# Missing Complement Clause Subjects in Malagasy

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This paper presents and analyzes a biclausal construction in the Austronesian language Malagasy in which the subject of a complement clause is not expressed but is interpreted as coreferential with a higher noun phrase: *Manantena Rabe$_i$ [mba/fa hividy fiara Ø$_i$]* 'Rabe$_i$ hopes that Ø$_i$ will buy a car.' We show that there are two different structures here depending upon the choice of complementizer. With the complementizer *mba*, the construction instantiates finite control: an obligatory referential dependency between an unexpressed subject in a finite clause and a higher antecedent. With the complementizer *fa,* despite some apparent similarities, the construction is not control. We propose instead an NP Drop analysis in which the missing subject is a null pronominal licensed by an independent process of topic drop.

**1. INTRODUCTION.**[1] This paper investigates a case of missing complement clause subjects in the Austronesian language Malagasy. The complement clause in (1a) lacks a subject, which is nevertheless interpreted as coindexed with the higher subject, as represented by (1b), where the missing subject is indicated by Δ.

(1) a. Manantena Rabe fa/mba hividy fiara.
hope.PRESENT Rabe COMP buy.FUTURE car
'Rabe hopes to buy a car.'

b. [manantena Rabe$_i$ [fa/mba hividy fiara Δ$_i$]]
hope Rabe COMP buy car

This Missing Subject Construction (MSC) was first documented in Keenan 1976, and here we intend to take up where he left off and consider in more detail the data and two of his suggested analyses. The first treats such examples as an instance of FINITE CON-

TROL, a referential and syntactic dependency between an unexpressed subject in a finite complement clause and an overt antecedent in the matrix clause. Finite control has recently been documented in a number of unrelated languages and is analyzed for Hebrew in Landau 2004. The alternative analysis is that the MSC represents the phenomenon of NP DROP in the embedded clause. Malagasy allows the omission of subjects, especially in informal, spoken contexts (Rahajarizafy 1960:14, Keenan 1976:274, Pearson 2005) and under this proposal the MSC is NP Drop in the embedded clause licensed by the matrix subject. We claim that both analyses are correct, depending upon the choice of the embedded clause complementizer. With the complementizer *fa*, the construction is NP Drop. When the complementizer is *mba*, the construction instantiates Finite Control. Thus, what looks superficially the same is actually two different structures.

The paper is organized as follows. Section 2 introduces some basics of Malagasy morphosyntax. In section 3 we present details of the missing subject construction and lay out two possible analyses, the Finite Control analysis and the NP Drop analysis. In section 4 we show that the construction with *mba* behaves like control but that the construction with *fa* does not. The two constructions systematically differ over a wide range of properties that characterize control structures. We conclude that both of Keenan's analyses were correct, albeit for different sets of data. Sections 5 and 6 develop the NP Drop and Finite Control analyses in more detail and discuss how they account for the previously introduced data. Section 7 concludes.

**2. MALAGASY SYNTAX.** Malagasy is an Austronesian language spoken by approximately 14 million people on the island of Madagascar. It is widely cited as having predicate-initial word order, as in (2a). It also has a well-developed Philippine-style voice system that advances thematically diverse elements to the clause-final position. Corresponding to the ACTOR TOPIC (AT) sentence with the agent as the external argument in (2a), the THEME TOPIC (TT) sentence in (2b) has the direct object as the clause-final element and the CIRCUMSTANTIAL TOPIC (CT) sentence in (2c) has an oblique constituent in final position, in this case a benefactive. Note that the agent in non-AT clauses appears immediately following the verb.[2]

(2)  a. N-i-vidy     ny akoho  i Bao.
        PAST-AT-buy  the chicken Bao
        'Bao bought the chicken.'

     b. No-vidi-n'  i Bao  ny  akoho.
        PAST-buy-TT Bao    the chicken
        'The chicken was bought by Bao.'

     c. N-i-vidi-anan' i Bao  akoho  i Soa.
        PAST-AT-buy-CT Bao    chicken Soa
        'Soa was bought a chicken by Bao.'

There is some debate over the status of the clause-final noun phrases in such examples: are they subjects occupying an A (argument) position or a topic element in an A' (non-

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2. We use the following abbreviations in glossing: AT, actor topic; CT, circumstantial topic; PRT, particle; TT, theme topic.

argument) position. Under the former approach, the theme topic and circumstantial topic sentences are like English passives, advancing an object or oblique element to subject position (Guilfoyle, Hung, and Travis 1992; Paul 2000). Under the latter approach, Malagasy is a VSO language in which one element must be obligatorily externalized to a right-peripheral position. This underlying order can be seen in circumstantial sentences like (2c), in which a nonterm is externalized. The verbal voice morphology registers the grammatical role of the externalized noun phrase (Pearson 2001, 2005 for Malagasy, Rackowski and Richards 2005 for Tagalog). We will ultimately adopt this latter position but will neutrally refer to the clause-final noun phrase as the EXTERNALIZED ELEMENT or the CLAUSE-FINAL DP.[3]

An exception to the generalization that the externalized element appears in clause-final position is when the predicate has a CP complement with an overt complementizer. In such cases, the CP occurs to the right of the externalized element, which is bold-faced in (3) (Keenan 1976). We will call this word order extraposition without taking a stand on how the CP arrives in this extraposed position.[4]

(3) a. Manantena **Rabe** [fa/mba handeha ho any Frantsa aho].
hope...AT    Rabe    COMP    FUT.go.AT  LOC    France    1S.NOM
V         S      CP
'Rabe hopes that I will go to France.'

    b. *manantena [fa/mba handeha ho any Frantsa aho]   **Rabe**
hope        COMP    go     LOC    France   1S.NOM   Rabe

Although there are differences between *fa* and *mba*, some of which will be discussed below, we will gloss both as COMP, for complementizer. The fact that both license a clause-final position of the complement they introduce supports this decision. To first approximation, *fa* is the equivalent of English *that* and introduces an indicative clause, while *mba* is an irrealis/subjunctive complementizer more similar to English *for*. Abinal and Malzac 1888/2000 characterizes *mba* as a marker of the optative.

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3. Within Government and Binding Theory, an A-position was a structural position in a language to which a θ-role was assigned: the subject position (spec,I) and complement positions. All other positions were A'-positions. With the advent of the VP-internal subject hypothesis, according to which subjects originate in a lower position (spec,v) where they are assigned a θ-role, the classic definitions of A- and A'-positions fail because spec,I undesirably becomes an A'-position. We continue to use the terms A- and A'-position because they are widely understood within the generative literature. For our purposes, A-positions are the canonical position of phrases bearing grammatical relations to the clause (subject and object) and other positions are A'-positions. Simplifying somewhat, the debate over the status of the Malagasy externalized argument can be viewed as whether the externalized argument occupies the canonical surface subject position in the clause or not.

4. Unextraposed examples are, in fact, grammatical for some speakers if the embedded subject is not pronounced. Randriamasimanana (n.d.) offers the examples in (i).

(i) a. Nilaza     fa     nandeha    i Paoly.
PAST.say   that   PAST.go.AT   Paul
'Paul said that he went (there).'

    b. Nilaza     fa     hividy       ilay boky i Paoly.
PAST.say   that   FUT.go.AT    that book Paul
'Paul said that he would buy that book.'

These examples presumably illustrate the MSC under investigation, but we have nothing to say about why extraposition should become optional.

All Malagasy verbs, with the exception of certain *f*-nominalizations (Keenan and Polinsky 1998), contain tense morphology indicated in the table in (4). There are no dedicated nonfinite verb forms.[5]

(4)  Malagasy tense prefixes

| PAST | PRESENT | FUTURE/IRREALIS |
|------|---------|-----------------|
| n(o)- | Ø- | h(o)- |

With this much as background, we turn to the MSC.

## 3. THE MISSING SUBJECT CONSTRUCTION.

In presenting the MSC, we follow Keenan's (1976) ground-breaking descriptive work. This section presents Keenan's observations, supplemented with some of our own data from the Merina dialect of Malagasy.

