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Wh-Questions in Malagasy

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1 Introduction

Wh-questions in Malagasy consist of a clause-initial wh-phrase followed by an invariant particle and then the remainder of the clause. This paper considers the structural analysis of Malagasy wh-questions and argues for a biclausal cleft analysis in which the initial wh-phrase is a predicate and the remaining material is a headless relative in subject position. The paper is organized as follows: Section 2 introduces some basic facts about Malagasy clause structure and wh-questions. Section 3 lays out two competing structural analyses of wh-questions: the cleft analysis and a fronting analysis in which Malagasy wh-questions are derived by wh-movement. Section 4 introduces various evidence in favor of the pseudocleft analysis and against the fronting analysis. Section 5 concludes.

2 Malagasy Syntax and Wh-Questions

Malagasy is an Austronesian language spoken on the island of Madagascar. It is well-known for having basic VOS word order, (1a), and a robust voice system which advances thematically diverse elements to the clause-final subject position. Corresponding to the active sentence in (1a), the passive sentence in (1b) has the direct object as the clause-final subject and the circumstantial sentence in (1c) has an oblique element as its subject. Note that the agent in non-active clauses appears immediately following the verb. 14

(1) a. n-i-vidy ny akoho i Bao
   PAST-ACT-buy the chicken Bao
   'Bao bought the chicken.'
   ACTIVE

b. no-vidi-n’ i Bao ny akoho
   PAST-buy-PASS Bao the chicken
   'The chicken was bought by Bao.'
   PASSIVE

b. n-i-vidi-anan’ i Bao ny akoho i Soa
   PAST-ACT-buy-CIRC Bao the chicken Soa
   'Soa was bought a chicken by Bao.'
   CIRCUMSTANTIAL

For concreteness I adopt structures from Guilfoyle, Hung, and Travis 1992. In active clauses, the clause-final subject occupies a right specifier of IP and the verb raises to I, yielding VOS word order, (2a). PredP is a projection in whose specifier the external argument is introduced (Bowers 1993, see also Chomsky’s (1995) VP). For non-active clauses, the immediately post-verbal agent is in the predicate-internal subject position, spec.Pred, with the clause-final subject again in spec.I, (2b).

Descriptively, wh-questions in Malagasy are formed by preposing the wh-phrase and following it immediately with the particle no (glossed as PRT) and then the remainder of the clause:

(3) a. iza no nividy ny akoho?
   who PRT buy.ACT the chicken
   'Who bought the chicken?'

b. inona no novidin’ i Bao?
   what PRT buy.PASS Bao
   'What was bought by Bao?'

It is widely cited that only subjects can be questioned with this strategy (Keenan 1976, 1995, MacLaughlin 1995, Paul 2000, 2002, Pearson 2001, Sabel 2002, and others). Non-subject questions are ungrammatical:

(4) a. *inona no nividy i Bao?
   what PRT buy.ACT Bao
   ('What did Bao buy?')

b. *iza no novidina ny akoho?
   who PRT buy.PASS the chicken
   ('Who was the chicken bought by?')

An exception to this claim is that some adjuncts, including temporal, locative, and instrumental adverbials, can be questioned without first advancing to subject position (Keenan 1976, Rabenilaina 1998, Paul 2000, 2001, 2002, Pearson 2001, Sabel 2002, and others). (5) shows that a question with where is compatible with any verbal voice form. Only in the example with circumstantial voice, (5c), does the adverbial correspond to a subject.

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(5) a. taiza no nanafina ny lakileko ny zaza
   where PRT hide.ACT the.key.1SG the.child
b. taiza no nafanin’ ny zaza ny lakileko
   where PRT hide.PASS the.child the.key.1SG
c. taiza no nanafenan’ ny zaza ny lakileko
   where PRT hide.CIRC the.child the.key.1SG

   ‘Where did the child hide my key?’

This restriction, that only subjects and some adjuncts can be extracted, will be important as a descriptive generalization in discussions to follow (see MacLaughlin 1995, Sabel 2002, Paul 2002, and Pearson, to appear for possible analyses of the restriction).

