Control in Malagasy

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1. Introduction

Bresnan 1982 describes control as an interpretational dependency between two argument positions in which the referential properties of an overt one, the controller, determine the referential properties of a non-overt one, the controllee. For example, in the English sentence in (1), the farmer is the controller and the unpronounced external argument of kill, which we represent atheoretically as \( \Lambda \), is the controllee.

(1) The farmer tried \( \Lambda \) to kill the chicken.

Malagasy control constructions have received some discussion in the literature, most notably in Keenan 1976 and Law 1995 (see also Keenan 1995, Paul and Ranaivoson 1998, Pearson 2001, Polinsky and Potsdam 2001). This paper is a contribution towards a more comprehensive coverage and analysis of Malagasy control. Section 2 introduces two previously recognized control structures. In section 3 we suggest that these structures instantiate the distinction between obligatory control and non-obligatory control. Section 4 then introduces a third, previously undocumented control structure. We explore possible analyses of this construction in sections 5 and 6. Our partial conclusion is that the newly introduced construction represents a control structure in which the embedded clause corresponds to a thetic judgment. Section 7 summarizes our findings.

2. Control Structures in Malagasy

Malagasy is an Austronesian language spoken by approximately nine million people on the island of Madagascar. Its basic word order is VOS, (2a). Malagasy has a well-known voice system which advances thematically diverse elements to subject position. Corresponding to the active sentence in (2a), the passive sentence in (2b) has the direct object as the subject and the circumstantial sentence in (2c) has an oblique element as its subject.

(2) a. ny akoho (hoan-dRasoa) Rabe PAST-ACT-buy the chicken (for-Rasoa) Rabe 'Rabe bought a chicken for Rasoa.'

b. no-vidi-n-dRabe (hoan-dRasoa) ny akoho PAST-buy-PASS-Rabe for-Rasoa the chicken 'The chicken was bought (for Rasoa) by Rabe.'

c. n-i-vidi-an-dRabe ny akoho Rasoa CIRCUMSTANTIAL PAST-ACT-buy-CIRC-Rabe the chicken Rasoa 'Rasoa was bought a chicken by Rabe.'

Following Guilfoyle, Hung, and Travis 1992 (GHT), we adopt the structure for VOS in (3a) with the clause-final subject occupying a right specifier of IP. The verb-initial order is compatible with verb raising, \( V \)-to-\( F \), which that work also assumes.2 Also following GHT, we assume for non-active sentences the structure in (3b) in which the subject is in the right specifier of IP and the immediately post-verbal agent is in spec,VP.
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3. Obligatory and Non-Obligatory Control

3.1. The OC versus NOC distinction

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pair, the first example illustrates OC and the second NOC.
properties of PRO under OC versus NOC

- no antecedent, allows PRO\textsubscript{arb} reading: OC
- allows a non-local antecedent: OC

(10) a. It was expected PRO to shave.
   b. It was believed that PRO shaving is important.

(11) a. Joe expects PRO to win and Kim does too.
   \hspace{1em} = Joe expects to win and Kim expects \textit{to} win.
   \hspace{1em} \textit{SLOPPY}
   = Joe expects to win and Kim expects Joe to win.
   \hspace{1em} \textit{STRUCT}
   b. Joe thinks PRO passing the exam is important and Kim does too.
   \hspace{1em} = and Kim thinks his, passing the exam is important.
   \hspace{1em} \textit{SLOPPY}
   = and Kim thinks Joe's passing the exam is important.
   \hspace{1em} \textit{STRUCT}

(12) a. *John, expects (for) him, to win.
   b. John, thinks his/him, passing the exam is important.

(13) a. *John, thinks that it was expected PRO to shave himself.
   b. John, thinks it is believed that PRO, shaving himself is good.

(14) a. *John, cuenta's campaign expects PRO to shave himself.
   b. John, cuenta's campaign thinks that PRO, kissing babies is important.