The primary characteristic of this construction is that an embedded clause externalized element is missing under coreference with another DP in the sentence, (5). The first restriction on this generalization is that only externalized elements of agent topic verbs can licitly antecede a missing DP, as is the case in (5). A missing DP is not licensed by an agent of non-AT verb, (6), a possessor, (7), or a conjunct in a coordinate structure, (8).

(5)  Manantena Rabe$_i$   fa/mba  hividy fiara  $\Delta_i$.
    hope.AT       Rabe     COMP     buy      car
    'Rabe hopes to buy a car.'

(6)  *antenain-dRabe$_i$  fa/mba    hividy fiara  $\Delta_i$
    hope.TT-Rabe          COMP       buy      car
    ('It is hoped by Rabe to buy a car.')

(7)  *manantena ny fianakavian-dRabe$_i$  fa/mba  hanambady an-dRasoa  $\Delta_i$
    hope.AT       the family-Rabe              COMP     marry         ACC-Rasoa
    ('Rabe's family hopes that Rabe will marry Rasoa.')
    (ok with meaning 'Rabe's family hopes to marry Rasoa.')

(8)  *manantena Rabe$_i$  sy   Rakoto fa/mba  hanambady an-dRasoa  $\Delta_i$
    hope.AT       Rabe     and Rakoto COMP     marry         ACC-Rasoa
    ('Rabe and Rakoto hope that Rabe will marry Rasoa.')
    (ok with meaning 'Rabe and Rakoto hope to marry Rasoa.')

Second, only externalized elements can be dropped, (5), not objects, (9), or postverbal agents, (10).[6]

(9)  *manantena Rabe$_i$ fa/mba  hamangy     $\Delta_i$   Rasoa
    hope          Rabe COMP     visit.AT            Rasoa
    ('Rabe hopes that Rasoa will visit him.')

(10)  *manantena Rabe$_i$ fa/mba  hovangiana  $\Delta_i$   Rasoa
    hope          Rabe COMP     visit.TT            Rasoa
    ('Rabe hopes that Rasoa will be visited by him.')

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5.  With the past and future prefixes, *no/ho-* is used before consonants, *n/h-* is used before vowels. It is often stated that the present tense marker is *m-* in the actor topic voice and Ø- elsewhere. We follow Pearson 2001 in taking *m-* to be a voice marker that disappears in nonactor topic voices, perhaps for phonological reasons. Nothing hinges on this decision.

6.  Malagasy is not an object drop language (Randriamasimanana 1986, Pearson 2005, Potsdam 2006c) although one occasionally sees missing objects in conversation.

Lastly, Keenan notes that speakers vary in whether they require obviation when an overt pronoun is inserted as the embedded externalized element, (11). We also found highly variable judgments on similar examples. The (im)possibility of a coreferential interpretation varied greatly with the speaker, the matrix predicate, and the embedded clause. We will have nothing more to say about obviation and the graded judgments associated with it.

(11)   Manantena Rabe  fa/mba  hividy  fiara   izy.
       hope.AT      Rabe   COMP   buy     car    3s.NOM
       */?/ok 'Rabe hopes to buy a car.'
       'Rabe hopes that he (not Rabe) will buy a car.'

Keenan (1976) suggests two analyses of the MSC. He initially posits that the construction is a form of Equi NP Deletion. What is now called Obligatory Control would be analyzed using the null formative PRO in the embedded externalized element position (Chomsky 1981, Landau 2000) or A-movement from one position to another (Hornstein 1999, 2003) as schematized in (12). The terms CONTROLLER and CONTROLLEE are standardly used to describe the overt DP and the missing DP, respectively, in a control relation.

(12)   manantena Rabe$_i$ [$_{CP}$ fa/mba  hividy  fiara  PRO$_i$/t$_i$]
       hope          Rabe        COMP    buy     car

The construction thus far does indeed show a number of properties typical of obligatory control, some of which are listed in (13) (see Hornstein 1999, 2003 Landau 2000, Jackendoff and Culicover 2003, Davies and Dubinsky 2004, as well as much earlier work on the subject).

(13)   PROPERTIES OF OBLIGATORY CONTROL
       a.  the missing constituent in the subordinate clause must be a subject
       b.  the missing subject does not allow an arbitrary interpretation
       c.  the missing subject does not allow a non-c-commanding antecedent

Keenan's observations in (9) and (10) confirm (13a), that the missing element must be a subject under the assumption that the exernalized element is in some way a subject. Property (13b), that the missing DP does not allow an arbitrary, nonreferential reading, is also confirmed in that MSC examples like (5) cannot mean 'Rabe hopes that someone will buy a car'. Only the obligatory control interpretation is possible. Examples (6) through (8)) confirm property (13c), that the antecedent for the missing element must be a c-commanding DP.

The main difference between the more standard cases of obligatory control, which involve nonfinite complement clauses, and the MSC, is that the embedded clause in the MSC is finite. Given that we seem to have obligatory control into a finite (tensed) CP, the MSC calls for FINITE CONTROL analysis. Finite control has been recently analyzed in a Minimalist framework in Landau 2004 and is found in diverse languages such as Hebrew (Landau 2004), Japanese (Uchibori 2000), the Balkan languages (Terzi 1992, Landau 2004), and Persian (Hashemipour 1988, 1989, Ghomeshi 2001). Although it is not well known, its existence seems firmly established. A Hebrew example is given in (14).

(14)  Hem$_i$ kivu  e    PRO$_i$/t$_i$ yelxu    ha-bayta  mukdam.
      they   hoped that            will.go.3P  home      early
      'They hoped to go home early.'

As an alternative, Keenan (1976:274) also suggests that the construction could be
an instance of what he calls NP Drop. Malagasy shows characteristics of a discourse-
driven, externalized-element-drop language, especially in informal, spoken contexts
(Rahajarizafy 1960:14, Keenan 1976:274, Pearson 2005). Such NP Drop requires that
the dropped noun phrase's referent have been established as topical ("given") earlier in
the discourse. Although the pragmatic licensing requirements on NP Drop have not
been precisely determined, we can assume for the sake of argument that they are met in
this construction and we will call this the NP DROP analysis.

In the following section, we argue that both analyses are correct, but for different
embedded complementizers. When the complementizer is *mba*, the MSC shows all the
characteristics of control. We thus claim that it is finite control. When the complemen-
tizer is *fa*, however, the MSC does not exhibit control-like characteristics. Instead it seems
to be a discourse-driven ellipsis construction, and we will propose that this is NP Drop.
This conclusion will force us to flesh out both the Finite Control and the NP Drop analy-
ses and their consequences, which we do in sections 5 and 6. To differentiate the two pat-
terns below, we will call them MSC-*mba* and MSC-*fa*.

## 4. FURTHER PROPERTIES OF CONTROL.

This section more closely com-
pares the two constructions under investigation with known characteristics of control.
The results provide further evidence in favor of analyzing MSC-*mba* as finite control.
On the other hand, they argue against analyzing MSC-*fa* as control because the con-
structions do not pattern alike. The two will be seen to differ along a number of dimen-
sions, suggesting distinct analyses. The conclusion is that MSC-*mba* is control but
MSC-*fa* is not.

Much is known about the structural and interpretive properties of obligatory con-
trol. A number of these characteristics, based on in-depth studies of English are given
in (15) (see Hornstein 1999, 2003, Landau 2000, Jackendoff and Culicover 2003,
Davies and Dubinsky 2004, and references therein).

(15)  OBLIGATORY CONTROL CHARACTERISTICS
      a. the missing constituent must be a subject
      b. the missing subject does not allow an arbitrary interpretation
      c. the missing subject does not allow a non-c-commanding antecedent
      d. controller choice is governed by the Minimal Distance Principle
      e. the controller-controllee relation is local
      f. the tense of the complement clause is dependent upon the tense of the
         matrix clause

We have already seen that the MSC with both complementizers has characteristics
(15a–c). In this section, we show that MSC-*mba* has the remaining three characteristics
in (15), but MSC-*fa* does not.

It is widely recognized that, to first approximation, obligatory control structures are
subject to something like Rosenbaum's (1967) Minimal Distance Principle in (16)

according to which the missing subject in control constructions must be coindexed with the closest possible antecedent (see Hornstein 1999 for recent discussion). It accounts for why intransitive control verbs are subject control and transitive verbs are typically object control, and not subject control, (17).

