a difference in meaning becomes apparent. Eventive roots in the genitive construction have a "by" phrase interpretation while non-eventive roots do not. Non-eventive roots have either a possessive or a causal reading (different from the "by" phrase interpretation as I will argue below) depending on whether they are nouns or adjectives. Examples of eventive and non-eventive genitive constructions are given in (3) and (4) respectively.

(3) Eventive Genitive Constructions ("by" phrase)

A. Nouns

ny hobin' ny olona
DET acclamations DET people
'the acclamations by the people.'

ny tohitry ny olona
DET resistance DET people
'the resistance by the people.'

ny kafaran' ny mpiasa
DET complaint DET workers
'the complaint made by the workers.'

B. Verbal Passives

Tapak'i Soa ny voninkazo.
cut Sao DET flowers
'The flowers were cut by Soa.'

Tapitry ny zazakely ny sakafo.
finished DET child DET meal
'The meal was finished by Soa.'

Resin' ny mpanjaka ny fahavalo.
vanquished DET king DET enemy
'The enemy was vanquished by the king.'

(4) Non-eventive Genitive Constructions

A. Nouns (Possessive)

ny andon' ny tanimbary.
DET moistness DET fields
'the moistness which the fields have.'

ny tsatson'ny toaka.
DET taste DET rum
'the tastelessness of the rum.'

ny loton'ny akanjo.
DET dirt DET clothes
'the dirt of the clothes.'

B. Adjectives (Causative)

Finaritry ny kilalao ny zazakely.
happy DET game DET child
'The child is happy because of the game.'

Hendrin'ny fianarana i Soa.
wise DET studies Soa
'Soa is wise from her studies.'

Tsaran' ny voninkazo ny trano.
beautiful DET flowers DET house
'The house is beautiful with the flowers.'

Menan'ny loko ny akanjo.
red DET colour DET clothes
'The clothes are red from the colour.'

As can be seen in (3A) and (3B) eventive roots form a uniform class in that they all have a "by" phrase interpretation in the genitive construction. Of the non-eventive roots in (4) the nouns present the clearest distinction with the eventive roots; while eventive roots clearly have a "by" phrase interpretation, non-eventive nouns clearly have a possessive interpretation (this will be further discussed in section 5.3 below). Unlike eventive roots, however, non-eventive roots do not form a

semantically unified class; the genitive complement of a non-eventive root may have either a possessive or causal interpretation depending on whether it is a noun or an adjective. However, there is a similarity, beyond the fact that they do not express a "by" phrase, that can be drawn between non-eventive nouns and adjectives. The possessive interpretation of non-eventive nouns in the genitive construction is reflected in the nature of the adjectives themselves. That is, *regardless* of the causal interpretation of the genitive complement of adjectives in the genitive construction in (4B), *all* adjectives in a sense express a (physical or abstract) quality possessed by someone/something and it is this possession of a state that is analogous to the interpretation of the genitive constructions based on non-eventive nouns in (4A). For example, the adjectives in (5) express certain states possessed by whatever they are predicated of:

- | | | |
|-----|-------------------------------|------------------------------|
| (5) | <i>Tsara ny voninkazo.</i> | 'The flowers are beautiful.' |
| | <i>Maina ny tanety.</i> | 'The land is dry.' |
| | <i>Finaritra ny zazakely.</i> | 'The child is happy.' |
| | <i>Hendry i Soa.</i> | 'Soa is wise.' |

The flowers in 'The flowers are beautiful' in (5) above can be understood as possessing a certain quality, namely beauty. Similarly the air possesses dryness, the child happiness, etc. The same can be said for any adjective and whoever/whatever it is predicated of. Non-eventive roots, then, are unified and distinguished from eventive roots in

their ability to express (implicitly or explicitly) possession of something (a quality or something physical). It is also significant in this respect that non-eventive nouns can take the stative prefix *ma-*, the result being adjectival, whereas eventive nouns cannot:

(6)	<u>Non-eventive Nouns</u>		<u>Eventive Nouns</u>
	<i>loto</i> -> <i>maloto</i>	'dirty'	<i>*mahavokavoka</i>
	<i>dio</i> -> <i>madio</i>	'clean'	<i>*matohitra</i>
	<i>tsiro</i> -> <i>matsiro</i>	'tasty'	<i>*mahoby</i>
	<i>ando</i> -> <i>mando</i>	'moist'	<i>*masava</i>
	<i>hery</i> -> <i>mahery</i>	'strong'	<i>*makafara</i>

Briefly, we can account for the above difference between non-eventive nouns and eventive roots if we propose that *ma-* indicates possession of the quality or thing that is expressed by the root (more specifically, we shall suggest in section 6.1 below that *ma-* is an abstract HAVE). For example, we can understand who or whatever *mahery* 'strong' is predicated of as possessing *hery* 'strength.' But what cannot be possessed are events such as *kafara* 'complaint', *sava* 'action of separating', *tohitra* 'resistance' etc. It simply makes no sense to say someone or something (qualitatively) possesses a complaint, resistance or the action of separating.

The difference between non-eventive nouns and adjectives in the genitive construction in (4) is interesting and suggests that, at least in the context of the genitive construction, the difference between non-eventive nouns and adjectives is one of stative aspect.

Non-eventive nouns can be thought of as the non-aspectual counterpart of adjectives (the alternation between beauty and beautiful, cleanliness and clean, strength and strong etc.).³¹

If the genitive construction is going to provide a means to distinguish between eventive and non-eventive roots then the cause expressed with adjectives in the genitive construction cannot be taken as being the same agentive "by" phrase expressed with verbal passives. I would argue that in the case of the adjectives in (4B) we do not have so much of an agent as we do an *explanation* or *means* for certain states. For example, the game in *finaritry ny kilalao ny zazakely* 'The child is happy because of the game' is the reason why the child is happy (the explanation for the child's state). We cannot think of it as an agent of any event (**the child is happy by the game*). In fact, an animate NP cannot be a genitive complement of an adjective:

- (7) **Menan'i Rabe ny akanjo.* 'The clothes are red by Rabe.'
 **Matsatson'i Rabe ny toaka.* 'The rum is tasteless by Rabe.'
 **Tsaran'i Rabe ny trano.* 'The house is beautiful by Rabe.'
 **Maloton'ny zazakely ny trano.* 'The house is dirty by the child.'

Contrast this with their inanimate counterparts in (8):

³¹ The relationships that the genitive construction sets up between two constituents is interesting and certainly requires further comment.

- (8) *Menan'ny loko ny trano.* 'The house is red from the paint'
Matsatson'ny rano ny toaka. 'The rum is tasteless from the water.'
Tsaran'ny voninkazo ny trano. 'The house is beautiful from the flowers.'
Maloton'ny fotaka ny ankizy. 'The child is dirty from the mud.'

