

More concealed pseudoclefts in Malagasy and the Clausal Typing Hypothesis

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Abstract

Cheng's Clausal Typing Hypothesis (Cheng, L., 1997. *On the Typology of Wh-Questions*. Garland, New York) predicts that no language should have constituent questions using both *wh*-in-situ and *wh*-movement strategies. Malagasy (Austronesian, Madagascar) is a *prima facie* counter-example to this claim in seemingly allowing both options. In keeping with the Clausal Typing Hypothesis, however, this paper argues that Malagasy, a predicate-initial language, has only *wh*-in-situ. Apparent examples of *wh*-movement are pseudoclefts in which the initial *wh*-phrase is a predicate and the following material is a headless relative clause in subject position. Evidence comes from the predicate status of the *wh*-phrase, parallels with a similar focus construction, and discontinuous *wh*-phrases.

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1. Introduction

Cheng (1997) explores the syntax of *wh*-questions, specifically the choice that languages can make between *wh*-in-situ and *wh*-movement strategies. The core of the proposal to account for cross-linguistic patterns is the Clausal Typing Hypothesis (CTH) in (1).

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(1) *Clausal Typing Hypothesis* (Cheng, 1997:22)

Every clause needs to be typed. To type a wh-question, either i) there is a wh-particle in C° or ii) a wh-phrase fronts to spec, C°

The idea is that wh-questions must be marked, or “typed”, as such in the syntax.¹ This may be accomplished in one of two ways: via a wh-question particle or wh-movement. Mandarin Chinese, for example, employs the wh-particle strategy, (2a). There is a wh-particle, which may be non-overt (Cheng, 1997:17), and wh-movement does not occur. English, in contrast, employs the wh-movement strategy and no wh-particle, (2b).

- (2) a. Hufei mai-le na-yi-ben-shu (ne)?
 Hufei buy-ASPECT which-one-CLASSIFIER-book Q
 ‘Which book did Hufei buy?’
 b. Which book did Hufei buy?

Cheng proposes that Chomsky’s (1991) Principle of Economy of Derivation prevents a sentence from using both strategies because a clause should not be typed twice. Further, if a language has a wh-particle, it always uses it. A consequence of the proposal is that there should be no optional wh-movement languages:

(3) *Prediction of the CTH* (Cheng, 1997:28)

No language has the option of using either wh-in-situ (a wh-particle) or syntactic wh-movement of wh-words to type a sentence as a wh-question

Malagasy is a VOS, or predicate-initial and subject-final, Austronesian language spoken by approximately fourteen million people on the island of Madagascar. It is an apparent counterexample to the CTH prediction in (3) in having both in-situ and apparent wh-movement strategies. (4) illustrates the in-situ strategy.

- (4) *wh-in-situ*
 nividy vary taiza Raso?a
 buy rice where Raso?a
 ‘Where did Raso?a buy rice?’

The putative wh-movement strategy consists of a clause-initial wh-phrase followed by the invariant particle *no* and then the remainder of the clause:

- (5) *wh-movement*
 a. taiza no nividy vary Raso?a
 where PRT buy rice Raso?a
 ‘Where did Raso?a buy rice?’

¹ See Yoshida (2000) for similar though distinct claims regarding scope marking in wh-questions cross-linguistically.

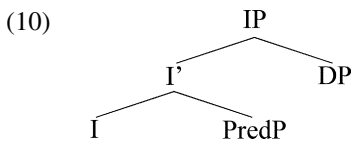
- ² I use the following abbreviations in glossing: 1/2/3-person, ACC-accusative, ACT-active voice, CIRC-circumstantial voice, DEM-demonstrative, EXCL-exclamative, EMPH-emphatic, FUT-future, LOC-locative, NEG-negative, PASS-passive voice, PREP-preposition, PRT-particle, Q=yes-no question, SG/PL-number.

- (8) a. [n-i-vidy ny akoho]_{VP} i Bao
 PAST-ACT-buy the chicken Bao
 ‘Bao bought the chicken.’
- b. [vorona ratsy feo]_{NP} ny goaika
 bird bad voice the crow
 ‘The crow is a bird with an ugly voice.’
- c. [faly amin’ ny zanany]_{AP} Rasoa
 proud PREP the child.3SG Rasoa
 ‘Rasoa is proud of her children.’
- d. [any an-tsena]_{PP} aho
 PREP ACC-market 1SG.NOM
 ‘I am at the market.’