(16) MINIMAL DISTANCE PRINCIPLE (MDP)

PRO is coindexed with the lowest DP that c-commands it.

(17) a. Sandy$_i$ tried PRO$_i$/t$_i$ to win.
  b. Sandy$_i$ persuaded me$_j$ PRO$_{*i,j}$/t$_{*i,j}$ to go.

While there are exceptions to the MDP in which subjects control over a closer object, notably *promise* and *threaten* (Larson 1991), the class of exceptions is small, cross-linguistically stable (Ruzicka 1999), and semantically consistent (Jackendoff and Culicover 2003). The examples in (18) show that ordinary control structures in Malagasy also obey the MDP. Ordinary control differs from the MSC in that the complement clause does not extrapose and there is no overt complementizer.

(18) a. Niteny tamin-dRasoa [hianatra teny gasy] Rabe.
  tell      PREP-Rasoa      learn      Malagasy   Rabe
  'Rabe told Rasoa to learn Malagasy.'
  \*'Rabe told Rasoa that he (Rabe) will learn Malagasy.'

  b. Nampahatsiahyny zanany [hanidy ny varavarana] Rasoa.
  remind       the     child    lock the door     Rasoa
  'Rasoa reminded her children to lock the door.'
  \*'Rasoa reminded her children that she will lock the door.'

  c. Nandresy lahatra an-dRabe [haka rivotra] aho.
  persuade        ACC-Rabe   take   air     1S.NOM
  'I persuaded Rabe to take a vacation.'
  \*'I persuaded Rabe that I should take a vacation.'

When we turn to the MSC, we find that *mba* patterns with obligatory control. The presence of a matrix object forces an object control interpretation for the missing embedded element, (19b), (20b), and (21b). With *fa* however, the missing element is still interpreted as coreferential with the matrix externalized element, (19a), (20a), and (21a).

(19) a. Niteny tamin-dRasoa Rabe$_i$ [fa    hianatra teny gasy     Δ$_i$].
  tell     PREP-Rasoa      Rabe   COMP learn       Malagasy
  'Rabe told Rasoa that he (Rabe) will learn Malagasy.'

  b. Niteny tamin-dRasoa$_i$ Rabe [mba hianatra teny gasy     Δ$_i$].
  tell     PREP-Rasoa      Rabe   COMP learn       Malagasy
  'Rabe told Rasoa to learn Malagasy.'

(20) a. Mampahatsiahy ny zanany Rasoa$_i$ [fa    hanidy ny varavarana Δ$_i$].
  remind        the children Rasoa   COMP lock    the door
  'Rasoa reminded her children that she (Rasoa) will lock the door.'

  b. Mampahatsiahy ny zanany$_i$ Rasoa [mba hanidy ny varavarana Δ$_i$].
  remind        the children Rasoa   COMP lock    the door
  'Rasoa reminded her children to lock the door.'

(21)  a.  Nandresy lahatra  an-dRabe      ny    ray aman-dreniko$_i$
          persuade              ACC-Rabe      the    parent.1S
          [fa        haka  rivotra    Δ$_i$].
           COMP     take   air
          'My parents persuaded Rabe that they will take a vacation.'

      b.  Nandresy lahatra  an-dRabe$_i$    ny    ray aman-dreniko
          persuade              ACC-Rabe      the    parent.1S
          [mba      haka  rivotra    Δ$_i$].
           COMP     take   air
          'My parents persuaded Rabe to take a vacation.'

We return to these facts in section 5, in developing the NP Drop analysis. At this point we note only that the MDP is regularly violated with MSC-*fa,* suggesting that it does not involve control.

The next relevant characteristic of obligatory control structures is locality of the controller-controllee relation. OC structures show strict restrictions on the position of the controllee. It must be the subject of a complement clause or adjunct immediately embedded in the clause containing the antecedent. That is, there can be at most one clause boundary between the controller and controllee. We will show that MSC-*fa* does not obey this restriction, but MSC-*mba* does.

To do this, however, we need to make a detour into the syntax of the focus construction in Malagasy, examples of which are given in (22). Descriptively, the focus construction is formed by fronting the focused constituent and following it with the particle *no* plus the remainder of the clause. Paul (2001) and Potsdam (2006a,b) argue that, despite appearances, these constructions are pseudoclefts. The initial XP in each case, *Rasoa* in (22a) and *omaly* 'yesterday' in (22b), are the main predicates of the clause, and the remaining material is a headless relative clause in subject position. This is schematized in (23) for (22a).

(22)  a.  Rasoa    no     nihomehy.
          Rasoa     PRT    laugh
          lit. "The one that laughed is Rasoa."
          'It is Rasoa that laughed.'

      b.  Omaly    no     nihomehy  Rasoa.
          yesterday  PRT    laugh         Rasoa
          lit. "Yesterday is when Rasoa laughed."
          'It was yesterday that Rasoa laughed.'

(23)  b.  [IP [predicate  Rasoa] [DP/headless rel.  no  Op$_i$  nihomehy    t$_i$]]
                              Rasoa                                        laugh

If such a construction is embedded under an MSC verb, then the entire headless relative clause should be missing because it is the embedded clause subject. But this is impossible. Instead, the subject inside the subject of the embedded pseudocleft clause is missing and interpreted as coreferential with the matrix subject:

(24)  Manantena Rasoa fa/??mba rahampitso  no  handeha  Δ.
      hope            Rasoa  COMP      tomorrow      PRT  go
      'Rasoa hopes that it is tomorrow that she will go.'

The example does not illustrate a possible obligatory control configuration, as we can see in the syntactic structure in (25). The controller (bold-faced) is the subject of the matrix clause but the putative controllee Δ is embedded within a relative clause within the complement clause's subject.[7]

(25)
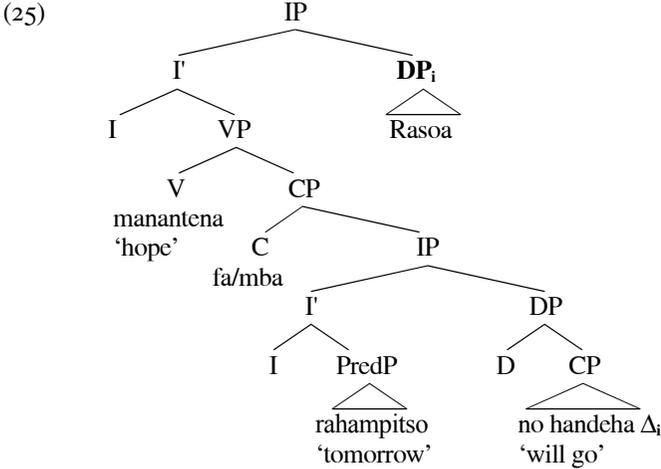


The fact that this example is grammatical with *fa* indicates that we are not dealing with a control construction. If MSC-*mba*, in contrast, is a control construction, the ungrammaticality of (24) with *mba* is expected.[8] Observe that both options are fully grammatical if the missing subject is realized with a pronoun:

(26) Manantena Rasoa fa/mba  rahampitso no handeha izy.
     hope       Rasoa COMP    tomorrow   PRT go     3S
     'Rasoa hopes that it is tomorrow that she (Rasoa or someone else) will go.'

The final well-known characteristic of control is that the temporal interpretation of the embedded clause is restricted by the matrix clause (Bresnan 1982, Varlokosta 1993, Stowell 1995, Martin 1996, Terzi 1997, Landau 2000, 2004, and others). This tense dependency is observed in finite control and Landau 2004 shows that the embedded verb in Hebrew finite control is restricted to having an irrealis interpretation. Morphologically, if the embedded verb is not an infinitival, it shows subjunctive morphology or future tense (Landau 2004). When we turn to the Malagasy MSC, we find that this is the case with *mba* but not *fa*. With *fa* there is no tense dependency between the two verbs. With *mba*, the embedded verb must have future/irrealis morphology marked with *h(o)-* (see [4] above):

(27) a. Mihevitra Rabe fa/*mba **n**-ahita    gidro tanyan-tsena.
        think.AT  Rabe COMP  **PAST**-see.AT lemur LOCACC-market
        'Rabe thinks he saw a lemur at the market.'