(10) illustrates that NOC but not OC allows PRO to appear without an antecedent; only NOC allows the so-called PRO\textsubscript{arb} reading. In (11), NOC PRO but not OC PRO allows a strict reading under ellipsis. The NOC example in (11b) is ambiguous between the strict and sloppy readings; however, the OC example in (11a) has only the sloppy reading. (12) illustrates that NOC PRO but not OC PRO can be replaced by a pronoun. In (13), NOC PRO allows a non-local antecedent outside the immediately dominating clause; OC PRO does not permit a non-local antecedent. Finally, in (14), NOC PRO but not OC PRO can take a non-commanding antecedent.

Because of these clear differences between OC and NOC, OC structures are analyzed with movement but NOC structures involve a base-generated null pronominal, little \textit{pro}, and no movement (see Hornstein 1999 for details).

3.2. OC versus NOC in Malagasy

Returning to Malagasy, we claim that the OC/NOC distinction is relevant and it corresponds to the two control constructions we have introduced. Our proposal is that the active control construction instantiates OC while the passive control construction is NOC:

(15) OC/NOC Proposal for Malagasy Control constructions

- the active control construction is OC
- the passive control construction is NOC

If this proposal is correct then the passive control construction would not involve movement under Hornstein's analysis and would thus provide no evidence against a movement analysis of control. The data that support the proposal in (15) are given in (17) through (21) below. In each case, the (a) example is the active construction and the (b) example is the passive construction. The results are summarized in (16).

(17) a. mikasa hanasa ny lapa-ny ny andriana intend.ACT wash.ACT the castle-3SG the king
   *'The king intends someone to clean his castle.'
   (only 'The king intends to clean his castle."
   (18) a. te hamono ny omby Rasoa, izaho koa. ACTIVE/OC
   *'Rasoa wants to kill the zebu and I do too.'
   b. John, thinks it is believed that
   \hspace{1em} \textit{SLOFFY}
   *'Rasoa wants to kill the zebu and I want her to also.'
   \hspace{1em} \textit{STRUCT}
   (19) a. *te handao i Tana izy Rasoa want.ACT leave.ACT Antananarivo 3SG Rasoa
   ('Rasoa wants to leave Antananarivo.')
   b. Joe thinks
   \hspace{1em} \textit{SLOFFY}
   *'Rasoa wants to kill the zebu and I want her to also.'
   \hspace{1em} \textit{STRUCT}
   (20) a. mikasa handao an'i Tana ny governemanta think.ACT Rasoa that
   mikasa
   \hspace{1em} \textit{PASSIVE/NC}
   *'Rasoa thinks that the government intends to leave Antananarivo.'
   b. Joe thinks
   \hspace{1em} \textit{SLOFFY}
   *'Rasoa thinks that the government intends her to leave Antananarivo.'
   \hspace{1em} \textit{STRUCT}
   (21) a. te hanambady an-dRasoa ny fianakavian-dRabe want.ACT marry.ACT ACC.Rasoa the family-Rabe
   *'Rabe's family wants to marry Rasoa.'
   b. *Rabe's family wants him to marry Rasoa.'
b. tian’ny fiaanaviarin-dRabe hovana Rasoa PASS  
want.PASS the family-Rabe marry.PASS Rasoa  
*Rabe’s family wants to marry Rasoa.  
*Rabe’s family wants him to marry Rasoa.

(17) shows that only the passive construction allows a non-controlled, PRO
reading. Both of the examples can mean ‘The king intends to clean his castle’ but
only the passive construction has the additional meaning ‘The king intends for his
castle to be cleaned’ in which the agent of the embedded verb is unstated. (18)
shows that only the passive control construction allows a strict reading under
ellipsis. Like the English translation, the active control construction is unambiguous,
permuting only a stepipy reading. In (19b), PRO can be replaced by an overt
pronominal. This is not possible with the active control construction. Unexpectedly,
the data in (20) and (21) seem to show that in neither construction can PRO pick up
a non-local or non-c-commanding antecedent. This is the expected result if the active
construction is OC but not if the passive construction is NOC. In (20), PRO cannot
be interpreted as coreferential with the DP Rasoa in the matrix clause. Similarly, in
(21), PRO cannot be construed as the possessor of the matrix subject, Rabe, despite
the fact that this would be the pragmatically preferred interpretation.