Malagasy also has a well-known and well-developed voice system which advances thematically diverse elements to the clause-final subject position. Corresponding to the active verbal sentence in (8a), the PASSIVE sentence in (9a) has the direct object as the clause-final subject and the CIRCUMSTANTIAL (indirect passive) sentence in (9b) has an oblique element as its subject. The agent in non-active clauses appears immediately following the verb.

- (9) a. no-vidi-n’ i Bao ny akoho PASSIVE
 PAST-buy-PASS Bao the chicken
 ‘The chicken was bought by Bao.’
- b. n-i-vidi-anan’ i Bao ny akoho i Soa CIRCUMSTANTIAL
 PAST-ACT-buy-CIRC Bao the chicken Soa
 ‘Soa was bought a chicken by Bao.’

I assume that Malagasy clauses are projected from an I° head whose complement is a predicate phrase (Bowers, 1993; Chomsky, 1995) which embeds the lexical phrase and whose right-hand specifier is the DP subject (Guilfoyle et al., 1992)^{3,4}:



³ Other researchers argue that the subject-final order is derived from subject-initial order with a left-hand specifier by predicate fronting (Aldridge, 2002, 2004; Chung, 2005; Massam, 2000; Massam and Smallwood, 1997; Pearson, 1998, 2001; Rackowski, 1998; Rackowski and Travis, 2000; Travis, 2005). For the purposes of this paper, this innovation is not important.

⁴ There is considerable debate as to whether this clause-final DP is actually a subject or an A' topic-like element. With respect to (10), is spec,I an A or A' position? I continue to refer to it as a subject for convenience, without taking a stand on the issue. See Pearson (2005) for discussion.

Wh-questions in Malagasy are formed in one of two ways. For non-subjects, wh-in-situ is possible (see [Sabel, 2002](#) for description and analysis):

- (11)
- a. nividy **inona** ianao?
 buy.ACT **what** 2SG.NOM
 ‘What did you buy?’
 - b. novidin’ **iza** ny omby?
 buy.PASS **who** the cow
 ‘Who was the cow bought by?’
 - c. nividy vary **taiza** ianao?
 buy.ACT rice **where**.PAST 2SG.NOM
 ‘Where did you buy rice?’

Wh-in-situ is ungrammatical for subjects:

- (12)
- a. *nihomehy **iza**?
 laugh.ACT **who**
 (‘Who laughed?’)
 - b. *mamaky angano aminao **ny ray aman-dreninao iza**?
 read.ACT fable to.2SG **the parent.2sg** **which**
 (‘Which of your parents reads fables to you?’)

This ban on subject wh-in-situ has an independent explanation in the grammar, first articulated in [Sabel \(2002\)](#). It is widely cited that Malagasy has an inviolable restriction that subject DPs be formally and semantically specific ([Keenan, 1976](#); [Paul, 2000b](#); [Pearson, 1996, 2001](#)):

- (13) *Malagasy subject specificity requirement*
 Subjects must be specific

The restriction is illustrated by the following data.

- (14) mihinana vary i Soa/izy/ny mpianatra/ilay gidro
 eat.ACT rice DET Soa/3SG.NOM/the student(s)/that lemur
 ‘Soa/(s)he/the student(s)/that lemur is eating rice.’
- (15) *mihinana vary mpianatra/olona
 eat.ACT rice student/person
 (‘A student/someone is eating rice.’)

If the subject is to be non-specific, an existential construction is used instead:

- (16) *misy* *mpianatra/olona mihinana vary*
 exist.ACT student/person eat.ACT rice
 ‘There is a student/someone eating rice.’

Assuming that *wh*-phrases do not count as formally or semantically specific, Malagasy does not allow subject *wh*-in-situ, (12), because this would violate the subject specificity requirement.⁵

The second strategy for forming *wh*-questions, directly relevant for this paper, is to prepose the *wh*-phrase, following it immediately with the particle *no* (glossed as PRT) and then the remainder of the clause, minus the *wh*-phrase:

- (17) 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 or extracted in Malagasy with this strategy (Keenan, 1976, 1995; Keenan and Comrie, 1977; MacLaughlin, 1995; Paul, 2000a, 2002; Pearson, 2001; Sabel, 2002; and others). (18) shows that it is ungrammatical to *wh*-question a non-subject argument in this way. Instead, the voice system is used to make the to-be-questioned argument a subject, as in (17).