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7. Extraposition of the complement clause is not shown in the structure.
8. If MSC-*mba* is a control structure, we might expect such examples to illustrate nonobligatory control with so-called PRO_arb as the controllee. This might account for the marginal acceptability of the example with *mba,* but then we might also expect the example to take on the arbitrary reading. Further work is required to evaluate this proposal.

b. Mihevitra Rabe fa/mba **h**-ahita    gidro any an-tsena.
   think.AT    Rabe    COMP   **FUT**-see.AT lemur LOC ACC-market
   'Rabe thinks he will see a lemur at the market.'

MSC-*fa* is also possible with factive verbs, whose complements do not have an irrealis interpretation. MSC-*mba* is not possible with such verbs:

(28)  a. Manenina Rabe fa/*mba hivarotra ny fiarany.
         regret      Rabe COMP    sell        the car.3S
         'Rabe regrets that he will sell his car.'

      b. Gaga          ny mpiasa fa/*mba handray valim-pitia.
         be.surprised  the worker COMP    receive  reward
         'The worker is surprised that he will receive a reward.'

   In conclusion, the MSC represents two distinct constructions. With the complementizer *mba*, we have all the characteristics of a control structure. Because the complement clause is finite, we conclude that MSC-*mba* represents finite control. With the complementizer *fa*, in contrast, the construction does not behave like obligatory control. We conclude that the control analysis of MSC-*fa* is not appropriate and that the NP Drop analysis may be a more promising approach. We explore the details of both analyses in the following sections.

## 5. TOPIC DROP

**5.1 THE PROPOSAL.** The intuition behind the NP Drop analysis of MSC-*fa* that we will pursue is that Malagasy is a topic drop language much like the Germanic V2 languages. MSC-*fa* is thus an instance of topic drop in the embedded clause, triggered by coreference with the externalized element in the matrix clause. In 5.2 we point out parallels from the literature between Germanic V2 languages and Malagasy that include topic drop to support our general approach. In 5.3 we analyze the dropped topic in Malagasy as an instance of *pro*. The analysis follows Rizzi 1986, which proposes that *pro* must be both licensed and recovered. Licensing takes place if *pro* occupies some privileged syntactic position, which we identify as that occupied by the externalized element in Malagasy. Recovery determines the interpretation of *pro* and in 5.4 we propose that this is done via an interpretive rule that links *pro* with a current discourse topic.

**5.2 PARALLELS BETWEEN MALAGASY AND GERMANIC.** The Germanic languages, with the exception of English, are widely known for having a general V2 requirement in which the finite verb must occur in second position following some initial constituent. This initial constituent is often a topic, with particular characteristics that we explore below. The literature already contains explicit comparisons between Malagasy and Germanic V2 languages (Richards 2000 and Pearson 2001, 2005) and Pearson 2005 argues in detail that Malagasy clause-final DPs (what he calls TRIGGERS) are parallel to the initial XPs in Germanic V2 structures. If this comparison is accurate, then the presence of topic drop in both language families is unsurprising and will lead us to propose similar analyses.

In this section, we review the parallels between Germanic initial V2 topics and Malagasy externalized elements. (29) lists a number of these parallels, which are illustrated below (see Pearson 2005 for further discussion).

(29) PARALLELS BETWEEN MALAGASY EXTERNALIZED ELEMENTS AND GERMANIC V2 TOPICS
   a. externalized/initial XP cannot be focused
   b. externalized/initial XP can be present in imperatives
   c. externalized/initial XP reconstructs for the purposes of variable binding
   d. externalized/initial XP must be specific (referential)
   e. externalized/initial XP can undergo topic drop

Assuming that externalized XPs in Malagasy are topics, we correctly predict that they cannot, in general, be focused, on the assumption that topic and focus are mutually exclusive categories (Bach 1971, Lambrecht 1994). This prediction is confirmed in (30a) for Malagasy. To focus the externalized argument, the focus construction discussed in section 4 is used, (30b). Similarly, initial XPs in Germanic overtly associated with exhaustive focus are unacceptable. We illustrate this with the Norwegian example in (31).

(30) a. \*mihinana trondro ilay    zaza fotsiny          Malagasy
        eat.AT   fish   [this   child  only]

   b. Ilay  zaza fotsiny  no   mihinana trondro.
      this  child  only   PRT  eat       fish
      'Only this child eats fish.'

(31) a. \*bare denne boka  leste Lars                 Norwegian
        only  this  book  read  Lars

   b. Lars  leste  bare  denne boka.
      Lars  read   only  this  book
      'Lars read only this book.'

There is no incompatibility between the externalized argument/initial XP and imperative clause structure, however (examples from Pearson 2005:420). This is expected because there is no inherent reason to prohibit a topic in imperative clauses, under the assumption that they have a full-fledged clause structure.

(32) a. Vonoin' i Soa ny     akoho                   Malagasy
        kill.TT  Soa the    chicken
        'Soa is killing the chickens.'

   b. Vonoy    ny     akoho
      kill.TT.IMP the  chicken
      'Kill the chickens!'

(33) a. Das  Buch gab   Hans  schon   zurück          German
        the  book gave  Hans  already back
        'Hans already gave the book back.'

   b. Das Buch gib      mal zurück!
      the book give.IMP PRT back
      'Give the book back!'

Pearson indicates that both Malagasy externalized elements and Germanic initial XPs show reconstruction for the purposes of variable binding. The examples in (34a) and (35a) illustrate that a theme (underlined) that occupies the final or initial position in Malagasy and Germanic, respectively, can nevertheless contain a variable bound by the agent (examples from Pearson 2005:423–24). (34b) and (35b) illustrate that an agent in the privileged position (underlined) in each language can, of course, also bind a variable inside the theme argument.

(34)  a.  Novangian' [ny mpianatra tsirairay]$_i$ [ny rainy]$_i$ omaly.      Malagasy
          visit.TT      the student    each      the father.3S yesterday
          'His father$_i$, each student$_i$ visited yesterday.'

      b.  Namangy [ny rainy]$_i$ [ny mpianatra tsirairay]$_i$ omaly
          visit.AT    the father.3S the student    each      yesterday
          'Each student$_i$ visited his$_i$ father yesterday.'

(35)  a.  [Seinen$_i$ Vater] hat [Jeder      Student]$_i$ gestern besucht. German
          his.ACC father has   every.NOM student.NOM yesterday visited
          'His$_i$ father, every student$_i$ visited yesterday.'

      b.  [Jeder    Student]$_i$ hat gestern [seinen$_i$ Vater] besucht.
          every.NOM student.NOM has yesterday his.ACC father visited
          'Every student$_i$ visited his$_i$ father yesterday.'

The restriction of the initial XP/external argument to referential expressions, (29d), has different manifestations in Malagasy and Germanic. In Malagasy, the externalized element must have a determiner (Pearson 2005:419):

(36)  a.  Nihinana ilay voankazo *(ny) gidro.                    Malagasy
          eat.AT    that fruit       the lemur
          'The/*A lemur ate that fruit.'

      b.  Nohanin' ny gidro *(ilay) voankazo.
          eat.TT    the lemur    that fruit
          'The lemur ate that fruit/*fruit.'

We hypothesize that the presence of an overt determiner signals specificity (referentiality) rather than definiteness. A similar proposal for Māori determiners is advanced in Chung and Ladusaw 2004. The absence of an overt determiner (*ny*) or demonstrative is associated with the nonspecific reading. Topics are by definition specific (see Lambrecht 1994, Gundel, Hedberg, and Zacharski 1993, for extensive discussion), and so it is unsurprising that Malagasy external arguments have to appear with an overt determiner. In Germanic, where the determiners express definiteness rather than specificity (Christophersen 1939, Prince 1998a, and many others), indefinite initial DPs are possible, if rare (Pearson 2005:419):[9]

(37)  a.  Bókina/??Bók    keypti Jón.                          Icelandic
          book.DEF.ACC/book bought John.NOM
          'John bought the/a book.' (lit. 'The book/A book John bought.')

      b.  Ljóbók        mun hann aldrei kaupa.
          poetry.book.ACC will  he.NOM never buy
          'A poetry book he will never buy.'