In summary, the active control construction shows all the characteristics of NOC. The passive control construction shows most of the characteristics of NOC.
Surprisingly however, PRO in the passive control does not allow a non-local or non-c-commanding antecedent. There are two analytical possibilities: either these characteristics are accidental to NOC or they are relevant but permit
cross-linguistic variation. If this unexpected difference between English and
Malagasy can ultimately be accounted for, then the passive control can be reduced to NOC and does not provide evidence against control as movement (recall Horstein’s assumption that NOC should not be analyzed as movement).

3.3. Analytical issues for future investigation

The Malagasy control data raise several interesting analytical questions which we
would like to highlight briefly.

First, with regard to the active construction and the structure in (6a), the
controller seems to appear in a Case-marked and governed position. Further
investigation is required to determine if this is in fact the case or whether there are
other considerations which might avoid this conclusion. If the controller is in a
governed, Case position, we are lead to ask how this is permitted given current
understanding of the controller position as typically being syntactically deficient in
some way. While there are languages documented in the literature in which the
controller seems to be governed or Case-marked, some of these have been given
alternative analyses: Icelandic (Sigurðsson 1991), Irish (McCloskey and Sells
1983), Greek (Terzi 1997), Ancient Greek (Andrews 1971).

Second, the Malagasy data support the distinction between OC and NOC; nevertheless, the OC/NOC distinction is cased out in a different way than in
English. In English, NOC obtains when the controlled clause is in subject position
or certain adjunct positions (Horstein 1999, Landau 2000, and references therein).
When the controlled clause is a complement, only OC seems to be possible. In
Malagasy, by contrast, the controlled clause is apparently a complement in both
NOC and OC. The choice depends upon the structural position of the controller and
controller. Given that the theory must ultimately capture the OC/NOC distinction,
the fact that Malagasy realizes the contrast differently from English is potentially
important in determining the proper analysis.

Finally, if the OC/NOC distinction is indeed valid and the passive control
construction in Malagasy instantiates NOC, we need to explain why its behavior
diverges in part from the established characteristics of NOC. In particular, what
accounts for the antecedent locality that NOC in English does not show? We
speculate that the answer to this question is related to the differing structural
realization of OC versus NOC in Malagasy discussed above; however, we leave
these theoretical issues for future investigation.

4. The Mixed Voice Control Construction

In the remainder of the paper, we turn to a third, previously undocumented control-
like structure which we will call the mixed voice control construction (MVC). The
morphosyntactic characteristics of the MVC are a combination of the two previously
discussed constructions: the control predicate is in the active voice and the
embedded predicate is non-active. The subject of the active verb is not the controller
however; instead, the controller appears as the agent on the embedded verb:

(22) a. nanandrana novonoin-dRasoa ny aloho try.ACT kill.PASS Rasoa the chicken  
Rasoa tried to kill the chicken.

b. mikasa bavyaki-kity byoky try intend.ACT read.PASS-1SG this book this
*I intend to read this book.

#This book intends to be read by me.

Such sentences look like the active control construction and can indeed have the
meanings that would be expected if they were active control examples; (22b) for
example can have the anomalous meaning ‘This book intends to be read by me’. Surprisingly however, the examples also have the indicated sensible readings. (22b)
also means ‘I intend to read this book’. This latter interpretation is the one which we
will be concerned with.

The MVC has two interesting distributional characteristics. First, the
construction is subject to dialectal variation. Some speakers get only the anomalous
interpretations in (22). Second, the MVC is lexically restricted and is not possible
with all control predicates. We have found it with nanandrana ‘try’, mikasa ‘intend’,
tse ‘wash’, mijanona ‘stop’, mirihatama ‘cause’, and manaihy ‘agree’ but
not, for example, with manandina ‘forget’, mahavita ‘finish’, or manontena ‘hope’.

