

# The day the data went south: object adjacency in Malagasy\*

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## 1 Introduction

There is a nice Malagasy fact reported in the literature (e.g., Rackowski 1998, Pearson 1998). Indefinite objects must occur adjacent to the verb, as in (1a), while definite objects allow adverbs to intervene between themselves and the verb, as in (1b).<sup>1</sup>

- (1) a. Manasa (\*matetika) **lamba** (matetika) Rakoto.  
PRES.AT.wash (\*always) cloth (always) Rakoto  
'Rakoto is always washing clothes.'
- b. Manasa (matetika) **ny lamba** (matetika) Rakoto.  
PRES.AT.wash (always) DET cloth (always) Rakoto  
'Rakoto is always washing clothes.'

In this paper I explore this observation, show that a wider range of data suggests that there are problems with analysis (oh no!) but end on the positive note of 'we still have what we need' (whew!).

There is also a bigger issue to address — what happens when one hits a counter-example or a set of counter-examples. There are two ways to go. We can reconstruct the theoretical tools so that the counter-examples now are generated by the grammatical system. Or we can relegate these counter-examples to another mechanism that lies outside the original generative system. In the first scenario, the grammatical system is changed so that it now includes as unexceptional a larger set of data. Here the question is, in some cases, whether this larger dataset is well exemplified or if the system has been changed to accommodate a few rare examples. In the second scenario, the grammatical system remains more restrictive and the excep-

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\* Sure, Kyle has produced an amazing list of publications about syntactic structure and the syntax/semantics interface, and this is deeply appreciated. But, at least equally important, Kyle by his presence and general goofiness has made the world of linguistics generally and syntax more specifically a better sandbox to play in. If you don't know what I'm talking about, you haven't met Kyle.

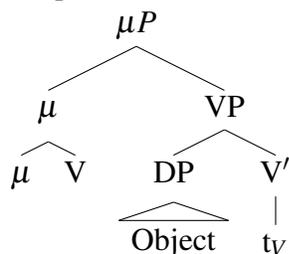
<sup>1</sup> I am grateful for the financial support from SSHRC 435-2016-1331, the patience of my consultants, Hasina Josué Rakotoniaina, Fetra Ramontazafy, Vololona Razafimbelo; Malagasy linguists, Baholisoa Ralalaoherivony, Jeannot Fils Ranaivoson, and discussions with other members of the Malagasy mafia, Ileana Paul and Matt Pearson.

tions remain just that, exceptions. Here the question is why these exceptions exist. In the present case, I hope to show that the grammatical system itself should not be changed but rather an extra-grammatical explanation should be found for the counter-examples.

## 2 Why we care

Since Johnson 1991, the reason behind the adjacency of objects has been seen to be structural, not an issue of some licensing effect of a case adjacency (though see Levin 2015 for an alternative view). More specifically, adjacency is simply the effect of head movement of the verb around an object in a Spec position (and not allowing anything to adjoin to VP).

(2) Adapted from Johnson (1991)



Adjacency then can be used to tell us something about structure. There is a particular contribution that this adjacency makes in understanding the syntax of Malagasy and more specifically the inventory of movements in Malagasy.

Malagasy has been argued to have roll-up (XP) movement within the predicate to account for the order of various predicate internal elements such as adverbs and direct vs. indirect objects. Both Rackowski (1998) and Pearson (1998) propose that the inverse order of predicate internal adverbs (the inverse order from, say, English) and, more relevant to this paper, the fact that definite objects appear to move rightward over adverbs in Malagasy (as opposed to leftwards over adverbs in languages such as Icelandic) can be traced to this predicate internal roll-up movement. The way that this goes is the following. Definite objects may move leftward out of the VP. The remnant VP now moves higher in the structure, perhaps over an adverb, now stranding the definite object below (and to the right of) the adverb. So it is leftward movement of the definite object out of the VP (not unlike Icelandic), followed by the leftward movement of the VP (very unlike Icelandic), which gives the appearance of rightward movement of the definite object.<sup>2</sup>

<sup>2</sup> Notice that I am waving my hands a bit here having the indefinite object as sister to the V. There are many reasons why this is probably not the way to go. One is that, given a Larsonian structure, the