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Turning to the topic drop phenomenon of interest, characteristic (29e), it is well documented that the Germanic languages have the ability to drop the initial XP in a V2 structure under certain conditions (Balkenende 1995 for topic drop in Dutch, Huang 1984 and Sigurðsson 1989:139–48 for topic drop in German, Sigurðsson 1993 for topic drop in Old Icelandic, Sigurðsson 1989:139–48 for Swedish, Prince 1998b for Yiddish, among others). Icelandic topic drop examples are in (38) (Sigurðsson 1989:254–55).

(38) a. (Ég) ekki    a    ekki.                                         Icelandic
        I    recognize that not
     'I don't recognize that.'

   b. (A)  ekki    ég ekki.
        that recognize I  not
     'That I don't recognize.'

Only the initial XP in a V2 clause can drop, not a noninitial subject, (39a), or an object, (39b).

(39) a. Núna ekki     *(ég) a    ekki.                                  Icelandic
        now  recognize I    that not

   b. Núna ekki     ég  *(a)  ekki.
        now  recognize I     that not
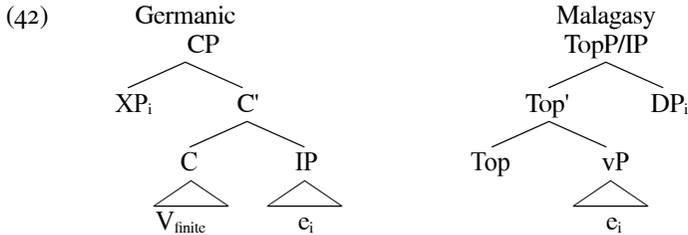     'Now I don't recognize that.'

Pearson 2005 explicitly points out that Malagasy, too, has a rule of topic drop (see also Rahajarizafy 1960, Keenan 1976). In Malagasy, of course, the rule targets the final XP, rather than a clause-initial XP as in Germanic. The Malagasy examples in (40) parallel the Icelandic examples in (38). As in Icelandic, nonsubjects cannot be dropped, (41) (examples from Pearson 2005:421):

(40) a. Mamangy an' i Tenda (izy).                                      Malagasy
        visit.AT  ACC Tenda 3.NOM
     'He is visiting Tenda.'

   b. Vangian' i Naivo  (izy).
        visit.TT  Naivo   3.NOM
     'Him, Naivo is visiting.'

(41) a. Mamangy *(azy)  i Naivo.                                        Malagasy
        visit.AT   3.ACC  Naivo
     'Naivo is visiting him.'

   b. Vangian- *(-ny) i Tenda.
        visit.TT    3    Tenda
     'Tenda, he is visiting.'

The phenomenon is characteristic of colloquial speech and informal writing (Sigurðsson 1993:254, Pearson 2005:421). Pearson indicates that in Malagasy it is "reasonably common in texts when a particular referent persists across several sentences in a stretch of discourse. …" We thus see that Germanic languages and Malagasy share characteristics (29a–e).

Pearson 2005 uses some of these facts, and others, to argue that the Malagasy externalized element, in fact, occupies an A' position external to the clause, much like the topic XP in the Germanic V2 languages occupies spec,C under many accounts.[10] We

will adopt this fundamental insight and encode the topic status of Malagasy external-ized elements by locating them in a rightward specifier of an A' projection (see MacLaughlin 1995 for a similar proposal). For simplicity, we will identify this A' pro-jection as IP; spec,I is an A' position.[11] For clarity, we will relabel IP as TopP as a reminder of its A' status:

(42)            Germanic                                  Malagasy
                  CP                                      TopP/IP

       XP$_i$          C'                        Top'              DP$_i$

              C            IP                  Top              vP

           V$_{finite}$    e$_i$                            e$_i$

The topic drop phenomenon, then, is that spec,C or spec,Top may be unpronounced under certain discourse conditions. In the next section, we develop an analysis of topic drop that can account for both Germanic and Malagasy.

**5.3  TOPIC DROP IN MSC-fa: A *pro* ANALYSIS.**  Under the above concep-tion, the topic drop phenomenon entails that the XP in the specifier of CP or TopP may be unrealized in some situations. It is not literally deleted, however; rather, we will pro-pose that in some cases this XP may be *pro*, the null pronominal well known from *pro*-drop languages. Typically, null pronominals are associated with the subject position but null topics are also well documented (Lambrecht 1994:93–101, 323–29). In the structure we just introduced above, *pro* is located in spec,C or spec,Top. In what fol-lows we develop the analysis for Malagasy and hypothesize that it can be extended to Germanic with minimal modifications.

Rizzi's (1986) influential theory of *pro* provides a framework in which to under-stand the limited distribution of *pro* in Malagasy. That approach to *pro* has been labeled the identification hypothesis (Jaeggli 1982, Chung 1984). For Rizzi, *pro* must satisfy two distinct identification conditions: it must be licensed, and it must be recoverable. FORMAL LICENSING requires that *pro* be in an appropriate structural relationship with a licensing head. RECOVERY says that information regarding the identity of *pro* must be recoverable or determinable. We discuss licensing in this section and address the recovery aspect of *pro* in the following section.

For Malagasy, the licensing requirement is straightforward: *pro* is licensed only in spec,TopP by the head Top°.[12] We assume without argument that the spec-head configuration is a licit licensing configuration. We state this in (43).

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10. More precisely, Pearson adopts an articulated Comp structure (Rizzi 1997) in which CP consists of at least a Topic Phrase (TopP) dominating a Wh Phrase (WhP). The overt subject is base-generated in the clause-peripheral spec,Top position and it is coindexed with a null operator that has moved to spec,WhP from a clause-internal position. We do not adopt this more complex structure.
      One difference between Malagasy and Germanic topics is that German topics have the case that they are assigned in situ while Malagasy topics bear nominative case.
11. See Diesing 1990 (Yiddish), Aissen 1996 (Tzotzil), Ordóñez and Treviño 1999 (Spanish), and Sturgeon 2006 (Czech) for other analyses in which spec,I is an A'-position.
12. For Germanic, the licensing head is usually assumed to be C°.

(43) LICENSING OF *pro* IN MALAGASY
   *pro* is licensed by Top° in spec,TopP

This correctly accounts for the fact that topic drop is not possible for nonexternalized elements, as they are not located in spec,Top. We thus account for the data in (41), repeated here as (44).

(44) a. Mamangy  *(azy)  i Naivo.
   visit.AT      3.ACC  Naivo
   'Naivo is visiting him.'

   b. Vangian-  *(-ny) i Tenda.
   visit.TT      3     Tenda
   'Tenda, he is visiting.'

The analysis correctly predicts that topic drop will not target a subject that is not in spec,Top, even if it is a topic. Malagasy has a topic-marking, left dislocation construction illustrated in (45) in which an XP is fronted followed by the particle *dia* (Keenan 1976:272–73, Paul 2000:148–52):[13]

(45) Rasoa dia    nanapaka bozaka omaly.
   Rasoa TOPIC cut.AT     grass    yesterday
   'Rasoa, she cut the grass yesterday.'

Topic drop is not possible from the left dislocated, pre-*dia*, position:

(46) *pro    dia    nanapaka bozaka omaly
           TOPIC cut.AT     grass    yesterday
   ('[Her], she cut the grass yesterday.')

This follows in our analysis because the initial XP is not in spec,Top, even though it has the semantic and pragmatic properties of a topic, in this case, the "aboutness" reading.

Our analysis also correctly predicts that topic drop is not restricted to complement clauses. Topic drop and *pro* will be possible in adjunct clauses as long as the adjuncts contain TopP:[14]

(47) a. Tsy nianatra Rabe$_i$ fa      narary   *pro*$_i$.
   NEG study      Rabe   because PAST.sick
   'Rabe did not study because he was sick.'

   b. Homeko     valisoa ianao$_i$ raha mety   mihira *pro*$_i$.
   FUT. give.TT.1S reward   you    if   willing sing
   'You will be given a reward by me if you agree to sing.'