- (18) 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 generalization is that some adjuncts, including temporal and locative adverbials, can be questioned without first advancing to subject position (Keenan, 1976; Paul, 2000a, 2001a, 2002; Pearson, 2001; Rabenilaina, 1998; Sabel, 2002; and others). In (19), a question with *where* is compatible with any verbal voice form. Only in the example with circumstantial voice, (19c), does the adverbial plausibly correspond to a subject.

⁵ Note that d(iscourse)-linking (in the sense of Pesetsky, 1987) the in-situ subject does not help, (12b). See Law and Gärtner (2005) for critical discussion of this line of argumentation.

- (19) a. taiza no nanafina ny lakile ny zaza?
 where PRT hide.ACT the key the child
- b. taiza no nafenin' ny zaza ny lakile?
 where PRT hide.PASS the child the key
- c. taiza no nanafenan' ny zaza ny lakile?
 where PRT hide.CIRC the child the key
 'Where did the child hide the key?'

This restriction, stated in (20) below, will be important as a descriptive generalization in the discussions that follow, although I will not offer an explanation for it (see MacLaughlin, 1995; Paul, 2002; Pearson, 2005; and Sabel, 2002 for possible analyses of the restriction).

- (20) *Malagasy extraction restriction*
 Only subjects and some adjuncts can be extracted

To summarize, Malagasy apparently uses both wh-in-situ and wh-movement to form wh-questions. The two strategies are not in complete free variation only because of independently motivated syntactic restrictions in the language, namely the subject specificity requirement and the extraction restriction. Given the presence of both options, Malagasy is a counterexample to Cheng's (1997) Clausal Typing Hypothesis. In order to maintain the CTH, it must be shown that the examples with initial wh-phrases do not actually involve wh-movement. That is the job of the remainder of the paper.

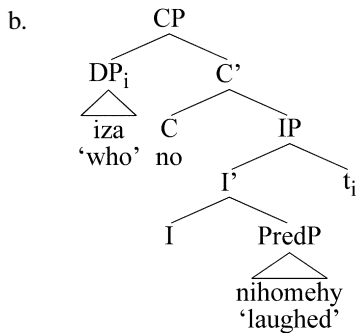
3. Two hypotheses

This section introduces two structural analyses of Malagasy wh-questions with initial wh-phrases. In section 3.1 I present Sabel's (2002, 2003) fronting analysis of wh-questions. Section 3.2 develops the non-movement pseudocleft analysis based on Paul (2001a). Only the latter analysis is compatible with the CTH and I will ultimately argue for its correctness.

3.1. The fronting analysis

The fronting analysis of wh-questions likens their structure to that of wh-fronting constructions in better studied language families like Germanic, Romance, and Slavic. Sabel (2002, 2003) is the primary proponent of such an approach although it is assumed in MacLaughlin (1995), Pensalfini (1995), and Potsdam (2003). Wh-questions, such as (21a), resemble English wh-fronting examples and can be assigned a familiar structure, (21b). The wh-phrase moves to spec,C and *no* is a question complementizer in C°. The motivation for the movement can be as in other languages: a strong [wh] (or EPP) feature on C° *no*.

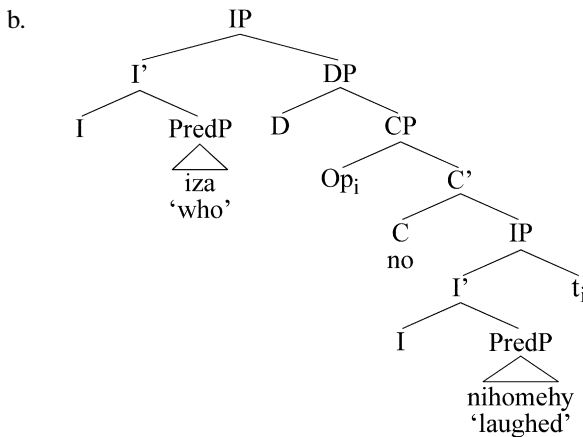
- (21) a. iza no nihomehy?
 who PRT laugh.ACT
 'Who laughed?'



3.2. The pseudocleft analysis

The pseudocleft analysis, which I will ultimately defend, builds on proposals in Dahl (1986), Paul (2001a, 2003b), Pearson (1996), and others. Under the pseudocleft analysis, wh-questions in Malagasy 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 closest English translation is with a pseudocleft: *Who laughed was who?* or *The one who laughed was who?* The wh-question repeated in (22a) is assigned the structure in (22b) under this approach.

- (22) a. iza no nihomehy?
 who PRT laugh.ACT
 'Who laughed?'