3 Two Hypotheses

This section introduces two structural analyses of Malagasy wh-questions from the literature. The FRONTING ANALYSIS (Sabel 2002, 2003) likens the structure of wh-questions in Malagasy to that of wh-movement structures in better studied languages. Wh-questions, such as (6) below, resemble English wh-fronting examples and can be assigned a familiar structure, (7a). The wh-phrase moves to spec, C and no is question complementizer in C".

(6) iza no nihomehy?
    who PRT laughed

   ‘Who laughed?’

FRONTING ANALYSIS

(7) a.  
   IP
   
   [DP C’]
   
   [iza ‘who’ no]
   
   [nihomehy ‘laughed’]

   CLEFT ANALYSIS

b.  
   IP
   
   [DP D C’]
   
   [iza ‘who’]
   
   [nihomehy ‘laughed’]

   The CLEFT ANALYSIS to be defended here builds on proposals in Dahl 1986, Pearson 1996, Paul 2001, 2003b, and others. Under the cleft analysis, wh-questions are pseudocleft structures in which the wh-phrase is a non-verbal predicate and the subject is a headless relative clause involving internal movement of a null operator.

Op. The wh-question in (6) is assigned the structure in (7b). For concreteness, I take the focus particle no under the cleft analysis to be a determiner and the relative clause its complement, as shown. Paul 2001 points out that some related Austronesian languages are also argued to employ a pseudocleft structure for questions, for example, Palauan (Georgopoulos 1991), Tagalog, and Seediq (Aldridge 2002).

4 Argumentation Against the Fronting Analysis

This section provides evidence in favor of the pseudocleft analysis from parallels with a cleft focus construction, word order facts, and multiple wh-questions.

4.1 parallels with the focus construction

Malagasy has a focus construction illustrated in (8) that is formally similar to wh-questions. Dahl 1986 first proposed that this focus construction is a kind of cleft and Paul 2001, 2003a develops this idea, assigning (8a) the pseudocleft structure in (9). The focused element is the predicate of the clause and the subject is a headless relative clause.

(8) a. Rasoa no nihomehy
    Rasoa PRT laugh.ACT
    ‘It was Rasoa who laughed’

   b. ny mofo no novidin-dRasoa
    the bread PRT buy.PASS Rasoa
    ‘It was the bread that was bought by Rasoa’

(9) [% predicate Rasoa % [subject headless relative class no Op] nihomehy]
    Rasoa PRT laughed
lit. “The one who laughed was Rasoa”

There are a number of non-trivial parallels between wh-questions and the focus construction, which suggest that they should receive the same structural analysis. First, both are formed by preposing a constituent and following it immediately with the particle no. Second, the two constructions have a similar focus interpretation of the initial XP. Wh-phrases indicate a request for new information in the same way that focused XPs supply new information. Third, the two constructions are subject to the same extraction restriction, that only subjects and adjuncts can be extracted. In (10), adjuncts are focused regardless of the voice of the verb (compare to the wh-questions in (5)). In (11), we see the ungrammaticality that results from focusing a non-subject argument (compare (4)).

(10) a. ao· ambanin’ ny fandriana no nanafina ny lakile ny zaza
    there under the bed PRT hide.ACT the.key the.child
b. ao ambanin’ ny fandriana no nafanin’ ny zaza ny lakile
    there under the bed PRT hide.PASS the.child

(11) a. mofo no novidin-dRasoa
    the bread PRT buy.PASS Rasoa
    ‘It was the bread that was bought by Rasoa’

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c. ao ambanin’ ny tandriana no nanafenan’ ny zaza ny lakile there under the bed PRT hide.CIRC the child the key
‘It’s under the bed that the child hid my key’

(11) a. *ny mofo no nividy i Bao
the bread PRT buy.ACT Bao
(‘It’s the bread that Bao bought’)
b. *Rabe no novidina ny akoho?
Rabe PRT buy.PASS the chicken
(‘It’s Rabe that the chicken was bought by’)

Such similarities are perhaps unexpected under the fronting analysis in which the two constructions have rather different derivations.

4.2 predicational properties of the wh-phrase
One distinction between the two analyses concerns the characterization of the initial wh-phrase. Under the pseudocleft analysis, it is a predicate, while under the fronting analysis, it is a preposed constituent. We can thus differentiate the two analyses by seeing whether a fronted wh-phrase has properties characteristic of predicates or not. This subsection demonstrates that the position of predicate-related particles treats initial wh-phrases as predicates, not as fronted elements.