The fact that we cannot have an animate complement in the genitive constructions in (7) above suggests that what the genitive NP is describing is an explanation or reason for the actual state (and it is in this sense that I am calling such a genitive complement causal) and not an agent. So for example, the water can be an explanation of the state of the rum being tasteless, but Rabe cannot since Rabe would obviously have to be the agent (in the active sense) and not the actual *explanation* or *reason* for the rum being tasteless. I suppose one could look at this in causal layers: directly responsible for the state of being tasteless is the water and after that comes Rabe, the person who adds that water. However, it is the inner causal layer that is relevant to the non-eventive root. The outer causal layer (the role played by Rabe) is, of course, eventive in the active sense of the word.

Another difference between adjectives and verbal passives is that the genitive construction can only be paraphrased with *aminy* 'with' in the case of adjectives and not in the case of verbal passives. For example, the verbal passives in (9), unlike the adjectives in (10), are

nonsensical. The reason for this is that the complement of *aminy* expresses a means or an explanation for a certain state and not the agent of an action. So, *Soa* in (9) cannot be the complement of *aminy* in *laitra amin'i Soa ny zohy* or *tapaka amin'i Soa ny voninkazo* unless *Soa* is the name of a pair of cutting shears or a tool for digging.³²

(9) Verbal Passives

- **Tapaka amin'i Soa ny voninkazo.* 'The flowers are cut with
Soa.'
**Tapitra amin'i Soa ny sakafo.* 'The meal is finished with
Soa.'
**Resy amin'ny mpanjaka ny fahavalo.* 'The enemy is vanquished
with the king.'
**Laitra amin'i Soa ny zohy.* 'The cave is penetrated
with Soa.'

(10) Adjectives

- Tsaran'ny voninkazo ny trano.* / *Tsara amin'ny voninkazo ny
trano.*
'The house is beautiful with the flowers.'
Menan'ny loko ny akanjo. / *Mena amin'ny loko ny akanjo.*
'The clothes are red with (or because of) the paint.'
Finaritry ny kilalao ny zazakely / *Finaritry amin'ny kilalao
ny zazakely.*
'The child is happy with the game.'
(in the sense of 'because of the game')

The causal complement in adjectival genitive constructions is the non-agentive counterpart to the "by" phrase complement of eventive genitive constructions. They

³² We will in fact see in section 6.5 that *maha-* based on an eventive root can be predicated of an *instrument*. We will argue, however, that such an *instrument* is different from the causal interpretation that we are attributing to the subjects of *maha-* predicates based on non-eventive roots. However, regardless of the possibility of having an *instrument* as subject in (9) above, it is still true that an *agent* cannot appear as the complement of *aminy*, although a *cause* can in the case of non-eventive roots.

are counterparts which are defined by the different nature (ie. eventive or non-eventive) of the root to which they "bond".³³ Having argued for the difference between adjectives and verbal passives in the genitive construction, I turn now to the division between eventive and non-eventive nominals as illustrated above in (3A) and (4A).

5.3 Eventive and Non-Eventive Nominals

The division between nominals into those classified as eventive (3A) and those classified as non-eventive (4A) captures in part the division considered in Grimshaw (1990) between what she terms complex event nominals that have argument structure and simple event or result nominals that lack any argument structure. Simple event nominals are nominals such as *event*, *race*, *trip*, *exam* that denote an

³³ A specific group of adjectives can take animate complements with *aminy*. These adjectives are psych adjectives such as *finaritra* 'happy', *gaga* 'surprised', *sosotra* 'irritated':

- (1) *Finaritra amin'i Soa ny zazakely.*
'The children are happy with Soa.'
- (2) *Sosotra amin'ny mpanjaka ny olona.*
'The people are irritated with the king.'
- (3) *Gaga amin'ny zazakely ny olona.*
'The people are surprised by the child.'

Adjectives such as the ones found in (1)-(3) above are able to take an *aminy* complement precisely because they are psych predicates. Being psych predicates the animate NP of *aminy* can be interpreted, not in an agentive sense, but in the causal sense that we have been arguing for above. That is, the animate NPs in the above examples are the *means* by which the subject is put in the state described by the adjective. So, in the first example there is some property of Soa that makes the children happy, just as there is in example (2) something about the king that irritates the people.

event but, as we shall see, do not behave like complex event nominals. Result nominals are nominals that are the output or an element associated with an action. This division is proposed to explain the observation that some nouns systematically act like verbs and take arguments, while other nouns take no arguments at all. Of course, some nouns may be ambiguous between the two type of nominals. In this case I would assume that such a nominal would in fact have two lexical entries: one for the argument taking nominal and the other for the nonargument-taking nominal. In (11) and (12) below (all English examples are from Grimshaw (1990)) the theme of *develop* is obligatory for the verb as it is for its nominal counterpart. However, with the simple event nominal *exam* in (13) no arguments are required.³⁴

- (11) *The development *(of inexpensive housing) by the city.*
- (12) *The city developed *(inexpensive housing).*
- (13) *The exam was long.*

In (11) above, the argument structure of *development* licenses the agentive by phrase (*the city*) as well as the object complement (*of inexpensive housing*), whereas in (13), *exam*, lacking any internal structure, has no arguments to license.

The difference in argument-taking abilities of complex

³⁴ Sentences like (11) must be taken without a context if the theme is to be obligatory. With a context the theme, although it can be omitted, is of course still implied. This will be true of similar examples to follow, such as examples (16) and (17).

event nominals and simple event/result nominals is in part revealed by different interpretations of the possessive;³⁵ with simple event nominals and result nominals the interpretation is one of possession (as in (14)), whereas with complex event nominals the interpretation is agentive (as in (15)). It is important to note that *destruction* is a nominal that has both an argument-taking and nonargument-taking form.

(14) *The enemy's destruction was awful to watch.*

(15) *The enemy's destruction *(of the city) was awful to watch.*

If we follow Grimshaw in holding that subject-like possessives are licensed by argument structure, then any agentive interpretation of the possessive must arise because of the argument structure of the nominal. This would explain why the sentence in (14) becomes ungrammatical if we understand the subject (*the enemy*) as being agentive; the inclusion of an agent (ie. *the enemy*) requires the argument-taking form of the nominal and therefore, example (14) is ungrammatical under an *agentive* interpretation since an object is also obligatory (just as it is in (15)).

³⁵ Grimshaw also presents further evidence from English involving the "by" phrase. The "by" phrase of a complex event nominal has an agentive reading and an object complement is obligatory. A result/simple event nominal has an "authorship" reading and an object complement is not obligatory. It would also seem that modifiers such as *constant* and *frequent* can only occur with complex event nominals and not simple event/result nominals. We will not go into these further differences between the two types of nominals. We will simply note that Grimshaw does present various arguments for this division.

Of course, this difference amongst possessive NPs and its explanation just outlined nicely matches the division between eventive nominals in (3) and non-eventive nominals in (4). Nominals in the former case have an agentive reading, but a possessive reading in the latter case. The agentive reading with eventive nominals (or what Grimshaw is calling complex event nominals) arises because of the presence of argument structure, whereas the possessive reading occurs precisely because of the lack of such internal structure. Thus, in (16) and (17) where we have an agentive reading of the genitive construction an object complement is obligatory as it is in (13) and (15) above.³⁶

- (16) *Ny tohitry ny olona *(ny fanjakana) dia tena mafy.*
 DET resistance DET olona DET government TOP very
 difficult
 'The resistance of the government by the people was very difficult.'
- (17) *Ny savan' ny olona *(ny omby) dia naka fotoana betsaka.*
 DET separate DET people DET cows FOC took time
 alot
 'The separation by the people of the cows took alot of time.'

