

Which Questions in Malagasy

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Introduction

This squib discusses the analysis of certain *wh*-questions in Malagasy, an Austronesian language spoken by approximately 18 million people on the island of Madagascar. It investigates *wh*-questions that are translated in English with the *wh*-determiner *which*. The results contribute to current work that analyzes Malagasy *wh*-questions as clefts (Keenan 1976, Paul 2001, Pearson 2001, Potsdam 2006, Law 2007, Kalin 2009, and others).¹

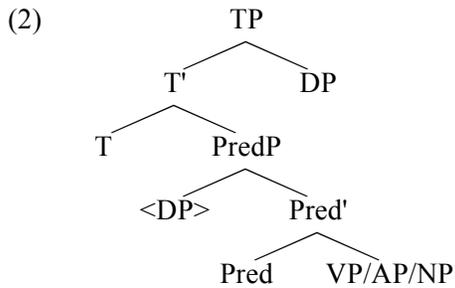
1 Malagasy Basics

Malagasy is a predicate-initial, subject-final language for both verbal and non-verbal clauses:

- (1) a. [nanoroka an-dRasoa]_{VP} ny mpahandro
kiss.PAST ACC-Rasoa the cook
'The cook kissed Rasoa.'
- b. [faly amin' ny zanany]_{AP} Rasoa
happy PREP the child.3SG Rasoa
'Rasoa is proud of her children.'
- c. [vorona ratsy feo]_{NP} ny goaika
bird bad voice the crow
'The crow is a bird with an ugly voice.'

For concreteness, I will assume that such clauses have the following structure (see also Paul 2008). There is an underlying predication relationship between the VP/AP/NP predicate and the DP subject of predication mediated by a Pred(ication)^o projection in which the subject of predication occupies spec,Pred and the predicate itself is the complement of Pred. Surface word order is derived by raising some element, typically the subject of predication, into a righthand specifier of TP, which is part of the functional structure dominating PredP:

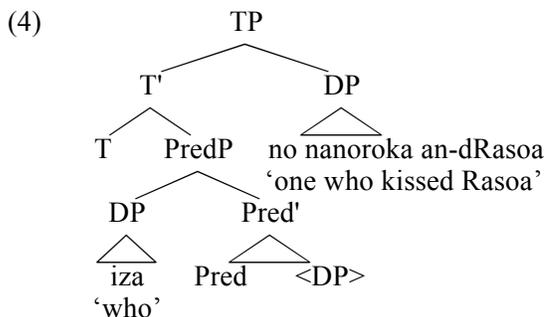
¹ Syntactic work on Malagasy would not be at its current level of sophistication without the groundbreaking work that Ed Keenan has done and continues to do on his "perfect" language. It is an honor to follow in his footsteps. I thank my consultants Charlotte Abel-Ratovo, Voara Randrianasolo, and Bodo Randrianasolo for help with the data.



Wh-questions in Malagasy can be formed using WH-IN-SITU or WH-FIRST strategies. In the latter, the wh-phrase is initial followed by an obligatory particle *no* (glossed FOC(US) because it is also used in a focus construction (Paul 2001)) and the rest of the clause, (3). Only subjects and some adjuncts can be questioned with the wh-first strategy (see Keenan 1976, Potsdam 2006, and references therein).

- (3)
- a. iza no nanoroka an-dRaso?
 who FOC kiss.PAST ACC-Raso
 ‘Who kissed Raso?’
- b. oviana no nanoroka an-dRaso ny mpahandro?
 when FOC kiss.PAST ACC-Raso the cook
 ‘When did the cook kiss Raso?’
- c. *iza no nanoroka — ny mpahandro?
 what FOC kiss.PAST the cook
 (ungrammatical with the meaning ‘Who did the cook kiss?’)

There is some consensus that the structure of these wh-questions is a specificational pseudocleft (Paul 2001, Potsdam 2007, Travis 2008, Kalin 2009, but see Sabel 2002, 2003 and Law 2007 for alternatives). *No* and the following material (the *no*-phrase) constitute a free relative and the underlying predicate. The wh-phrase is the underlying subject of predication. The free relative then moves to spec,TP, (4). Thus, on the surface, the wh-phrase appears to be the predicate, contained in PredP, while the *no*-phrase is the subject. Consequently, Malagasy is a fully wh-in-situ language: the wh-phrase is either in place as an argument/adjunct or in place inside PredP.