Returning to the MSC, the missing externalized element of the complement clause is *pro*, licensed by Top° in that clause:

(48) Manantena Rabe$_i$ [fa    [[hividy fiara t$_i$]vP *pro*$_i$]TopP].
   hope.AT      Rabe   that   buy.AT  car
   'Rabe hopes to buy a car.'

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13. We assume that the topic occupies the specifier of a phrase headed by *dia*. The *dia*-phrase is possibly one of the projections in Rizzi's (1997) left periphery. The exact identity of this projection is not important as long as it is not TopP used above.

14. We thank an anonymous reviewer for bringing this fact to our attention.

Here, too, we saw that a missing complement clause with a nonexternalized element expressed by *pro* is ungrammatical:

(49) a. *manantena Rabe$_i$ [fa  hamangy *pro$_i$*  Rasoa]           = (9)
        hope        Rabe     that visit.AT         Rasoa
        ('Rabe hopes that Rasoa will visit him.')

    b. *manantena Rabe$_i$ [fa  hovangiana *pro$_i$*  Rasoa]           = (10)
        hope            Rabe     that visit.TT            Rasoa
        ('Rabe hopes that Rasoa will be visited by him.')

The voice of the embedded clause is not relevant, as long as *pro* corresponds to an externalized element. In (50), the embedded verb is in the theme topic form.[15]

(50) Manantena Rabe$_i$ fa  hofidina      *pro$_i$*.
      hope         Rabe     that FUT.choose.TT
      'Rabe hopes that he will be chosen.'

(43) thus accounts for the positional restrictions on the null topic. *Pro* will not appear in any position except spec,TopP, because it would then be unlicensed. In the next subsection we turn to the more challenging task of determining the interpretation of the missing element.

**5.4 REFERENTIAL RECOVERY OF *pro*.** The second half of Rizzi's identification hypothesis for *pro* involves recovery. Recovery requires that information regarding the referential identity of *pro* be available. We propose that this is done via an interpretive, discourse-oriented rule:

(51) RECOVERY OF *pro* IN MALAGASY
      coindex *pro* with the current discourse topic

Our rule has parallels with Huang's (1984) topic-chain interpretation rule for the null topic operator in Chinese: "We may assume that there is a rule of coindexation, in the discourse grammar of a discourse-oriented language, which coindexes an empty topic node with an appropriate preceding topic (Huang 1984:550)." This rule is responsible for interpreting *pro* as the current topic in the discourse. This rule accounts for, but is not limited to, the two core instances of topic drop: its use in root clauses, (40) repeated here as (52), and its use in MSC-*fa*.

(52) a. Mamangy an' i Tenda (izy).
        visit.AT     ACC Tenda    3.NOM
        'He is visiting Tenda.'

    b. Vangian' i Naivo (izy).
        visit.TT    Naivo    3.NOM
        'Him, Naivo is visiting.'

In (52), there is no syntactic representation of the discourse topic, precluding a syntactic recovery condition.[16] The missing topic will be interpreted as the current discourse

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15. The analysis predicts that NP Drop should be impossible if the complement clause lacked a Topic Phrase, because there would be no head to license *pro*. We have not found a configuration that tests this prediction.

16. In earlier versions of this work, we proposed that the interpretation of *pro* was recovered in part syntactically. We thank an anonymous reviewer for pointing out the limited application of that line of thought.

topic, a notion we will take up below. In most cases, the current discourse topic should be the referent of the DP in a preceding spec,TopP. In embedded contexts such as the MSC-*fa* in (53), the recovery condition in (51) will pick out the most immediately preceding DP in spec,TopP.

(53)  Manantena Rabe$_i$ [fa   hividy fiara *pro$_i$*] .
       hope         Rabe    that buy.AT  car
       'Rabe hopes to buy a car.'

Here the current discourse topic has been syntactically declared as such by being in spec,TopP; it is also the closest DP to the embedded subject. Other DPs not in spec,TopP, if there are any, will be dispreferred as antecedents for *pro*.

The main difficulty in putting the proposed topic interpretation rule to work has to do with the elusive task of identifying the "current discourse topic." The choice of discourse topic is known to be sensitive to a wide range of other factors besides structural cues. The literature on topic is enormous, and we will make no attempt to review it here. Instead, we will try to summarize the main components of the notion "topic" that we believe may play a role in the recovery of *pro* in Malagasy. We hypothesize that when these components are associated with different referents, the recovery is not as predictable as it is in the more straightforward cases such as (53). In addition to the association with the syntactic position spec,TopP, which we have shown to play a role, there are at least three factors that influence the identification of a particular expression as the current topic: syntactic locality, activation of the referent, and semantic/pragmatic implicatures of the verb associated with this expression. Locality would guide *pro* to select a structurally closer antecedent, even if it is not the DP in spec,Top (see Shi 2000 for Chinese). That is, recovery is guided by the syntactic structure, even though the recovery condition itself is not a syntactic principle. Activation refers to the level of salience of a referent in a speaker's working memory. Pronominal elements, especially those associated with discourse participants (first and second person pronouns), have referents that are highly active in working memory (Garrod, Freudenthal, and Boyle 1994; Garnham 2001). This gives them an advantage over other expressions in terms of topic continuity—the ability of the topic referent to remain accessible over several sentences in discourse (Givón 1983). Lastly, the choice of "current topic" seems to depend upon the matrix predicate. The role of predicate semantics in topic identification is not fully understood, but two observations are in order here. First, there is experimental evidence that referential interpretation is highly sensitive to such subtle semantic factors as causality (Green and McKoon 1995), which may provide different preferences for topic choice depending on the matrix or embedded predicate. Second, different predicates are used preferentially with different persons; for instance, 'think', 'know', and 'guess' in American English occur most frequently with first person singular subjects (Scheibman 2002). Assuming that such preferences recur across languages, the semantics of a given predicate should be expected to bias the identification of a null topic.

When all these factors work together the identification of a particular expression as topic proceeds in a rather straightforward manner. It is when these factors conflict that difficulties in identifying and defining a topic arise. Different researchers then place different emphasis on each of those factors, which leads to the competing definitions

of topic in the literature: definitions that emphasize the structural position (Huang 1984, Kiss 1995), definitions that emphasize activation (Chafe 1976; Gundel, Hedberg, and Zacharski 1993; Ariel 1990), and definitions that emphasize verb implicatures or entailments (Miltsakaki 2003), to name just a few.

A discourse-based recovery condition is appealing because it recognizes the competing components that contribute to the concept of "current topic." However, because there is no clarity regarding the inventory of competing components and the weight of each factor, a discourse-based recovery condition raises a number of practical analytical problems. The most severe, in our view, is the lack of clear predictions regarding the recovery of *pro* in examples beyond the simple cases directly above. In what follows, we consider additional data and the extent to which the recovery condition successfully accounts for the interpretation.

We have already seen that *pro* cannot take a non–c-commanding DP as its referent. (54) repeats (6) through (8).

(54)  a.  *antenain-dRabe$_i$ fa  hividy fiara  *pro*$_i$
          hope.TT-Rabe        that buy    car
          ('Rabe hopes to buy a car.')

   b.  *manantena ny fianakavian-dRabe$_i$ fa  hanambady an-dRasoa *pro*$_i$
       hope.AT      the family-Rabe          that marry      ACC-Rasoa
       ('Rabe's family hopes that Rabe will marry Rasoa.')

   c.  *manantena Rabe$_i$ sy  Rakoto fa  hanambady an-dRasoa *pro*$_i$
       hope.AT      Rabe and Rakoto that marry      ACC-Rasoa
       ('Rabe and Rakoto hope that Rabe will marry Rasoa.')

We hypothesize that these noncommanding DPs are unfavorable topics in the higher clause. The DP that contains them is the strongly preferred discourse topic because it is more local and in spec,TopP. Choosing a non–c-commanding DP as the antecedent for *pro* violates syntactic locality, a component of discourse identification that we discussed above. Further evidence for the relevance of c-command to locality comes from the data in (55a) and (56a) showing that the MSC is not possible with sentential subjects. The examples can be expressed by using an overt pronoun, (55b) and (56b), or an alternative verb with the MSC but no sentential subject, (55c) and (56c). We propose that the overt DPs in (55a) and (56a) are not possible discourse topics because they are not structurally local enough.