Previous work on the argument structure of nominals has

³⁶ My consultants agreed that examples (16) and (17) (and one must assume all such examples with eventive nominals) were grammatically correct, but just not frequently used. The more common way to express such sentences is to use the eventive nominals with their nominalized active morphology. For example in (17), *ny savan'ny olona* 'separation by the people' would be more commonly phrased as *ny fisavan'ny olona* where its active morphology, *i-* (from *mi-*), is used in its nominalized form (*f-*). This in itself is revealing.

suggested that all nominals possess an external argument (Williams (1981), Higginbotham (1985) and di Sciullo and Williams (1987) among others) (in this sense, all nominals, then, can be said to possess argument structure). This external argument has been identified as <R>, a non-thematic argument (not a realization of any participant in the lcs of a word). Grimshaw suggests, however, that the external argument of complex event nominals is different from the external argument of simple event/result nominals. While the latter take <R>, complex event nominals take what she terms <Ev> for "event." Although I do not want to go into the detail of the evidence for two different external arguments, Grimshaw does present such evidence from, among other things, the difference in the determiner/modifier selection of the two types of nominals. What is crucial to our present discussion, however, is that complex event nominals possess internal argument structure that simple event or result nominals lack. For Grimshaw, a complex event nominal will have the argument structure in (18) and simple event or result nominals the argument structure in (19). The agent argument of a complex nominal is a suppressed or implicit argument and hence the <X-Ø> notation.

- (18) <Ev<X-Ø<Y>>>
- (19) <R>

The reason for the suppressed status of the agent is

because it can be optionally realized (for example, *The destruction of the city was unexpected*). This is also true of the subject in the Malagasy examples in (16) and (17) above. What allows the agent to be optional is, of course, context. Grimshaw (1986) and Zubizarreta (1985) have argued that such implicit arguments are represented in the argument structure (since they contribute information about positions in the argument structure) but are best considered as argument adjuncts (since they are not required to satisfy argument structure and behave like adjuncts under extraction).

We will assume, as was suggested in section 5.1 above, that in Malagasy the agentive complement that shows up in the genitive construction for eventive nominals is in fact represented in the argument structure of these nominals. The genitive construction, therefore, makes explicit the *implicit* agent of eventive nominals. Verbal passives will likewise also possess an implicit agent. Of course, if we are to follow this reasoning, then we must also say that, with respect to non-eventive roots, the genitive construction makes explicit the implicit possessor and cause arguments of *THING* and *PROPERTY* respectively. However, it still holds that the ontological categories of *THING* (non-eventive) and *PROPERTY* do not possess any argument structure at the initial level (section 5.1). The difference, then, between eventive and non-eventive roots remains; eventive

roots possess argument structure at the root level, but non-eventive roots do not. Eventive and non-eventive roots will, therefore, have the following lexical entries (we will adopt Grimshaw's notation for an implicit agent).

Eventive Roots

Nominals: THING, <X-Ø<Y>>
Verbal Passives: EVENT, <X-Ø<Y>>

Non-eventive Roots

Adjectives: PROPERTY, < >
Nominals: THING, < >

The definition of an eventive root in section 5.1 includes roots that describe a result of an action. However, this must be understood in a precise way for the following reason (a reason which bears directly on the present discussion of eventive and non-eventive nominals): nominals which describe the simple result of an action (which for Grimshaw are non-eventive) such as *ny ombika* 'pieces of meat' (the result of butchering) and *ny ratra* 'injury', (the result of injuring oneself or someone else) *ny sakafo* 'meal' (the result of cooking) etc., take a possessive complement in the genitive construction and therefore align themselves with non-eventive roots. Simple event nominals in Malagasy (*ny adina* 'exam', for example) also take a possessive complement. All of this is, of course, consistent with the proposals of Grimshaw as presented above. All of this is to say that the definition of an eventive root (and a non-eventive root, for that matter) given above in section 5.1 must be understood in a very robust way; an eventive root must not merely describe

an action or the result of an action, but must *itself* be eventive (this gets back, of course, to the issue of the argument structure of the root). A result of an action, therefore, cannot merely be a product or a thing associated with an action, but must rather be the resulting *change of state* associated with that action. Typically, such changes are expressed by verbal passives (for example, *laitra* 'penetrated', *tapaka* 'cut' etc). Roots like *ny ratra*, *ny sakafo* or even roots associated with an event such a *ny tantavana* 'strainer' (to strain) or *ny ravaka* 'ornament' (to decorate) are not eventive in a fundamental way (they do not carry an implicit agent) and, therefore, fall into the non-eventive class.

It should be remarked that the genitive construction in fact "forces" the presence of argument structure in roots. That is, if a nominal is ambiguous between an eventive and noneventive form as is the case with *hoby* 'acclamations' in (20) and (21),

- (20) *Ny hobby dia tsara hoan'ny saina.*
 DET acclamations FOC good for DET spirit
 'Acclamations are good for the spirit.'

- (21) *Ny hobby ny olona an' ny mpihajakazaka*
 DET acclamations DET people ACC DET runners
dia naka fotoana betsaka.
 FOC took time alot.
 'The acclamations by the people of the runners (of a race) lasted along time.'

the genitive construction settles the ambiguity in favour of the eventive form:

- (22) *Ny hoby ny olona.*
 DET acclamations DET runners
 'The acclamations by the people.'
- (23) **Ny hoby ny mpihajakazaka.*
 DET acclamations DET people
 'The acclamations of (for) the runners.'

Of course, a non-eventive nominal which is not ambiguous will only ever have a possessive reading with respect to the genitive construction and never an agentive one.

5.4 Selection of Active Morphology

There is further evidence for the eventive/non-eventive distinction among roots in the selection of active morphology. In general (for it is not a steadfast rule), eventive roots take the active prefixes *mi-* and *man-*, whereas non-eventive roots take the active prefixes, *mana-* and *manka-*.³⁷ For example:

Eventive Roots

<i>hoby</i>	->	<i>mihoby</i>	'to acclaim'
<i>tohitra</i>	->	<i>manohitra</i>	'to resist'
<i>kafara</i>	->	<i>mikafara</i>	'to complain'
<i>tapaka</i>	->	<i>manapaka</i>	'to cut'
<i>tapitra</i>	->	<i>manapitra</i>	'to finish'
<i>sava</i>	->	<i>misava</i>	'to separate'
<i>rovitra</i>	->	<i>mandrovitra</i>	'to use'
<i>resy</i>	->	<i>mandresy</i>	'to vanquish'

³⁷ Exceptions to this generalization amongst the examples given are found in the non-eventive roots: *dio* 'cleanliness' also takes *mi-* and *man-*. In the former case the meaning is reflexive (*midio* 'to purify oneself') in the latter case its meaning is indistinguishable with *manadio* 'to make clean.' Also, *tsatso* 'tastelessness' can take *mi-*. In this case, the meaning is unusual: 'to receive something that makes something tasteless/bland'. As for the eventive roots listed, there are no exceptions. They only take *mi-* or *man-* (or both in some cases).