Consultants’ translations of English *which*-questions into Malagasy typically take the forms in (5) and (6). Those in (a) involve *no* but those in (b) do not.

- (5) a. lehilahy iza no nanoroka an-dRaso
 man who FOC kiss ACC-Raso
 b. iza ny lehilahy nanoroka an-dRaso?
 who the man kiss ACC-Raso
 ‘Which man kissed Raso?’
- (6) a. trano inona no no-vidi-nao?
 house what FOC PAST-buy.PASS-2SG
 b. inona ny trano no-vidi-nao?
 what the house PAST-buy.PASS-2SG
 ‘Which house did you buy?’

I will assume that the (a) sentences with *no* are derived as described above. The initial wh-phrase is contained in PredP. It consists of a head noun (*lehilahy* ‘man’ or *trano* ‘house’) and a post-nominal wh-modifier (*iza* ‘who’ or *inona* ‘what’).² This wh-phrase is followed by a *no*-phrase in subject position.

The concern of this squib is the analysis of the (b) sentences. Because they lack *no*, it is less clear what the structure of such examples is. I will argue that the examples have the structure in (7). They are copular clauses. The initial wh-phrase is the predicate in keeping with the predicate-initial nature of the language. The remaining material is a headed relative clause in subject position, *ny lehilahy nanoroka an-dRaso* ‘the man who kissed Raso’ in (5) and *ny trano novidinao* ‘the house you bought’ in (6). More literal translations of the *which*-questions would be ‘The man who kissed Raso is who?’ or ‘The house that you bought is what?’ The definiteness of the subject nominal conveys the d-linking associated with English *which*.