Malagasy has a number of particles that immediately follow the predicate in ordinary clauses. These post-predicate particles include the quantifiers daholo ‘all’ and any ‘each’ (Keenan 1976, 1995), the exclamative particle anie (Keenan 1976, 1995), and VP adverbs such as foana ‘always’ (Pearson 1998, Rackowski 1998). There is abundant evidence that the verb and its complements constitute a predicate to the exclusion of the subject in Malagasy (Keenan 1976, 1995) and in VOS clauses these elements appear immediately after the predicate and before the subject but not elsewhere:

(12) a. nihinana vary (daholo) ny vahiny
eat.ACR vary all the guest all
‘All the guests ate rice’
b. manapaka bozaka (anie) Rasoa (*anie)
cut.ACR grass EXCL Rasoa EXCL
‘Rasoa is really cutting the grass!’
c. mihomehy (foana) Rasoa (*foana)
laugh.ACR always Rasoa always
‘Rasoa is always laughing’

For concreteness, I assume that these particles right adjoin to PredP. This correctly places them between the object and the subject in VOS clauses. The two analyses under consideration make different predictions about where these particles will appear in wh-questions. As shown in (13a), the cleft analysis places them immediately after the wh-phrase. The fronting analysis, in contrast, does not and predicts that they must be lower in the structure, near the end of the clause, (13b).

In all cases, the prediction of the cleft analysis is correct. Post-predicate particles immediately follow the wh-phrase:

(14) a. iza (daholo) no nihinana vary (*daholo)?
who all PRT eat.ACT vary all
‘Who all ate rice?'
b. iza (anie) no manapaka bozaka (*anie)?
who EXCL PRT cut.ACT grass EXCL
‘Who is really cutting the grass?’
c. iza (foana) no mihomehy (*foana)?
who always PRT laugh.ACT always
‘Who is always laughing?’

Malagasy also has a number of particles that immediately precede the predicate in VOS clauses. These pre-predicate particles include toa ‘seem’, tokony ‘should’ (Paul 2001), and tena ‘indeed (affirmative emphasis)’:

(15) a. tokony mamangy an-dRabe Rasoa
should visit.ACR ACC-Rabe Rasoa
‘Rasoa should visit Rabe’
b. tena hovidin’ ny zaza ny fiaramanidina
EMPH buy.PASS the child the airplane
‘The child will indeed buy the airplane’

The cleft analysis of questions correctly predicts that these particles also immediately precede the wh-phrase in a wh-question, (16). Under the fronting analysis, such data are unexpected because the wh-phrase is not a predicate and the particle should necessarily appear farther to the right.
One might object that these particles are not pre-predicate particles but clause-initial particles. If that were the correct description, then the fronting analysis would also account for the above data. There is evidence however that the particles do not simply occur clause-initially. There is a topicalization construction in Malagasy in which a constituent is preposed, followed by the topic particle dia (Keenan 1976):

(17) a. Rasoa dia manoroka an-dRabe
    Rasoa TOPIC kiss ACC-Rabe
    ‘Rasoa, she kisses Rabe’

Paul 2001 and Flegg 2003 suggest that the initial constituent in this construction is not a predicate and, indeed, the pre-predicate particles do not occur clause-initial, but predicate-initial, in this construction, (18).^4

(18) a. (*tokony) Rasoa dia (tokony) manoroka an-dRabe
    should Rasoa TOPIC should kiss ACC-Rabe
    ‘Rasoa, she should kiss Rabe’

b. (*tena) ny fiaramanidina dia (tena) hovidin’ ny zaza
    EMPH the airplane TOPIC EMPH buy.PASS the child
    ‘The airplane, the child will indeed buy it’

In summary, the fronting analysis does not allow the grammatical placement of a wide variety of clause-internal particles, while the cleft analysis does. The wh-phrase in a wh-question behaves like a predicate with respect to the position of these particles, as predicted by the cleft analysis.^

4.3 multiple wh-questions
The final argument for the cleft analysis comes from a consideration of multiple wh-questions introduced in Sabel 2003, (19), in which there are two wh-phrases at the front of the clause. I will claim that the cleft analysis provides a better account of such data. To see this we need to lay out how each hypothesis would handle such data. I then provide arguments in favor of the cleft-based approach.