Non-eventive Roots

<i>ratsy</i>	->	<i>manaratsy</i>	`to make bad, ugly'
<i>hery</i>	->	<i>mankahery</i>	`to make strong'
<i>rary</i>	->	<i>mankarary</i>	`to make sick'
<i>maina</i>	->	<i>manamaina</i>	`to make dry'
<i>dio</i>	->	<i>manadio</i>	`to make clean'
<i>tsara</i>	->	<i>manatsara</i>	`to make beautiful'
<i>tsatso</i>	->	<i>manatsatso</i>	`to make bland'
<i>kamo</i>	->	<i>manakamo</i>	`to make lazy'

The reason for this difference I would assume also lies with the distinction between eventive and non-eventive roots.

However, since I am unsure of the make-up of the prefixes *manka-* and *mana-*, I cannot comment further on the reasons for this particular difference in their selection of active morphology.

Chapter 6: The Syntactic Structure of a *maha-* Predicate Based on an Eventive and Non-eventive Root

6.0 Introduction

Up to this point we have been considering *maha-* semantically. We shall now propose a syntactic analysis of *maha-*. This analysis will be based on the structure of simple *ma-* adjectives and will involve a reevaluation of the causal *ha-* prefix as an instantiation of the aspectual marker BECOME. A syntactic explanation of the abilitive and causative meanings of *maha-* will then be presented. Finally, before turning to a more detailed discussion of the nature of the external argument of *maha-*, we will consider how the proposed syntactic structure of *maha-* accounts for *maha-* predicates based on unaccusative roots and roots that are *both* eventive and non-eventive.

6.1 The Syntactic Structure of Simple *ma-* Adjectives

Based on data from Irish where stative verbs are intransitive as in (1), Noonan (1992) proposes that stative verbs are underlyingly unaccusative (that is, they cannot assign accusative case).

- (1) *Ta eagla roimh an bpuca ag Ailill.*
is fear before the Puca at Ailill
'Ailill fears the Puca.'

Stative verbs in English, German and French are able to assign accusative case because these languages (unlike Irish) possess an abstract (empty) HAVE. This is suggested by the fact that most stative verbs can be paraphrased by 'to have STATE' as in (2) and (3).

- (2) John respects his sisters.
(3) John has respect for his sisters.

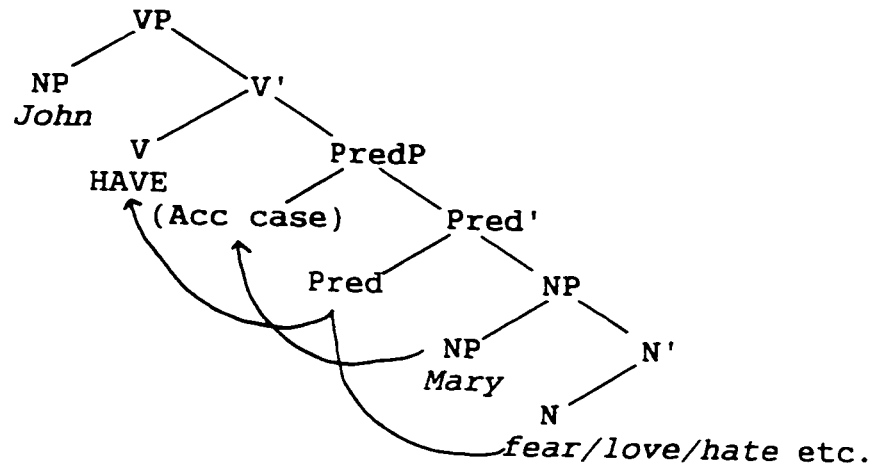
The stative verb 'respect', then, is abstractly represented as HAVE respect. Abstract HAVE for Noonan is more precisely a 'lexical function' that establishes a structural relationship between an NP and a predicate clause (a predicate NP, for example). Its lexical entry is as follows:

HAVE: V, [NP, PredP]³⁸

The relational structure set up by HAVE results in the assigning of accusative case in the following way: accusative case for Noonan (and for Sportiche (1990) and Travis (1991)) is case-checked within a double layer VP (more specifically in the spec of a functional category). In the case of transitive stative verbs, HAVE provides this necessary structure:

³⁸ By PredP Noonan simply means a predicative functional projection.

(4)

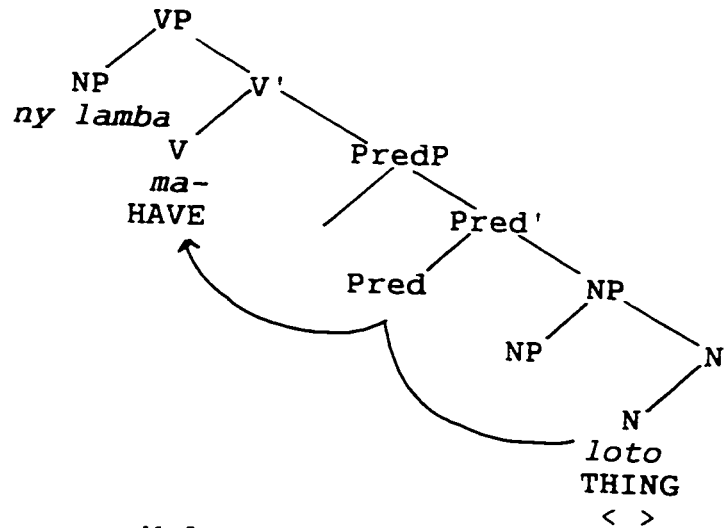


John fears Mary.

As HAVE is not available in Irish, the double VP structure needed for accusative case-checking is not possible, resulting in the intransitivity of stative verbs in Irish.

The above analysis can be carried over to simple *ma-*predicates in Malagasy (section 4.2.1 above); *ma-* in forming simple adjectives can be understood as an overt realization of abstract HAVE. So, for example, *maloto* Adj 'dirty' from the non-eventive root *loto* (THING) 'dirt, filth' is given the following structure. Note that *ny lamba* receives its theta role THEME from the *ma-* prefix and is checked for nominative case in the spec of IP.

(5)



Maloto ny lamba.

The idea here is that *madio* dirty can be paraphrased as 'to have dirt'. I assume that *loto* is not a root that can assign an internal theta role since a sentence such as *maloto ny ankizy(ACC) ny lamba* is ungrammatical. This fact rules out accusative case being checked in the spec of PredP (as it is successfully done in (4) for English psych verbs).³⁹ *ma-*, then, can be said to subcategorize for [NP, PredP]. It is this structure (the structure in (5) above) that we shall now extend to the *maha-* prefix.