For concreteness I take the focus particle *no* to be the relative clause complementizer and I assume that the relative clause is directly selected by a null determiner, as shown.

Given that Malagasy has wh-in-situ questions, the pseudocleft analysis is simply an extension of this strategy. The wh-phrase is in-situ as a predicate. Malagasy thus has no wh-

movement at all under the pseudocleft analysis. The *wh*-phase is always in-situ, either as an argument, an adjunct, or a predicate. Malagasy would thus be a pure *wh*-in-situ language, in keeping with the CTH.

Several related Austronesian languages are also claimed to employ a pseudocleft structure for questions, for example, Palauan (Georgopoulos, 1991), Malay (Cole et al., *in press*), Tsou (Chang, 2000), Tagalog (Richards, 1998; Aldridge, 2002), and Seediq (Aldridge, 2002) and in the next section I provide a wide range of arguments showing that the pseudocleft analysis is appropriate for Malagasy also.

4. Argumentation against the fronting analysis

This section provides theoretical and empirical argumentation in favor of the pseudocleft analysis and against the fronting analysis. Section 4.1 offers some additional observations from Cheng (1997) in support of Malagasy being a *wh*-in-situ language. Section 4.2 illustrates ways in which predicate-oriented particles treat the initial *wh*-phrase as a predicate and not a fronted argument/adjunct *wh*-operator. Section 4.3 points out parallels with a focus construction that Paul (2001a) analyzes as a pseudocleft. Lastly, section 4.4 argues that the pseudocleft analysis provides a superior treatment of discontinuous *wh*-phrases.

4.1. Preliminary cross-linguistic considerations

Cheng (1997) also makes a number of cross-linguistic claims about yes/no questions which are related to the CTH. Cheng (1997:16) indicates that there is a correlation between *wh*-in-situ and yes-no question particles:

- (23) a. In-situ languages have special markings in yes-no questions
- b. Languages with special markings in yes-no questions are in-situ languages

If Malagasy is a *wh*-in-situ language, we expect it to have special marking in yes-no questions, which it does. The yes-no question particle *ve* (Keenan, 1976; Paul, 2001b) is seen in (24).

- (24) nihomehy **ve** Rabe?
 laugh **Q** Rabe
 'Did Rabe laugh?'

The behavior of yes/no questions thus supports Cheng's claims and pushes us towards trying to analyze Malagasy as a fully *wh*-in-situ language compatible with the CTH. If the CTH is also correct, Malagasy cannot have *wh*-movement and so, by default, the pseudocleft analysis must be closer to being correct. In the next sections I present direct empirical evidence in favor of this conclusion.

4.2. Predicate properties of the *wh*-phrase

One distinction between the pseudocleft and fronting analyses concerns the characterization of the initial *wh*-phrase. Under the pseudocleft analysis, it is a predicate. Under the fronting analysis, the *wh*-phrase is not a predicate but a preposed operator (argument or adjunct). We can thus differentiate the two analyses by seeing whether a fronted *wh*-phrase has properties characteristic of a predicate or not. This section presents evidence in support of the predicate status of initial *wh*-phrases using predicate-related particles.

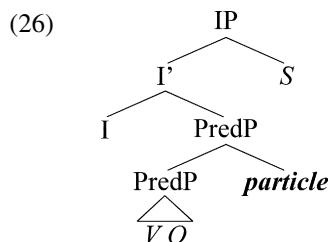
4.2.1. Post-predicate particles

Malagasy has a number of particles that immediately follow the predicate, including floating quantifiers like *daholo* ‘all’ and *avy* ‘each’ (Keenan, 1976, 1995), the exclamative particle *anie* (Keenan, 1976, 1995), and VP adverbs such as *foana* ‘always’ (Pearson, 1998; Rackowski, 1998).⁶ In VOS clauses, these elements appear after the predicate and not elsewhere, (25). I use VOS clauses as examples of predicate-initial clauses as there is abundant empirical evidence in Malagasy that the verb plus dependent(s) in such clauses constitute a predicate to the exclusion of the subject (Keenan, 1976, 1995).