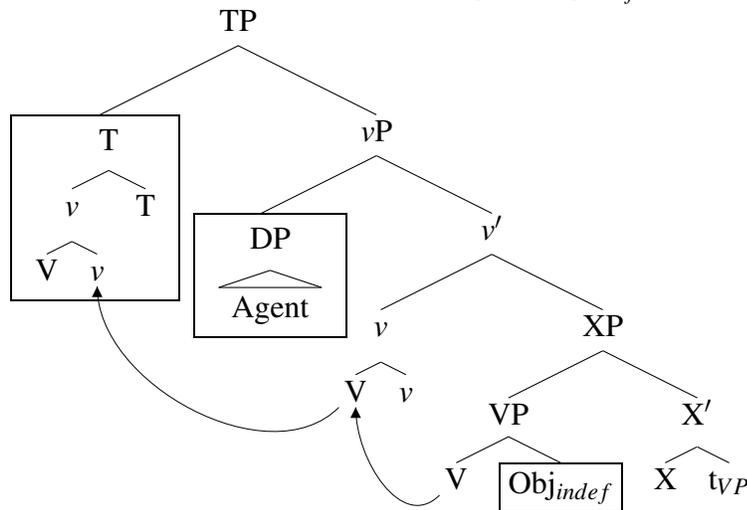


Now watch this. The indefinite object that was hell-bent on being adjacent to the verb in the AT construction, and would not let an adverb intervene, will, in the CT construction, allow a full DP Agent to come between it and the verb.<sup>5</sup>

- (6) Anasan-dRakoto lamba ny savony.  
 CT.wash-Rakoto cloth DET soap  
 ‘Rakoto is washing clothes with the soap.’

The conclusion that has been drawn from this (see e.g. Pearson 2005) is that here the verb moves to the left of the Agent not via roll-up (even though Malagasy is generally a roll-up language) but by head movement. What now has to be adjacent to the verb is the Agent, much in the same way that the object has to be adjacent to the verb in the structures in Johnson 1991. The Agent is in Spec<sub>vP</sub> and the verbal head moves over this Spec into some higher head. Here I show a somewhat simplified, nevertheless very complicated, structure. Presumably, this head movement will be preceded by some form of roll-up movement that has just been argued for. I give the simplest form of it where the VP has moved to Spec of some category (here XP). It is in the Spec just below the Spec where the Agent is (presumably Spec<sub>vP</sub>). The V must move out of VP to *v* then to T.<sup>6</sup>

- (7) Head movement and the order: V Agent *Obj<sub>indef</sub>*



The take-home message here is that if there is roll-up (XP movement), the V and the indefinite object will necessarily be adjacent. The only type of movement that can

<sup>5</sup> This Agent can be very long and include large modifying elements such as Relative Clauses.

<sup>6</sup> Note here that to preserve the previous facts about adjacency between the verb and the indefinite objects, no adverb adjunction to XP or *vP* would be allowed.

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separate the V from the indefinite object is head movement. The beauty of these data is that we have an argument that we need both roll-up movement and head movement in Malagasy, and we have a way to know which one is happening where.

### 3 When the data went south

The type of argumentation came in handy recently in doing work on the morphology of Malagasy. For reasons too long to go into here (see [Piggott & deMena Travis 2017](#) for details), it was important to show that verbs that express productive causatives clearly undergo syntactic head movement. Having a handy test to show this, we gave the baseline examples like (1a), (1b) and (5b) above showing (a) that XP movement cannot strand indefinite objects (see (1a)) while head movement can (see (5b)). With that background, all we have to do is to show that the productive causative form can, in the CT construction, move across the Agent undergoing a process already argued to be head movement. Below we see that exactly this can happen.<sup>7</sup>

- (8) Ampamaran-dRakoto mpivarotra ny menaka  
CT.make.measure-Rakoto seller DET oil  
'Rakoto makes sellers measure the oil.'

Indeed, the morphologically complex verb (*an-f-an-fatra-an* → *ampamaran*) which encodes the productive causative (it's a long story) does appear to undergo head movement around the Causer, *Rakoto*, leaving behind the indefinite Causee, *mpivarotra* 'sellers'. All is good except that we decided it would be nice to have a baseline example to show that in the AT form of the complex verb, the indefinite object would have to be adjacent to the verb. The example in (9) would be appropriate example where there is an adverb between the verb and the causee. And this example should be, to make the ta-dah moment complete, ungrammatical.<sup>8</sup>

- (9) Mampamatra **foana** mpivarotra ny menaka Rakoto  
AT.make.measure always seller DET oil Rakoto  
'Rakoto always makes sellers measure the oil.'