- (7) a. [iza]_{PredP} [ny lehilahy nanoroka an-dRaso]_{DP}
 who the man kiss Raso
 lit. ‘The man who kissed Raso is who?’
- b.
-
- ```

graph TD
 TP --- T_prime[T']
 TP --- DP["ny lehilahy nanoroka an-dRaso
'the man who kissed Raso'"]
 T_prime --- T
 T_prime --- PredP
 PredP --- DP_subj["<DP>"]
 PredP --- Pred_prime[Pred']
 Pred_prime --- Pred
 Pred_prime --- WH["iza
'who'"]

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## 2 Syntactic Evidence

The analysis makes the following claims about such *which*-questions, which are

<sup>2</sup> To first approximation *iza* ‘who’ is used with animate head nouns and *inona* ‘what’ with inanimate nouns. Speakers do allow *iza* with inanimates as well, however: *lakana iza* ‘which boat’. Further investigation is required but it is possible that *iza* is used when a specific instance is requested such as the title of book or the name of a particular boat.

defended in the subsections below.

- (8) a. WH is the predicate  
 b. [ny ... ] is a constituent and a headed relative clause

### 2.1 *The predicate*

Evidence from predicate-related particles and sluicing show that the wh-phrase is the predicate. A number of particles immediately follow the predicate in Malagasy, including *daholo* ‘all’, *anie* ‘EXCL’, *hono* ‘they say’, and *avy* ‘each’, (9). These particles are generally ungrammatical in other positions. For concreteness, one can assume that they are right-adjoined to PredP in (2), (4), and (7). See Potsdam 2006 for details.

- (9) a. nihinana vary (daholo) ny vahiny (\*daholo)  
 ate rice all the guest all  
 ‘The guests all ate rice.’  
 b. manapaka bozaka (anie) Rasoa (\*anie)  
 cut grass indeed Rasoa indeed  
 ‘Rasoa is really cutting the grass!’

In ordinary wh-questions with *no*, these particles immediately follow the wh-phrase because it is the predicate, (10a) and (11a). In *which*-questions, they also immediately follow the wh-phrase because it is still the predicate, as claimed above, (10b) and (11b).

- (10) a. iza (daholo) no nihinana vary?  
 who all FOC ate rice  
 ‘Who all ate rice?’  
 b. iza (daholo) ny (\*daholo) lehilahy (\*daholo) nanoroka an-dRaso?  
 who all the all man all kissed ACC-Raso?  
 ‘Who are all the men who kissed Raso?’
- (11) a. inona (anie) no ho-vaki-nao?  
 what EXCL FOC FUT-read.PASS-2SG  
 ‘What are you really going to read?’  
 b. inona (anie) ny (\*anie) boky (\*anie) hovakinao?  
 what EXCL the EXCL book EXCL FUT.read.2SG  
 ‘What are you really going to read?’

Supporting evidence comes from sluicing. Sluicing is a construction that reduces an embedded question to just a wh-phrase by deleting all non-wh-material (Ross 1969, Merchant 2001): *The student read something but I don’t know what (he read)*. Malagasy has a sluicing construction, which strands the wh-phrase predicate (see Potsdam 2007 and Paul and Potsdam 2012 for analytical details). Sluicing affects the *which*-questions as predicted. In ordinary wh-questions, only the wh-phrase remains, (12). In *which*-questions, the wh-phrase again remains when the headed relative clause is deleted, (13).

- (12) nividy zavatra ny mpianatra fa tsy fantatro hoe  
 bought thing the student but NEG know.1SG COMP  
 inona (no no-vidi-ny)  
 what FOC PAST-buy.PASS-3SG  
 ‘The student bought something but I don’t know what (he bought).’
- (13) nividy boky ny mpianatra fa tsy fantatro hoe  
 bought book the student but NEG know.1SG COMP  
 inona (ny boky no-vidi-ny)  
 what the book PAST-buy.PASS-3SG  
 ‘The student bought a book but I don’t know which (is the book he bought).’

## 2.2 The subject

The second claim about *which*-questions is that those lacking *no* are copular clauses linking a headed relative clause subject and a *wh*-phrase predicate:

- (14) [iza]<sub>PredP</sub> [ny lehilahy nanoroka an-dRaso] <sub>DP</sub>  
 who the man kiss ACC-Raso  
 lit. ‘The man who kissed Raso is who?’

That the subject here is a noun phrase modified by a relative clause is supported by the fact that the relativizer *izay* can appear between the head noun and the relative clause:

- (15) [iza]<sub>PredP</sub> [ny lehilahy izay nanoroka an-dRaso] <sub>DP</sub>  
 who the man REL kiss ACC-Raso  
 ‘Which man kissed Raso?’

In addition, the default determiner *ny* can be replaced by so-called framing demonstratives, which are a clear diagnostic for noun phrases. Framing demonstratives are matching demonstratives that circumscribe a noun phrase, appearing initially and finally:

- (16) tsy tsara [io boky no-vidi-ko io]  
 NEG good DEM book PAST-buy.PASS-1SG DEM  
 ‘This book that I bought is not good.’

The framing demonstrative appears around both the noun phrase and the relative clause, confirming its constituent status, (17). Other positions of the two demonstratives are ungrammatical.

- (17) iza ity lehilahy nanoroka an-dRaso ity?  
 who DEM man kissed ACC-Raso DEM  
 ‘Who is this man who kissed Raso?’

### 2.3 Combined strategies

Finally, both strategies for forming *which*-questions can be combined. A complex *wh*-phrase predicate of the form noun plus post-nominal *wh*-modifier can be related to a headed relative clause in subject position, (18) as a copular clause. Speakers find such examples acceptable, though somewhat repetitious. I claim that these sentences have the predicate-subject structure in (7b).

- (18) a. [lehilahy iza] [ny lehilahy nanoroka an-dRasoa]?  
           man        who    the   man    kissed    ACC-Rasoa  
           ‘Which man is the man who kissed Rasoa?’
- b. [trano inona] [ny trano novidi-nao]?  
           house what    the   house PAST.buy.PASS-2SG  
           ‘Which house is the house you bought?’

### Conclusion

This paper has argued that certain Malagasy clauses offered as translations for English *which*-questions are copular clauses in which the *d*-linked interpretation of English *which* is encoded using a definite noun phrase with a modifying relative clause as the subject. It replaces the free relative headed by *no* found in Malagasy *wh*-questions previously analyzed in the literature. The initial *wh*-phrase is still the predicate of the clause. Such questions instantiate the basic predicate-subject word order in Malagasy and are support the analysis of Malagasy *wh*-questions as clefts generally.

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