6.2 Refining the Notion of Cause in *maha-*

Vendler (1967) proposes four verbal classes: states,

³⁹ Malagasy psych verbs work the same way as psych verbs in English. So, just as in *John fears Mary* in (4), accusative case in the example below is checked in the spec of PredP by *ma-* (HAVE).

matahotra ny alika(ACC) Rabe.
ma-fear DET dog Rabe
'Rabe fears the dog.'

achievements, accomplishments and activities. In order to give these classes an aspectual analysis, Dowty (1979) proposes certain aspectual operators that go into making up their lexical semantics. Dowty takes a state as being a primitive predicate (BE). States are mapped with certain other aspectual connectives to create achievements and accomplishments. So, for example, in what is of interest to us here, accomplishment verbs (verbs such as 'to paint a picture', 'to draw a circle') are represented by the logical operators CAUSE and BECOME.⁴⁰ The latter operator roughly carries the meaning "first not p and then p." Under a Dowty analysis, a typical accomplishment verb like 'to paint a picture' has the following structure: [[John paints] CAUSE [BECOME[a picture exists]]].⁴¹

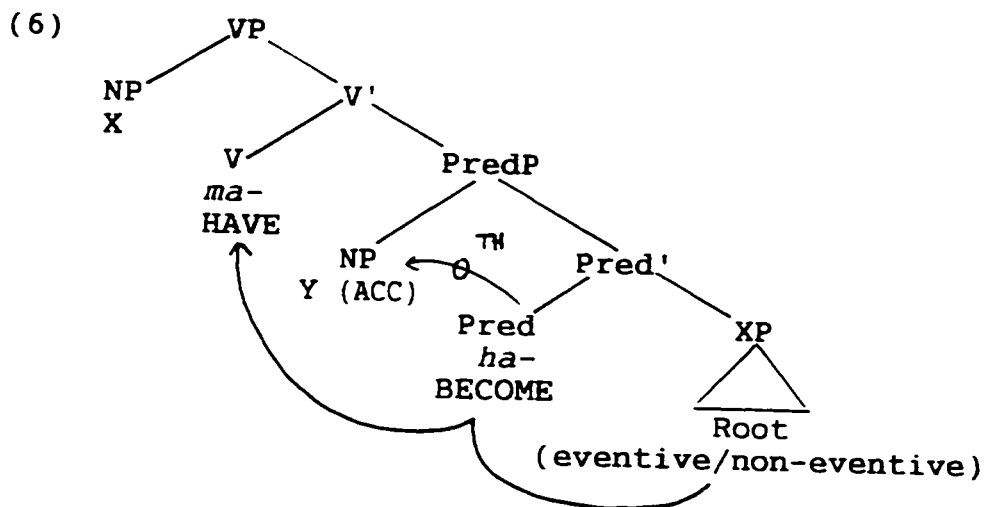
Recent work on event structure projects the aspectual information of a root (for instance, Dowty's aspectual operators) into the syntax (Travis (1991), McClure (1992), Hale & Keyser (1993), Amberber (1994)). The proposal here is that *ha-* is an overt realization of the aspectual operator BECOME and is generated in the head of PredP. It also realizes the external argument of (in the case of eventive roots) or adds an external argument to (in the case of non-eventive roots) the root to which it attaches. More

⁴⁰ BECOME is similar to the notion of transition in Moreno (1993). For Moreno, transition is a change of state.

⁴¹ In what follows, we are essentially claiming that *maha-*predicates are (stative) accomplishments.

precisely, then, the causative nature of *maha-* is to be found not in the *ha-* morpheme itself but in the syntactic structure of the predicate. That is, the following syntactic structure in (6) is causative. "Cause" falls out of the structure in (6) in the following way: the argument external to BECOME is interpreted as bringing about the change of first not "result of event" and then "result of event". *ha-* assigns THEME to the argument in the spec of PredP where (following Noonan (1992) and others) accusative case is also checked by spec head agreement. The argument external to *ma-* is interpreted as a *stative cause* and moves to the spec of IP to be case-checked.⁴³ Continuing the parallel with simple adjectives in (5) above, we might say that the structure in (6) represents a *complex* predicate which is predicated of the external argument; X has (possesses) a causative quality described by the *maha-* predicate.

⁴³ We will consider in detail the precise nature of the external argument in section 6.5.



There is some evidence for the idea of structural cause in English. Ritter and Rosen (1993) (henceforth R&R) propose that *have* in English is what they term a "functor" predicate. That is, it is semantically empty and takes its meaning from the predicate to which it attaches, ending up with either a causative or experiencer reading. So, in *John had half the students walk out of his class* (example from R&R), John may be either the cause or an experiencer. In the former case, which is relevant for us here, the event of the students walking out of the class is extended back to include a cause. In the latter case, however, the event is extended forward to include an experiencer. This insight can be modified for *maha-*; *ma-* (statively) extends back a change of state (BECOME) and the external argument is interpreted as a cause. The external argument is never interpreted as an experiencer since the *ha-* morpheme realizes the external argument of or adds an external argument to the argument structure of the root. That is,

the external argument actually participates in the argument structure of the root. We might understand *maha-* in the following way: *ma-* (statively) extends the change of state described by the *ha-* prefix and the root, while *ha-* ensures that this extension is always backwards to include a cause.⁴³

Cause, then, is structurally present in a *maha-* predicate and the argument of which *maha-* is predicated is interpreted as causal (a stative cause). We are now ready to show how the morphemes *ma-* and *ha-* and eventive/non-eventive roots syntactically fit together to give us what has been called the abilitive and causative meanings of *maha-*.⁴⁴

⁴³ Just as with 'have' in English, the external argument of *ma-* (which I am equating with 'have') can be interpreted in various ways: with simple *ma-* adjectives the external argument is interpreted as a theme. With stative *ma-* verbs the external argument is considered an experiencer (section 5.2.1). And as we have just seen, the external argument can also be interpreted as a cause. The thematic role of the argument external to *ma-* depends, therefore, on the nature of the morphemes to which *ma-* attaches.

⁴⁴ Another analysis of *maha-* might take *ma-* as the agent topic marker *m-* (the *a* being inserted to carry the *m-*). *ha-* would then be a stative causative marker (and not, merely an instantiation of BECOME). This alternative analysis raises the issue of where the stativeness of the *maha-* prefix is to be found (that is, in the *ma-* prefix or in the *ha-* prefix itself). A more thorough cross-linguistic and even diachronic investigation of the *maha-* morpheme would obviously decide between the two. I have, however, already presented some evidence against this alternative view: Kroeger (1990) suggests that *ko-* (cognate of *maha-*) in Kimaragang Dusun was historically **oko-* (the initial, unstressed stative *o-* having been lost in its present form). Assuming that Kroeger's claim is correct, the presence of the stative *o-* prefix without the agent topic marker in the historical form is not compatible with the suggestion that *ma-* is the agent topic marker supported by an inserted vowel. However, even under this alternative analysis (or any other analysis, for that matter), much of what has been