In addition, the MVC presents an unusual combination of syntactic and
semantic features not found in the other Malagasy control constructions. With
respect to VP-right edge identifiers that separate the matrix subject from the VP
(Keenan 1976, 1995), the clause-final DP in the MVC behaves as the matrix
subject—it has to follow the question particle ve and negative polarity items:

(23) a. mijanona novaki-ino (ve) ny boky (*ve)? stop.ACT read.PASS-2SG Q the book Q  
‘Did you stop reading the book?’

b. tsy mikasa hovasaan-drasoa (intsony) ny fiara (*intsony)  
read.EXTEND wash.PASS-Rasoa any longer the car any longer
Rasoa didn’t intend to wash the car (any longer).

However, the clause-final DP does not extract, as subjects in Malagasy normally do
(see (8) above). (24a,b) are ungrammatical:
Another unusual property of the MVC involves the semantics of control. As in other control structures, the matrix predicate in the MVC imposes selectional restrictions on its subject, which accounts for the infelicity of (25a,b). However, unlike more familiar control structures, (26a), the MVC does not form an imperative, (26b). In the remainder of the paper we investigate possible accounts of this unusual behavior.

5. Towards a Structural Analysis of the Mixed Control Construction

In this section, we will consider and reject two possible analyses of the MVC.

5.1. Restructuring (Clause union)

The first analytical possibility is that the MVC is monoclausal; the active verb takes a reduced VP complement and the clause-final DP is the subject. The structural representation of the MVC in (22a) is shown in (27).

Although the restructuring analysis would account for the subject behavior of the clause-final DP with respect to right edge identifiers, it cannot explain why this DP does not extract. In addition, there is good evidence that the MVC is biclausal, contrary to the restructuring analysis. First, both verbs in the MVC can have their own negation, which is unexpected if the MVC is monoclausal:
The BC analysis is able to capture the observed selectional restrictions and the biclausal nature of the MVC; however, the analysis is incompatible with other facts. First, the BC analysis incorrectly claims that the clause-final DP is in the embedded clause. VP-right edge identifier diagnostics from (23) indicate that the clause-final DP is in the matrix clause. Coordination confirms this result. Under BC, the embedded predicate and the final DP form a constituent and should coordinate but this is not possible:

(32) *nanandrana novadin-drabe ny antsy sy novonoin-draso ny akoho try.ACT kill.PASS-Rabe the knife and kill.PASS-Raso the chicken

("Rabe tried to buy the knife and Rasoa tried to kill the chicken.")

Second, a crucial component of the BC analysis is the presence of a null syntactic argument, the controller, which is the subject of the matrix clause; see (31). If such an agent argument were present, it should be able to license imperative formation. As we saw above in (26b), however, imperatives are impossible with the MVC. In addition, this empty category should license a floating quantifier or reciprocal marking on the matrix verb but neither is grammatical in the MVC:

(33) *nanandrana novonoin'ny mpiompy daholo ny akoho △i try.ACT kill.PASS the farmers all the chicken

("The farmers all tried to kill the chicken.")

(grammatical w/meaning 'The farmer(s) tried to kill all the chickens.')

(34) a. n-if-ansaky hividy fiara Rabe sy Rasoa ACTIVE PAST-RECIP-agree.ACT buy.ACT car Rabe and Rasoa

("Rabe and Rasoa agreed with each other to buy a car.")

b. *n-if-ansaky hovidin-drabe sy Rasoa ny fiara MIXED PAST-RECIP-agree.ACT buy.PASS-Rabe and Rasoa the car

("Rabe and Rasoa agreed with each other to buy a car.")

To sum up, contrary to the BC analysis, the clause final DP is in the matrix, not embedded clause, and there is no evidence for a syntactic representation of the agent in the matrix clause. The BC analysis is therefore untenable. In the following section, we will propose a partial analysis of MVC which addresses the characteristics in (35) observed thus far.