However my local (Montreal) consultant found this grammatical, to our dismay. This example was left out of the paper, the paper was sent out, only missing the

<sup>7</sup> Here the CT construction indicates that the embedded Theme, here *ny menaka*, 'the oil', is the subject.

<sup>8</sup> While my consultant accepted this, the preferred order is Theme > Causee. See [Pearson 2000](#) for a reason why. As a side point, more than one of the more conservative speakers consulted subsequently has found this sentence to be ungrammatical with this positioning of the adverb. The less conservative consultants find it grammatical. For more on this, see below.

deadline by a linguist-honourable amount of time. Knowing that the baseline had been set with the less complex examples and that it was unlikely that what was head-movement for the simpler cases would stop being head-movement for the complex cases, we felt safe in that decision.

But now that the paper has been published, the question remains — what *is* this surprising response all about? A possible idea is that the adjacency requirement can be loosened across phases, and there are arguably two phases in a productive causative (see [Marantz 2007](#)) but as the following examples were tried in the order represented below, every hypothesis fell apart.

HYPOTHESIS 1: Adjacency does not hold across phases, but ... below we arguably have only one phase.

- (10) Manome **foana** boky ny ankizy Rakoto.  
 PRES.AT.give always book DET child Rakoto  
 ‘Rakoto always gives books to the children.’

HYPOTHESIS 2: Adjacency does not hold when there is a lower VP (think [Larson 1988](#)), but... we can see that the adjacency relaxed even when the object is followed by an adjunct.<sup>9</sup>

- (11) Mamaky **foana** boky ao an-trano Rakoto.  
 PRES.AT.read always book there ACC-house Rakoto  
 ‘Rakoto always reads books in the house.’

HYPOTHESIS 3: Adjacency need not hold when the object is followed by another constituent, but it turns out that, for this consultant, even if there is more material *within* the object, adjacency is relaxed.

- (12) a. Mamaky **foana** boky momba ny matematika Rakoto.  
 PRES.AT.read always book about DET math Rakoto  
 ‘Rakoto always reads books about math.’  
 b. Mamaky **foana** boky sy gazety Rakoto.  
 PRES.AT.read always book and newspaper Rakoto  
 ‘Rakoto always reads books and newspapers.’

HYPOTHESIS 4: Adjacency need not hold when the object is syntactically complex, but a long object, here a compound, seems to be sufficient to turn off the adjacency requirement.

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<sup>9</sup> Yes, there is an issue on how to deal with adjuncts in Larson, but I would have expected adjuncts to behave differently.

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- (13) Mahita      **foana** mpivaro-kena Rakoto.  
PRES.AT.see always seller-meat      Rakoto  
'Rakoto always sees meat sellers.'

In the end, it seems that the generalization is that short indefinite objects that were VP final had to be adjacent to the verb. This was not a particularly satisfying result.

#### 4 Where this leaves us

With this discovery, the question becomes whether or not there is anything left. In other words, have we lost all support for the existence of head movement in Malagasy. The good news is that the baseline data holds very firm. The examples given in (1a), (1b), and (5b) continue to elicit clear judgements across speakers and across meetings. We could see signs of XP movement in (1a), (1b), and signs of head movement in (5b). Certainly strange things are happening with more complicated examples, but the simple sentences had a simple solution.

#### 5 The lesson

There are several lessons to be taken away from this.

1. *Don't panic*: The first impression was that the original data that everyone was using, the data that we were all was passing back and forth to one another, and the data which did important heavy lifting in our understanding of Malagasy syntax was actually not based on reality. In fact, those data proved to be robust and only the extensions and complications of this data set became, well, complicated.
2. *Weak effects may become strong effects with time, distance, and language interference*: More recent discussions with linguists in Madagascar and other consultants in Montreal have clarified the issue considerably. The original observation is seen to hold (indefinite objects must be adjacent to the AT form of the verb) but as the object and the verb phrase become more complex, this restriction can be relaxed sometimes for some people. Further, the restriction becomes more relaxed the longer one is away from Madagascar (say in Montreal) and in contact with other languages (say, English and French). Linguists in Madagascar have fairly strong judgements that most of the examples in (9) to (13) are quite bad. But even they could be pushed to accept some of the longer examples.
3. *Trust the structure*: In the end, the structure wins (and Kyle was right in 1991). Structure provides the baseline and a model of competence. Performance can be

sensitive to other aspects of language such as length, but rather than throwing the baby out with the bath water, or the structural explanation out with the variable judgements, we should learn to distinguish what system our grammar machine produces and what complications are added through external interface pressures.

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