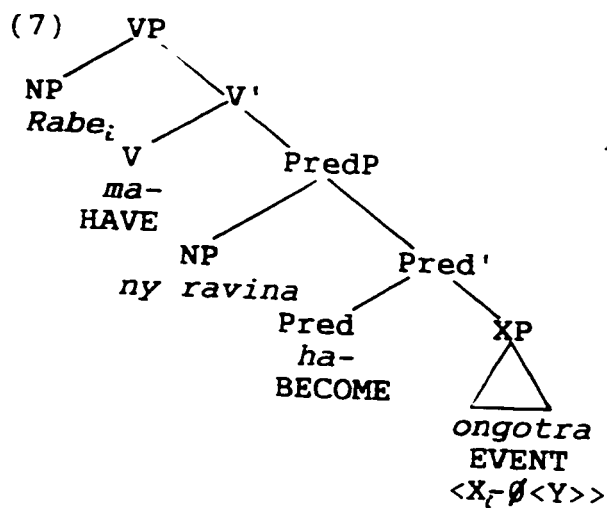
6.3 The Interaction Between *ma-/ha-* and Eventive and Non-eventive Roots

We have introduced above the idea of eventive and non-eventive roots. It is their difference in argument structure that is at the basis of the two interpretations (the abilitive and causative readings) of *maha-*. To review, we have proposed that roots can be divided into two types: eventive and non-eventive roots. Associated with the former are the ontological categories of EVENT and THING. Associated with the latter are the ontological categories of PROPERTY and also THING. Eventive roots have the argument structure $[X-\emptyset[[Y]]]$ and non-eventive roots have no argument structure.

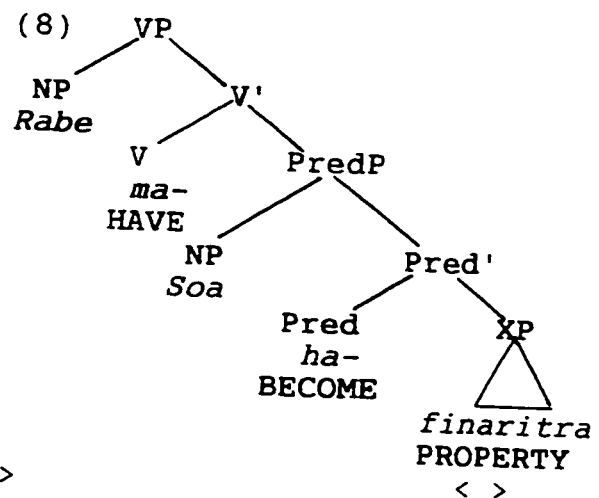
As already suggested in the previous section, *maha-* interacts with eventive and non-eventive roots in a crucially different way: the *maha-* predicate, being structurally causative, realizes the implicit external argument of an eventive root. However, in the case of non-eventive roots which lack an external argument, *maha-* actually adds an external argument. In the eventive case, the realized external argument is interpreted as that which brings about the event described by the root. In the non-eventive case the added external argument is interpreted as that which brings about the non-event described by the root

said, especially concerning the eventive/non-eventive nature of the roots and the respective abilitive and causative meanings of *maha*, still holds.

and hence the "to make" translation. In either case, it is of the external argument that *maha-* is predicated. Although the *maha-* predicate is structurally causative, the *ma-* morpheme ensures that it is a stative causative. Thus, a *maha-* predicate based on an eventive root will be interpreted as an abilitive (a stative event). That the causative meaning or "to make" meaning of *maha-* is itself stative (or qualitative) was shown in section 4.1 above. It would be helpful at this moment to look at two examples. Examples (1) and (2) from section 1.0 are repeated below as (7) and (8) respectively. In (7) we have the root *ongotra* THING 'the action of pulling'. In (8) we have the root *finaritra* PROPERTY 'happy'.



Mahaongotra ny ravina Rabe.
maha-pull root Rabe
 'Rabe can pull out the root.'



Mahafinaritra an'i Soa Rabe.
maha-happy Soa-ACC Rabe
 'Rabe (can) make Soa happy.'

In (7), the root is eventive and its external argument is realized as the external argument of the *maha-* predicate (I

have coindexed them to illustrate this). This external argument is interpreted as the agent of the event or that which brings about the 'action of pulling out'. *ma-* adds stative aspect and the result is the stative event of pulling out or in other words the ability to pull out. In (8), the root is non-eventive and *maha-* adds an external argument. This external argument is interpreted as the causer of the state or that which brings about the state of happiness and hence the "to make" translation. Again, *ma-* adds stative aspect and the result is '(able) to make happy.'

The two traditional interpretations of *maha-* arise because of a different emphasis of the stativity or the causativeness of the prefix. In what has been called the abilitive *maha-*, the causativeness of *maha-* is less apparent since the external agent is actually the agent of the event expressed by the root. What is more salient in the abilitive case is the fact that an ability is being expressed and not an actual event. However, in the causative *maha-* an external argument is actually added and in this case it is the causative nature of the prefix that is more salient. In this instance, the abilitive aspect is perhaps not as apparent, especially if one deals with sentences such as *mahatsara ny trano ny voninkazo* 'The flowers make the house beautiful' where the ability being expressed is *implicit* in the translation. This difference

in emphasis, then, goes back to the difference in argument structure of eventive and non-eventive roots.

Before turning to other matters, it should be noted that some *maha-* predicates may be transitive or intransitive. Thus, a *maha-* predicate can show up intransitive (our examples so far have been primarily transitive), as in the following:

- | | | |
|-----|--------------------------------|----------------------------|
| (9) | <i>Mahaloto ny fotaka.</i> | 'Mud dirties.' |
| | <i>Mahagaga ny vaovao.</i> | 'The news is astonishing.' |
| | <i>Mahatsara ny voninkazo.</i> | 'Flowers beautify.' |
| | <i>Mahavaky Rabe.</i> | 'Rabe can read.' |

Some *maha-* predicates, then, do not obligatorily take a direct object. An argument does not always have to move into the spec of PredP to be checked for accusative case⁴⁵.

6.4 Double Roots and Unaccusatives

This eventive/non-eventive analysis predicts that if a root is both eventive and non-eventive, then it will be given both a causative and an abilitive meaning when prefixed with *maha-*.⁴⁶ This is precisely what we find with the root *reboka*. *reboka* is both eventive THING 'action of

⁴⁵ When a change of state occurs it is usually understood that *something* changes. In the case of an intransitive *maha-*, the theme (the argument which undergoes a change of state) is simply left unspecified and not even necessarily implied, as in *mahavaky* 'able to read'. Admittedly, the absence of even an implicit theme is, perhaps, not what we would expect with the expression of a change of state.