(19) a. aiza iza no mividy ny vary?  Sabel 2003:245-246
    where who buy.ACT the rice
    ‘Who buys rice where?’

b. aiza (ny) inona no vidinao?
    where what buy.PASS the rice
    ‘What do you buy where?’

4.3.1 Sabel’s (2003) fronting analysis
Sabel 2003 proposes a clever analysis of the multiple wh-question examples within the fronting approach. That work argues that Malagasy is an optional multiple wh-fronting language like some of the Slavic languages. In such languages, all wh-phrases move to clause-initial position as in the Bulgarian data in (20) (Rudin 1988, Pesetsky 2000, Boskovic 2002, Richards 2002, and references therein).

(20) a. koj kakvo na kogo dade?
    who what to whom gave
    ‘Who gave what to whom?’

b. *koj dade kakvo na kogo?
    who gave what to whom

Rudin 1988 first argued that there are two types of multiple wh-fronting languages. In Polish/Serbo-Croatian type languages, fronted wh-phrases move to separate CP specifiers. In Romanian/Bulgarian type languages, the fronted wh-phrases move to a single spec,C, where they form a constituent. Sabel 2003 proposes that Malagasy is of this latter type. The structure of the multiple wh-question in (19a) is (21).

(21)

4.3.2 Paul’s (2003a) cleft analysis
Paul 2003a indirectly provides an alternative analysis of the multiple wh-questions within the cleft approach. The analysis rests on the existence of another construction in Malagasy which Keenan 1976 called the BODYGUARD CONSTRUCTION. Keenan 1976 first observed that when a non-subject is questioned or focused, the subject may optionally appear immediately after the wh-phrase/focus, and before no. The subject serves as a “bodyguard” for the fronted element. (22b) illustrates the bodyguard variant of the wh-question in (22a) and (23b) illustrates the bodyguard variant of the focus construction in (23a). The bodyguard construction is only possible when the first XP is an adjunct and the second XP is the subject.

(22) a. aiza no mividy mofo Rasoa?
    where buy.ACT bread Rasoa

b. aiza Rasoa no mividy mofo?
    where Rasoa buy.ACT bread
    ‘Where does Rasoa buy bread?’

(23)
Paul 2003a analyzes the bodyguard construction, arguing that the bodyguard phrase is in the specifier position of the DP subject. It is a kind of possessor. This correctly places the bodyguard between the focus and the particle no. To the focus construction with bodyguard in (23b) Paul assigns the structure in (24).

(24)

Given Paul's (2003a) analysis, we have a natural account of the multiple wh-questions. They are wh-questions in which the bodyguard in spec, D is also a wh-phrase:

(25)

There is a difference between the two languages, however, in that they show the opposite licit orderings. In Bulgarian we see who where but in Malagasy we see where who. The question that arises under the fronting analysis is why Malagasy shows anti-superiority. Given that the wh-phrases constitute a constituent, under the fronting analysis, it must be the case that constituent formation in spec, C proceeds via left adjunction in Malagasy but right adjunction in Bulgarian. The theory-internal issue is how to capture this parametric variation. It can be stipulated, of course, but this is unsatisfactory and I see no principled explanation. Under the cleft analysis, by contrast, the correct ordering in (27a) is fixed by the phrase structure. The bodyguard must be a subject and it must follow the adjunct wh-predicate.

A second argument for the cleft analysis of multiple wh-questions comes from examples with multiple fronted wh-adjuncts. We have already seen that wh-questions in Malagasy are sharply restricted: only subjects and certain adjuncts may be preposed. When one of each fronts, the subject must be rightmost. Even taking these restrictions into account, if Malagasy is a multiple wh-fronting language, it should still be acceptable to front other combinations of wh-phrases, specifically, two wh-adjuncts. This is not possible however, regardless of whether or not a subject bodyguard is present:

(26)

By contrast, true multiple wh-fronting languages like Bulgarian, allow multiple adjacent questions:
The ability of a parenthetical to appear between the wh-phrase and the bodyguard is surprising under the fronting analysis. With the pseudocleft analysis, there is a major constituent break between the predicate and the subject where the parenthetical is and (33) is expected to be grammatical.