(55)  a.  *mahagaga an-dRasoa$_i$ [fa  nofidina  *pro*$_i$]
          surprise    ACC-Rasoa      that choose.TT
          ('That she was chosen surprised Rasoa.')

   b.  Mahagaga  an-dRasoa$_i$ [fa  nofidina  izy$_i$].
       surprise      ACC-Rasoa      that choose.TT
       'That she was chosen surprised Rasoa.'

   c.  Gaga        Rasoa$_i$ [fa  nofidina  *pro*$_i$].
       be.surprised Rasoa      that choose.TT
       'Rasoa is surprised that she was chosen.'

(56) a. *antenain-dRabe$_i$ [fa   hividy fiara   pro$_i$]
     hope.TT-Rabe      that buy    car
     ('That he will buy a car is hoped by Rabe.')

   b. Antenain-dRabe$_i$ [fa   hividy fiara   izy$_i$].
     hope.TT-Rabe      that buy    car
     'That he will buy a car is hoped by Rabe.'

   c. Manantena Rabe [fa   hividy fiara   pro$_i$].
     hope.AT     Rabe    that buy    car
     'Rabe hopes that he will buy a car.'

As long as other restrictions are followed, the antecedent can be multiple clauses up, as in the focus construction example in (57), repeated from (24a). An object may also intervene between *pro* and its antecedent, (58), repeated from (19) through (21). In both cases, the antecedent for *pro* is the discourse and syntactic topic in spec,TopP even though structural locality is reduced.

(57)  Manantena Rasoa [fa  rahampitso [no   handeha   pro$_i$]].
     hope       Rasoa   that tomorrow     PRT   go
     'Rasoa hopes that it is tomorrow that she will go.'

(58) a. Niteny tamin-dRasoa Rabe$_i$ [fa   hianatra teny gasy   pro$_i$].
     tell     to-Rasoa     Rabe   that learn     Malagasy
     'Rabe said to Rasoa that he (Rabe) will learn Malagasy.'

   b. Mampahatsiahy ny  zanany Rasoa$_i$
     remind         the children Rasoa

     [fa   hanidy ny  varavarana   pro$_i$].
      that lock     the door
     'Rasoa reminded her children that she (Rasoa) will lock the door.'

   c. Nandresy lahatra  an-dRabe ny   ray aman-dreniko$_i$
     persuade        ACC-Rabe   the   parent.1S

     [fa   haka       rivotra   pro$_i$].
      that   FUT.take.AT   air
     'My parents persuaded Rabe that they should take a vacation.'

The recovery condition suggests that the MSC will be impossible if the higher predicate has no topic. This is the case in nominalizations. We assume that they do not have a discourse topic. They thus do not allow the MSC:

(59) a. ny fanantenan-dRabe$_i$ [fa   hitety any Madagasikara izy/*pro$_i$]
     the hope-Rabe        that travel   LOC Madagascar    3S.NOM
     'Rabe's hope that he will travel in Madagascar'

   b. ny fanirian-dRabe$_i$ [fa   hanambady an-dRasoa izy/*pro$_i$]
     the desire-Rabe        that marry.AT    ACC-Rasoa 3S.NOM
     'Rabe's desire that he marry Rasoa'

Finally, in some cases, *pro* may be coreferential with an object. That is, with some transitive verbs, the object can identify *pro*, (60a).

(60) a. Nandresy lahatra ahy$_k$ Rabe$_i$ fa  tsy maintsy haka rivotra  *pro$_{i/k}$*.
       persuade              me  Rabe that should        take  air
       'Rabe persuaded me that he/I should take a vacation.'

   b. Nampahatsiahy ahy$_k$ Rabe$_i$ fa  hanidy ny  varavarana  *pro$_{i/*k}$*.
       remind             me  Rabe that lock   the door
       'Rabe reminded me that he/*I will lock the door.'

The pattern is inconsistently allowed, however, as seen above, and seems to depend upon the matrix predicate. Such an option is allowed by the recovery condition but it is as yet unclear under what conditions it is expected to occur. We leave the investigation of such effects for future work.

   To summarize our analysis, a topic in a privileged position, spec,Top, may be an empty category that we have identified as *pro* just in case there is a discourse topic that can serve to identify *pro*. The DP in spec,Top is typically chosen as the antecedent for *pro* because it is a topic both structurally and syntactically and it strongly overrides other choices in the canonical cases. This proposal permits a range of data that are not accounted for in a control analysis.

**6. FINITE CONTROL.**  We now turn to MSC-*mba*. The data in section 4 indicated that the construction has characteristics of control in forcing specific restrictions on the interpretation of the missing element. Because Malagasy has no infinitives, it uses verb forms inflected with voice morphology and the irrealis/future morpheme *h(o)-*. The construction differs from Malagasy ordinary control structures in the presence of the complementizer *mba*, which causes the complement clause to be extraposed to the right of the subject; compare (61a) and (61b). It is for these reasons that we name the construction finite control. It parallels the form of finite control documented for Hebrew in Landau 2004 and for Persian in Hashemipour 1988, 1989.

(61) a. Manantena[hividy fiara] Rabe.                ORDINARY CONTROL
       hope          buy.FUT car  Rabe

   b. Manantena                 Rabe [mba hividy fiara].  FINITE CONTROL
       hope                      Rabe   COMP buy.FUT car
       'Rabe hopes to buy a car.'

The goals of this section are to offer an analysis of the finite control pattern within Hornstein's (1999) movement theory of control (6.1) and to account for why finite control is not possible with *fa* (6.2).

**6.1  A MOVEMENT ANALYSIS OF FINITE CONTROL.**  The two current theoretical approaches to control within the Minimalist Program are the base-gener-ated analysis using the null formative PRO (Chomsky 1981, Landau 2000, and others) and the movement-based analysis (Hornstein 1999, 2003, and others). These two approaches identify the missing controllee as PRO or a copy/trace of movement, respectively. Finite control thus has the representation in (62).

(62) Manantena Rabe$_i$ [mba hividy fiara   PRO$_i$/t$_i$]
       hope          Rabe   COMP buy.FUT car
       'Rabe hopes to buy a car.'

Landau 2004 develops an analysis of finite control within the PRO tradition. Here we would like to sketch out the movement-based analysis of finite control given that we have elsewhere offered movement analyses of other Malagasy control constructions (Polinsky and Potsdam 2002, 2003, Potsdam 2006c).

The fundamental idea is that the controller-controllee relationship is derived by movement of the controller from the embedded clause controllee position to the matrix clause controller position. Given our conception of Malagasy clause structure from section 5., the structure for (62) would be as in (63), sidestepping issues surrounding the internal structure of vP.

(63)    TopP/IP                               *initial try*
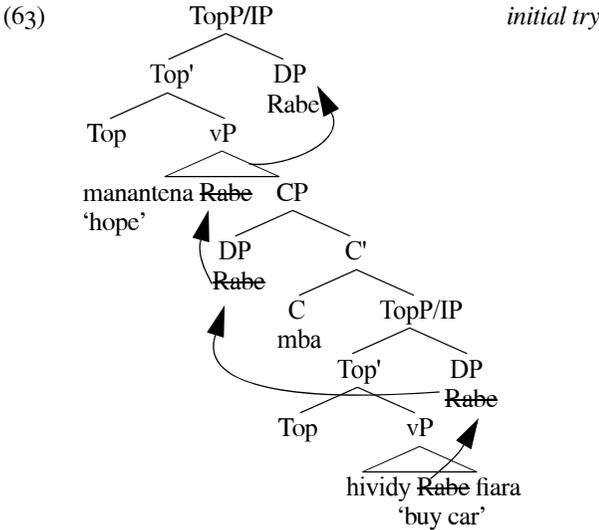
The controller *Rabe* begins in the embedded clause as the external argument of *hividy* 'buy'. It then moves to the externalized position of the lower clause, spec,TopP. From there it moves to spec,C—an intermediate movement typically associated with "long-distance" movement out of CP, which we discuss further below. *Rabe* then moves to the matrix clause where it becomes the external argument of *manantena* 'hope'. It finally moves to the higher spec,TopP as the matrix externalized element.[17]

A number of analytical issues require discussion here. First, as is required in Hornstein's (1999) movement theory of control, movement into a theta position is allowed. We see this above where *Rabe* becomes the external argument of the matrix verb 'hope', moving to a position within the matrix vP where it receives the external theta role of 'hope'.