(35) Summary of mixed voice construction characteristics

a. MVC is dialectally and lexically restricted
b. MVC is biclausal
c. clause-final DP is the matrix clause subject
d. clause-final DP does not undergo extraction
e. MVC predicate imposes selectional restrictions
f. there is no evidence for a syntactic representation of the controller in the matrix clause
g. MVC does not permit imperative formation

6. A Partial Analysis: The Thetic Hypothesis

Our proposal is that many of the unusual properties of the MVC follow not from its syntax but from the judgment type associated the complement clause. The contrast between thetic and categorical judgments is widely recognized (Kuroda 1972, 1992, Sasse 1978). A thetic judgment consists of a simple perception or recognition of a situation. This judgment is unitary (simple) because it does not rely on the prior recognition of an entity that would be then made into the subject of a logical predication. The singling out of an entity and the subsequent predication of a property of that entity constitutes a categorical judgment. Because it implies two separate cognitive acts (the recognition of an entity and the predication of a property), a categorical judgment is also called a double judgment. A sentence such as (36a) is ambiguous between representing a thetic and a categorical judgment.

Crucially, we propose that the embedded clause in the MVC represents a thetic judgment and cannot represent a categorical judgment. For the familiar MVC example in (37), we suggest the structure in (38).

As (38) shows, the thetic structure is desirably biclausal. Further, the clause-final DP is the subject of the higher clause, which is compatible with the observed constituency facts from matrix VP-right edge identifiers, (23), and coordination, (32). Since the matrix clause does not contain an agent—there is no representation of the controller in the matrix clause—the ban on imperative formation is also accounted for. Thus we account for properties (35b,c,f,g). We propose that the other characteristics of the MVC follow from semantic considerations.

Many sentence forms are ambiguous with respect to the representation of judgment types but there are also correspondences between judgment types and sentence forms (Kuroda 1992, Ogihara 1987, and others). It is therefore possible to identify distinct grammatical correlates of each judgment type. For a thetic judgment, the following grammatical correlates have been proposed in the literature:
Finally, of the three control constructions considered here, only the MVC permits the licensing of event anaphora by the embedded clause, (43c). This is again compatible with one of the grammatical correlates of a thetic judgment, (39e).

\[(39) \quad \text{Grammatical correlates of a thetic judgment}\]
\[\text{a. shows strong preference for unaccusatives and passives (Delsing 1992, Lambrecht 2014)}\]
\[\text{b. incompatible with individual-level predicates, such as have (own), contain, be tall (Kuroda 1972, 1992, Lambrecht 1994)}\]
\[\text{c. cannot be partitioned into topic and comment and maps into an "all-focus" sentence (Kuroda 1972, 1992, Saake 1978, Lambrecht 1994)}\]
\[\text{d. incompatible with relational quantifiers, which require reference to a subset within a presupposed set, such as most (Ladusaw 1994)}\]
\[\text{e. licenses event anaphora (Saake 1978, 1995)}\]

Using the grammatical correlates in (39) as diagnostics, let us now apply them to the embedded clause in the MVC. One defining characteristic of the MVC is that the embedded clause has a non-active predicate, consistent with (39a). Next, individual-level predicates are indeed ungrammatical in MVC, which accounts for the contrast between (40a) and (40b):

\[(40) \quad \text{a. mikasa hanana io fiara io Rasoa ACTIVE}\]
\[\text{intend.ACT have.ACT that car that Rasoa}\]
\[\text{'Rasoa intends to have that car.'}\]
\[\text{b. *mikasa hananan-dRasoa io fiara io MIXED}\]
\[\text{intend.ACT have.PASS-Rasoa that car that}\]
\[\text{'Rasoa intends to have that car.'}\]

If a sentence form corresponds exclusively to a thetic judgment, its arguments cannot map into a previously recognized and established referent. In terms of information structure, this entails property (39e): a thetic judgment cannot be partitioned into topic and comment. Hence no part of it can be topicalized, by Topicalization or Relativization, or focused, by wh-questioning. This accounts for the impossibility of extracting the subject of the MVC that we saw earlier:

\[(41) \quad \text{a. *ny boky dia nijanona novaki-ko TOPICALIZATION}\]
\[\text{the book STOP top.ACT read.PASS-1SG}\]
\[\text{('This book, I stopped reading.') (= (24a))}\]
\[\text{b. *mona no nijanona novaki-mo? WH-QUESTION}\]
\[\text{what FOCUS stop.ACT read.PASS-2SG}\]
\[\text{('What did you stop reading?') (= (24b))}\]