⁴⁶ I am using "causative" and "abilitive" in the traditional senses. It is understood, of course, that any *maha-* prefix is *both* causative and abilitive.

eating gluttonously' and non-eventive PROPERTY 'extravagant' and correspondingly has both an abilitive and causative reading when prefixed with *maha-*:

reboka THING 'action of eating gluttonously' (Eventive)
 PROPERTY 'extravagant' (Non-eventive)
mahareboka 'to be able to eat gluttonously' (Abilitive)
 'to make extravagant' (Causative)

The above analysis also predicts that unaccusatives will have a causative ("to make") reading since unaccusative roots, although they are eventive, have only an internal argument, ie. <Y>. Once again, the prediction is borne out:

(10) Unaccusative Roots: EVENT/<Y>

<i>korisa</i>	N	'action of sliding'
<i>mahakorisa</i>		'able to make slide'
<i>tafintohina</i>	V	'stumble'
<i>mahatafintohina</i>		'able to make stumble'
<i>pararetra</i>	N	'tremble'
<i>mahapararetra</i>		'able to make tremble'
<i>tonga</i>	V	'arrive'
<i>mahatonga</i>		'able to make arrive'
<i>koa</i>	N	'action of falling/crumbling'
<i>mahakoa</i>		'able to make fall/crumble'

In each case, *maha-* adds an agent argument and the resulting meaning involves the idea of 'to make someone/something X.' For example, one can use *mahatonga* in a figurative sense as in (11), but one cannot use it to mean 'able to arrive' as in (12).

- (11) *Mahatonga ny zanakao ho hendry ny fianarana.*
maha-arrive DET child/your FUT wise DET studies
'Studies make your child wise.'
 (ie. the act of learning, getting an education)

- (12) **Hahatonga aho rahampitso.*
haha-arrive I tomorrow

To express the latter one must use *afaka* which itself means
 'free':

- (13) *Afaka ho tonga aho rahampitso.*
free FUT arrive I tomorrow
'I can arrive tomorrow.'

6.5 On the Identity of the External Argument

We have referred to the external argument of a *maha-* predicate as an agent (in the case of eventive roots) or cause (in the case of non-eventive roots). As was illustrated in section 4.1, only inanimate arguments may appear in subject position of *maha-* predicates based on non-eventive roots (or more correctly, only arguments that can be interpreted as a cause).⁴⁷ However, with *maha-*

⁴⁷ This is not true of psych roots which have properties of eventive as well as non-eventive roots (due essentially to their abstract nature). That is, psych roots, like non-eventive roots, take a possessor argument in the genitive construction and for the large part do not take *mi-* or *man-*. Curiously, however, they do not even take *mana-* or *manka-*. Some psych roots, however, do take the active prefix *mampa-* which gives a causative verb. For example, *mampatahotra* 'to frighten'. It will also have been noted in footnote 33 that, unlike non-eventive roots, the complement of *amin-* can be animate. In these cases, the animate complements of *amin-* are understood, not as agents, but as the reasons for a certain state. Thus, to repeat an example, in *finaritra amin'i Soa ny zazakely* 'the children are happy with Soa', we understand that something about Soa makes the child happy. Here Soa is not an agent, but rather a cause. Semantically, however, these roots certainly express the resulting states of verbs such as *to shame*, *to*

predicates based on eventive roots, the agent or even the instrument of the action may appear in subject position. This is illustrated in examples (14) and (15) below.

- (14) *Mahamena ny trano *Rabe/ny loko.*
maha-loto DET house **Rabe/DET* paint
 'The paint/*Rabe makes the house red.'
- (15) *Mahatapaka ny mofo Rabe/ny antsy.*
maha-cut DET bread *Rabe/DET* knife
 'Rabe/the knife can cut the bread.'

Ideally, we want these differences to fall out of a distinction between eventive and non-eventive roots.

frighten etc. All of this suggests that psych roots in Malagasy are intrinsically different from other roots - a conclusion which shouldn't be too surprising.

The animate subject of *maha*-predicates based on psych roots, as we would expect, is not taken as an active participant (due to the stative nature of *maha*-), but as a *means* by which a certain psychological state is brought about. This difference is captured in the examples below where *mampatahotra* 'to frighten' in (1) is contrasted with *mahatahotra* 'to (be able) to frighten' in (2).

- (1) *ny nataon-dRabe dia mampatahotra ny ankizy.*
 DET PST-do-PASS-RabeGEN FOC *mampa*-fear DET child
 'What Rabe did was to scare the child.'
- (2) *ny nataon-dRabe dia nahatahotra ny ankizy.*
 DET PST-do-PASS-RabeGEN FOC *naha*-fear DET child
 'What Rabe did, *that* scared the children.'

The difference between (1) and (2) is as follows: with *mampatahotra* one understands Rabe to be acting volitionally in doing whatever he did. Though whether Rabe meant to scare the children is a different matter; if one includes *tsy nahy* 'accidentally' in (1) above, the reading is that Rabe, in spite of himself, scared the children. That is, Rabe was acting volitionally but did not have it in mind to scare the children. In either case, however, Rabe is a direct participant in bringing about the result of the children being afraid. With *mahatahotra* it is *that* something that Rabe did that scared the children. It is not so much Rabe who is relevant, but rather the actual act that he carried out. In fact, one of my consultants described Rabe in (2) as an indirect cause. This is, of course, similar to the interpretation of animate complements of *aminy* with psych roots (again, see footnote 33).

The differences in (14) and (15) can essentially be attributed to the fact that *maha-* assigns a *stative* causative role to the external argument of which it is predicated. In keeping with adjectival nature of a simple *ma-* predicate, the cause in a *maha-* predicate is a *causative quality* possessed by the external argument. Therefore, it is in this qualitative sense (which is true of the abilitive, an ability being a sort of quality, as it is of the causative meaning (see 4.1 above)) that we must understand the external argument.

With a non-eventive root a stative cause can only be that which is *directly* responsible for the caused non-event described by the root. This brings us back to the discussion of section 5.2, where we argued the difference between inner cause and outer cause with respect to the genitive construction based on adjectives. To briefly revisit this discussion, a change of state involving a non-eventive root can be considered as having two causal shells - an inner causal shell (that which directly brings about the change of state) and an outer causal shell (typically the causal event associated with an agent). So, in (14) above, the paint makes up the inner causal event and Rabe the outer. This outer causal shell, being associated with a dynamic event cannot be the external argument of stative *maha-* based on the *non-eventive* root *mena* 'red.' Only the paint can be taken as the cause (that which

directly brings about the final result. That is, the inner cause).

The external argument of an abilitive *maha-* is that which brings about the change of state involving an eventive root. And it is precisely because it is an event described by the root that the agent can be the external argument of the predicate (though it is not an active agent, but a stative agent). The agent of an action makes up the closest causal layer of an event and thus, Rabe in (15) can occupy the external argument position. The instrument of an action is also possible as the subject of a *maha-* predicate based on an eventive root, since even an instrument is directly involved in bringing about an event.⁴⁸ That is, it is equally true of Rabe or the knife in (15) that each possesses a certain ability to cut the bread. It is misleading to consider Rabe an agent in (15) in as far as the term "agent" carries an active sense. We are clearly

⁴⁸ One might suggest that the cause associated with non-eventive roots is in fact an instrument or a means to bring about the non-event expressed by the root. That is, in *mahamena ny trano ny loko* 'the paint (can) makes the house red', the paint should be identified more precisely as an instrument and not a cause. However, there is a fairly obvious distinction here; with non-eventive roots, the external argument suffices in and of itself to bring about a result. In the context of an eventive root, however, the external argument, at least when it is not an agent, can only properly be seen as something that assists in the event:

**mahatsara ny trano amin'ny loko ny voninkazo.*
'The flowers make the house beautiful with their colour.'

mahatapaka ny mofo amin'ny antsy Rabe.
'Rabe can cut the bread with the knife.'

dealing with a stative situation. In fact, whether we call the external argument of a *maha*-predicate an agent, an instrument or a cause is quite irrelevant, since both Rabe and the knife are, just as with the paint in (14), *stative causes*. What determines the precise identity of the stative cause is the eventive or non-eventive nature of the root.