Second, in undergoing movement out of a CP, we propose that the controller moves through the intermediate specifier of the CP headed by *mba*. This move is in keeping with general theory-internal requirements that even apparently long-distance movement be "local." In Chomsky's (2000, 2001, 2004) current phase-based system, this cyclic movement is implemented as follows: Movement is constrained by particular units called

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17. Note that the word order of (63) does not match (62), as extraposition of the CP complement
    is not shown.

phases, of which CP is one. In order for an element to move out of a phase, it must first move to the edge of that phase. Thus, if an element is to move out of CP, it must stop in spec,C. What forces it to do this is that C° has a so-called EPP feature, which translates as an instruction that CP have a filled specifier. In the analysis at hand, C° *mba* has an EPP feature that allows movement out of the CP by licensing a stopping off point in spec,C.[18] Without this EPP feature, such movement would not be possible.

Third, the derivation in (63) contains an instance of so-called Improper Movement (Chomsky 1981, Müller and Sternefeld 1993, and others). Improper Movement occurs when an element undergoes movement from an A'-position (nonargument position) to an A-position (argument position). This is seen above when the controller moves from spec,C, an A'-position, to the external argument position of *manantena* 'hope' within vP, an A-position. There are a number of potential solutions to this problem, including Hornstein's (2001:76) suggestion that Improper Movement should not be a part of the current theoretical picture. We will take a more conservative approach and suggest that even if Improper Movement is part of the current theoretical picture, it is illusory in this derivation. There are two components to our proposal.

The first is that we follow Tanaka 2002 and Rodrigues 2004, which allow for a phase head to license an A or A' EPP position. Intermediate landing sites in spec,C are thus not uniformly A'-positions. This permits us to stipulate that the specifier of C° *mba* is an A-position. Movement from spec,C to the external argument position of 'hope' does not now instantiate Improper Movement; instead, the offending movement is from the embedded spec,Top (an A'-position) to spec,C (now an A-position by stipulation). Ultimately, evidence for the A-position status of spec,C is desirable.

The second strand of the analysis is that we hypothesize that CP clauses headed by *mba* may lack TopP. It is often claimed that subjunctive/irrealis clauses are deficient in various ways. We cash out this intuition in Malagasy by proposing that they need not have the A'-projection TopP. The idea is supported by cross-linguistic claims that some embedded complements, control complements in particular, often lack a topic position (Rizzi 1997 for French and Kuroda 1972 for Japanese). Examples (64) through (66) illustrate this absence in English, French, and Japanese, respectively:

(64)  *I tried, this movie, to watch.

(65)  ??Je pense, ton  livre, pouvoir  le comprendre.
          I  think   your book  be.able.INF 3s understand.INF
      '*I think, your book, to be able to understand it'

(66)  *Jiroo-ga kono-eiga-wa mi-yoo-to       shi-ta[19]
         Jiro-NOM  this-movie-TOP  watch-DESID-COMPL do-PAST.DECL
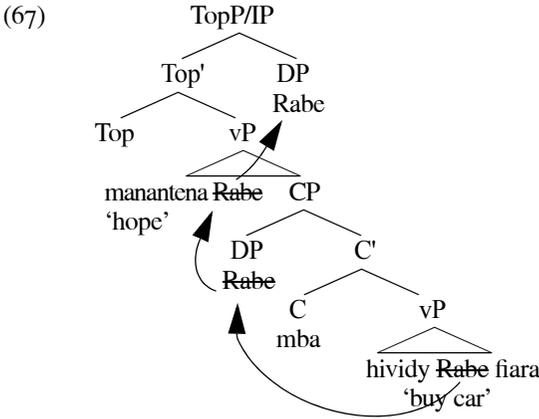      '*Jiro tried, this movie, to watch.'

Eliminating spec,TopP from the derivation removes the second instance of A'-movement because the movement chain now contains no internal A'-positions.

18. This feature is optional because movement out of the CP is not required, as in (i).

    (i)  Manantena Rabe mba  handeha  ho any  Frantsa aho.
         hope.AT   Rabe COMP FUT.go.AT LOC   France  1s.NOM
         'Rabe hopes that I will go to France.'

19. This sentence is acceptable with the contrastive interpretation of the embedded DP-*wa* ('Jiro tried to watch THIS movie.'), which is immaterial to our discussion.

With these two innovations, the derivation for finite control is (67) rather than (63).[20] The embedded TopP is eliminated and spec,C is an A-position. All movements but the last are A-movements and there is no Improper Movement. This type of derivation adequately captures the facts of the MSC-*mba* and can, with minor modifications, be extended to attested cases of finite control in other languages.

(67)

TopP/IP

Top'          DP
              Rabe

Top      vP

manantena ~~Rabe~~   CP
'hope'

        DP        C'
        ~~Rabe~~

              C        vP
              mba

                  hividy ~~Rabe~~ fiara
                       'buy car'

**6.2 RULING OUT FINITE CONTROL WITH fa.** The solution above also allows us to account for why the complementizer *fa* does not permit finite control. Empirically, we know that it does not, because otherwise MSC-*fa* would show the control characteristics discussed in section 4. We suggest that, in contrast to *mba*, *fa* requires a TopP complement. In other words, it does not have the option of the reduced clause structure shown in (67), in which it would directly take a vP complement. Finite control with *fa* is therefore ruled out because its derivation would necessarily involve Improper Movement. The A-movement chain would contain the A'-position spec,TopP.

A second way to rule out finite control with *fa* would be to stipulate that, unlike with *mba*, spec,C *fa* is an A'-position but never an A-position. Although rather technical in its details, the underlying claim encoded by the analysis is that indicative CPs are less transparent to movement and other syntactic relations than subjunctive/irrealis clauses (Polinsky and Potsdam 2006 and references therein). In keeping with the tradition of parallelism between nominal and clausal domains (e.g., Partee 1984), we propose that indicative CPs are akin to definite DPs, which are known to resist extraction (Chomsky 1973), while irrealis CPs can be equated with indefinitie DPs, which are transparent. With respect to the MSC, the asymmetry between the indicative clauses with *fa* and the irrealis clauses with *mba* is that the former are less permeable to movement.

**7. SUMMARY.** In this paper, we have examined the missing subject construction (MSC) of Malagasy in which a missing argument of a complement clause is interpreted as coindexed with a higher argument, as repeated below:

_____

20. Extraposition of the CP is not shown.

(68) a. Manantena    Rabe   fa/mba   hividy    fiara.
        hope.PRESENT   Rabe    COMP      buy.FUTURE car
        'Rabe hopes to buy a car.'

      b. [manantena   Rabe$_i$   [fa/mba   hividy    fiara     $\Delta_i$]]
        hope          Rabe     COMP      buy        car

We have argued that there are two distinct syntactic constructions here depending upon the choice of complementizer. When the complementizer is the irrealis *mba*, we have a control structure. The construction parallels other instances of finite control discussed and analyzed in Landau 2004. It seems clear at this point that finite control is a reality, as Landau has emphasized. Malagasy is not just another addition to the set of languages that have finite control; it differs from those other languages in having no person/number agreement, which some thought of as a prerequisite for finite control.

When the complementizer is the indicative *fa*, the missing subject is due to topic drop, not control. Malagasy allows privileged elements in a topic position to be unpronounced when their referent can be recovered from the syntax and the discourse. Malagasy topic drop is parallel to that found in the Germanic languages, and perhaps also Chinese (Huang 1984), Finnish, and Brazilian Portuguese (Rodrigues 2004 and references therein). Our analysis also supports the idea that *pro* is not uniformly set for the entire system of a particular language. A language may have *pro* in various, often restricted, areas of its grammar as long as the relevant licensing conditions are met.

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