Property (39d) predicts that relational quantifiers should be ungrammatical as subjects of thetic structures. Expectedly then, the Malagasy relational quantifier ankabeazana, 'the (the) most of' is acceptable in the active control construction but ungrammatical in the MVC:

\[(42) \quad \text{a. mikasa harnaky boky ny ankabeazan'ny mpianatra ACTIVE}\]
\[\text{intend.ACT read.ACT book the most'the student}\]
\[\text{'Most of the students intend to read the book.'}\]
\[\text{b. *mikasa hovakin'ny ankabeazan'ny mpianatra MIXED}\]
\[\text{intend.ACT read.PASS the most'the student}\]
\[\text{ny boky the book}\]
\[\text{'Most of the students intend to read the book.'}\]

The Thetic Hypothesis thus accounts for a wide range of facts: the mixed voice nature of the construction and the syntactic and semantic properties in (35bc,de,f,g). While it does not have the fatal empirical flaws of the restructuring analysis or Backward Control analysis, it leaves unexplained where the MVC receives its control interpretation from. At this point, we have no explanation for this interpretation and leave it open for future investigation.

Another theoretically important question that we would like to mention here concerns the selection of a thetic judgment by the matrix verb. All the verbs that participate in the MVC can also select for embedded clauses that either represent a categorical judgment or are ambiguous between judgment types. Moore (1997) proposes that in Spanish, the category of the complement constitutes the grammatical basis of selection for one judgment type over the other: full complements correspond to a categorical judgment, reduced, to thetic. Further research is needed to determine whether such selection principle applies cross-linguistically.

7. Conclusions

We have presented and analyzed three different control structures of Malagasy. Two of these structures, active (44a) and passive (44b) have been discussed in the literature; the mixed voice construction in (44c) has not been described previously.

\[(44) \quad \text{a. nanandrana namono ny akoho Rabe ACTIVE}\]
\[\text{try.ACT kill.ACT the chicken Rabe}\]
\[\text{b. nanandrana dRasoa novonoina ny akoho PASSIVE}\]
\[\text{try.PASS-Rasoa kill.PASS the chicken}\]
\[\text{c. nanandrana novonoin-dRasoa ny akoho MIXED}\]
\[\text{try.ACT kill.PASS-Rasoa the chicken}\]
\[\text{Rabe tried to kill the chicken.'}\]

The active and the passive control constructions show systematic differences. The active construction instantiates obligatory control and most closely resembles the canonical control construction of English. The passive construction represents non-obligatory control and is therefore not subject to the movement analysis of control which has been proposed exclusively for obligatory control structures. The difference between the two constructions in Malagasy is similar to the difference between obligatory and non-obligatory control in English; however, unlike in English, non-local antecedents are impossible under non-obligatory control in Malagasy. Our analysis of these constructions has at least two implications for a general theory of Control: first, it contributes to our understanding of the principled
difference between obligatory and non-obligatory control, second, it suggests the possibility of the controller appearing in a Case-marked position.

The lexically and dialectally restricted mixed voice control construction (44c) displays an unusual combination of semantic and structural properties. We have rejected restructuring and Backward Control analyses of this construction. To account for its characteristics, we propose that the embedded clause in this construction represents a thetic judgment. If this analysis of the mixed voice construction is on the right track, it contributes to our general understanding of the correspondences between judgment types and sentence forms and it establishes a new case where a judgment type is mapped into an embedded clause.

Endnotes

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We owe this argument to Jill Heather Flegg and Ileana Paul.

The passive example with coreference was presented at AFLA 8, MIT.

5 To our knowledge the construction was first noticed in Law 1995: fn. 9.

6 We owe this argument to Jill Heather Flegg and Ileana Paul.


8 Malagasy has no non-finite verb forms, so embedded verbs in Malagasy are all tensed. We briefly address the implications of this situation in section 3.3.

9 MacLaughlin noted this property in Law 1995:fn. 9.

10 It is common to think of the judgment type contrast as pertaining to root clauses only. The idea that embedded clauses may differ in judgment type has been discussed by Mejias-Bikandi (1993), Kuroda (1992), Sasse (1995), and Moore (1997).

References