Second, coordination facts lead to the same conclusion. The bodyguard and following material can be coordinated to the exclusion of the initial wh-phrase:

(34) oviana Raso no nijinja vary ary Rabe no nanapaka bozaka?
    when Raso PRET-harvest rice and Rabe PRET cut grass
    ‘When did Raso harvest rice and Rabe cut grass?’

Such examples are straightforwardly accounted for with the pseudocleft structure since the coordinated material is a constituent, as reflected in (32b). Under the fronting analysis however, there is no constituent being coordinated, see (32a), and the result should be ungrammatical, assuming that only constituents can coordinate. Further, the fronting analysis predicts that one should be able to coordinate the wh-phrase+bodyguard to the exclusion of no and the remaining material. This is completely impossible:

(35) *[oviana Rabe] sy/ary [taiza Rasoa] no nividy mofo?
    when Rabe and where Rasoa PRET buy bread
    (‘When did Rabe buy bread and where did Rasoa buy bread?’)

Third, post-predicate particles treat the initial wh-phrase structurally separate from the bodyguard. When both are present, the particle follows the wh-phrase, not the bodyguard:

(36) oviana (anie) Rasoa (*anie) no nanapaka bozaka?
    when EXCL Rasoa PRET buy bread
    ‘When really did Rasoa buy bread?’

In conclusion, there is good empirical evidence that Paul is correct in proposing the general structures in (24) and (25) for the bodyguard construction and, by extension, multiple wh-questions. The bodyguard is part of the subject constituent and not the predicate. No operation treats the two initial phrases as a constituent, contra the fronting analysis in which the wh-phrase+bodyguard to the exclusion of no and the remaining material.

5 Summary
This paper has argued that wh-questions in Malagasy have a pseudocleft structure in which the initial wh-phrase is the predicate and the remaining material, a DP, is the subject. Despite superficial appearances, wh-questions in Malagasy are not derived by wh-movement. The cleft structure for wh-questions in Malagasy is superior in unifying the analysis of wh-questions and the focus construction, in predicting the position of predicate-related particles in wh-questions, and in providing an analysis of multiple wh-questions and the bodyguard construction.
At this stage, a number of more detailed analytical questions arise. Two in particular are, what is the proper treatment of the particle no and why does Malagasy not appear to have any overt A'-movement under the adopted conception of clause structure? Is the latter an accidental observation or artifact of the simple clause structure assumed or is it some deeper property of the Malagasy grammar? I leave these and other questions for future investigation.

Endnotes

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1. I use the following abbreviations in glossing: 1/2/3-person, ACC-accusative, ACT-active voice, CIRC-circumstantial voice, EXCL-exclamative, EMH-emphatic, NEG-negative, PAREN-parenthetical, PASS-passive voice, PRT-particle, SVC-sentence.

2. There is considerable debate as to whether the clause-final DP is a subject or an A′ topic-like element. I continue to refer to it as a subject for convenience, without taking a stand on the issue. See Pearson, to appear for discussion.

3. The pre-predicate particles may also appear farther to the right, (i). This is expected under both analyses however because the verb constitutes a predicate under both analyses. Such examples do not help to differentiate the two analyses.

(i) a. izà no tokony mamangy an-dRabe
   who PRT should visit ACT ACC-Rabe
   ‘Who should visit Rabe?’

4. One unexpected piece of data in this realm concerns the negative particle no which also occurs predicate-initial. It occurs before the VP in VOS clauses, (ia), and it may occur before the XP predicate in the focus construction, (ib).

(i) a. tsy nihinana ny vary Rasoa
    NEG eat the rice Rasoa
    ‘Rasoa didn’t eat the rice’

b. tsy Rasoa no nihinana ny vary
   NEG Rasoa PRT eat the rice
   ‘It isn’t Rasoa who ate the rice’

Perhaps surprisingly, negation cannot precede a wh-phrase in a wh-question, (iia). The negation must occur before the verbal predicate, (iib).

(ii) a. *tsy izà no nihinana ny vary?
    NEG who PRT eat the rice
    (‘Who didn’t eat the rice?’)

References


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