Chapter 7.0 CONCLUSION

We have shown in this thesis that not only is *maha-* not a contracted form of the verb *mahay*, but that there is, in fact, only one *maha-* prefix that is *both* causative and abilitive. The different meanings of *maha-* have arisen, in part, because the semantics of the causative *maha-* have not been fully appreciated; causative *maha-* also expresses an ability. Furthermore, the abilitive *maha-* is not seen as expressing a causative because of the failure to appreciate the full complexity of the *maha-* prefix; it has been argued that *maha-* is comprised of two morphemes, *ma-*, a stative morpheme, and *ha-*, an overt realization of BECOME, an aspectual morpheme that indicates a change of state. The distinction between eventive and non-eventive roots also plays an important role in the explanation of the abilitive and causative meanings of *maha-*. This division is argued for on semantic grounds as well as on the difference in the interpretation of the genitive construction and the selection type of active morphology. Eventive roots crucially possess an external argument which non-eventive roots do not possess. Syntactically, *ma-* and *ha-* form a causal structure; *ha-* (BECOME) realizes the external argument of an eventive root or, in the case of a non-

eventive root, adds an external argument and *ma-* statively extends back this change of state.

What have traditionally been called the causative and abilitive meanings of *maha-* place different emphasis of the stative and causative components of the *maha-* prefix. With eventive roots the abilitive is emphasized (the causation being buried within the eventiveness of the root) and with non-eventive roots the causative is emphasized since an external argument is actually being added to a created state (the abilitive in this case being left implicit).

We have also argued that the achievement meaning of *maha-* is an entailment of a special class of the abilitive *maha-*. In particular, we have shown that achievement meaning of *maha-* comprises verbs that are automatic entailments of *maha-* predicates of perceptual and mental inquiry.

This analysis correctly predicts the meaning of unaccusative roots prefixed with *maha-* and predicts that any root that is both eventive and non-eventive will have an abilitive as well as a causative meaning (respectively) when prefixed with *maha-*.

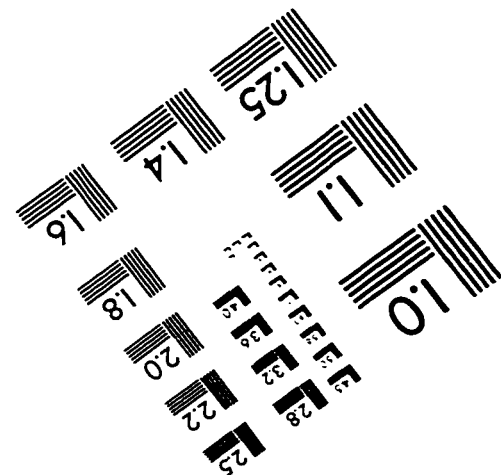
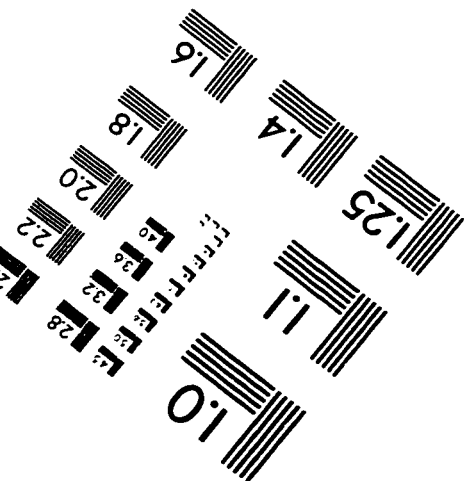
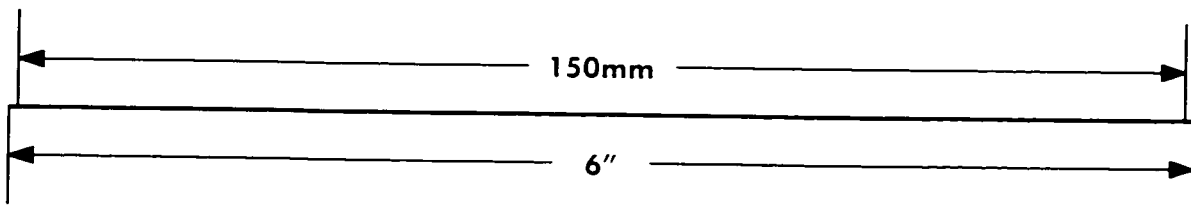
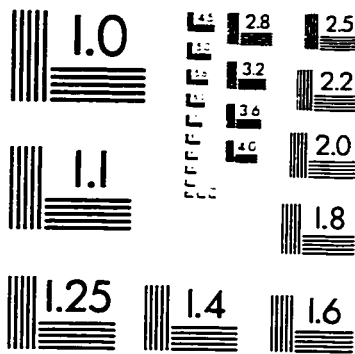
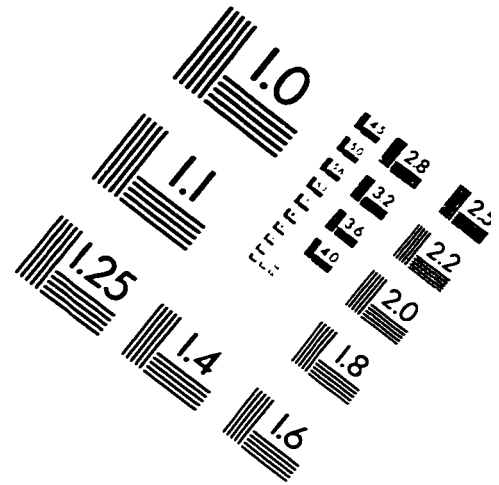
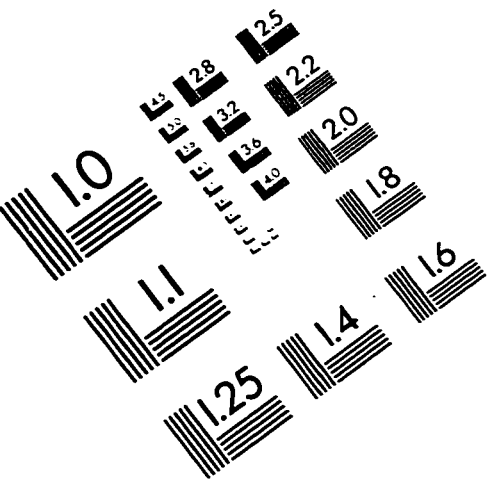
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