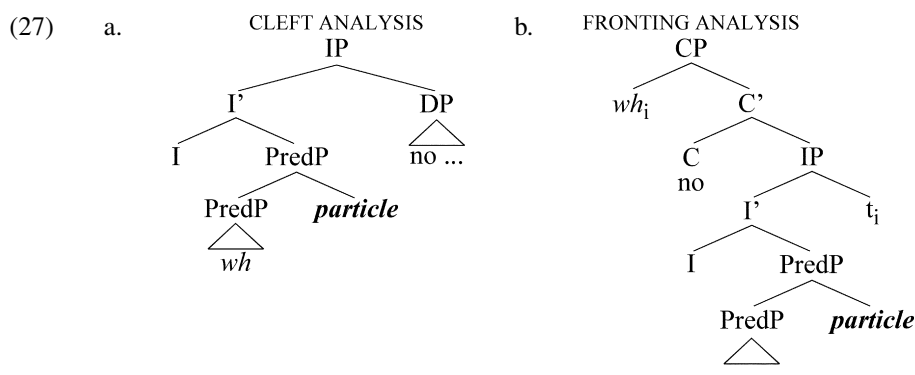
- (25) a. nihinana vary (**daholo**) ny vahiny (***daholo**)
eat.ACT rice **all** the guest **all**
‘All the guests ate rice.’
- b. manapaka bozaka (**anie**) Raso (***anie**)
cut.ACT grass **EXCL** Raso **EXCL**
‘Raso is really cutting the grass!’
- c. mihomehy (**foana**) Raso (***foana**)
laugh.ACT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

I assume that these particles are right adjoined to PredP as shown in (26). This correctly places them between the object and the subject in VOS clauses.

⁶ I use the term “particle” in a non-technical manner. I do not claim that they form a unified syntactic class but I believe that the preliminary analysis assigned to them below is sufficient for the stated purposes and captures their similarities. Regarding specific particles, the floating quantifiers are obligatorily subject-oriented and do not form a constituent with the DPs that they quantify over (Keenan, 1995:178–179). *Anie* may be a second-position clitic (Paul, 2001b). If this is correct, it would not provide evidence in favor of the pseudocleft analysis of *wh*-questions. For this reason, I use a variety of other particle types. Lastly, VP adverbs may appear inside, to the left of, some complements due to the availability of rightward object shift (Pearson, 1998). I ignore this possibility in what follows.



The two analyses under consideration make different predictions about where these particles will appear in *wh*-questions. As shown in (27a), the pseudocleft analysis places them immediately after the *wh*-phrase because it is the predicate. The fronting analysis, in contrast, does not and predicts that they cannot occur immediately after the *wh*-phrase but must occur near the end of the clause, (27b).



The prediction of the pseudocleft analysis is correct. Post-predicate particles can immediately follow the *wh*-phrase, (28). The fronting analysis does not permit these grammatical examples.

- (28) a. iza **daholo** no nihinana vary?
 who **all** PRT eat.ACT vary
 ‘Who all ate rice?’
- b. iza **anie** no manapaka bozaka?
 who **EXCL** PRT cut.ACT grass
 ‘Who is really cutting the grass?’
- c. zaza iza **foana** no mitomany?
 child which **always** PRT cry.ACT
 ‘Which child is always crying?’

Both analyses also predict a clause-final position for the particles. The fronting analysis does so given the above structure and the pseudocleft analysis does so by virtue of the fact that there is a second predicate within the subject headless relative which will permit a

PredP adjunct. Such examples are indeed generally possible, (29), except with the floating quantifier *daholo*, but they do not distinguish the two hypotheses.

- (29) a. *iza no mihinana vary **daholo**?
 who PRT eat.ACT vary **all**
 ('Who all ate rice?')
- b. iza no manapaka bozaka **anie**?
 who PRT cut.ACT grass **EXCL**
 'Who is really cutting the grass?'
- c. zaza iza no mitomany **foana**?⁷
 child which PRT cry.ACT **always**
 'Which child is always crying?'

I speculate that the floating quantifier *daholo* is ungrammatical in (29a) because the null relative operator in Malagasy does not license a floating quantifier, for reasons yet to be determined. We can see this restriction at work in the relative clause in (30a), which also cannot host the floating quantifier. The intended meaning can be expressed by placing the floating quantifier on the matrix predicate, (31a), or by using a nominal modifier, (31b).

- (30) a. *mainty ny omby (izay) mihinana bozaka **daholo**
 black the cow REL eat.ACT grass **all**
 ('The cows that are all eating grass are black.')
- b. [_{DP} ny omby [_{CP} Op_i izay [_{PredP} [_{PredP} mihinana bozaka] (*daholo)] t_i]]
- (31) a. mainty daholo ny omby (izay) mihinana bozaka
 black all the cow REL eat.ACT grass
- b. mainty ny omby rehetra (izay) mihinana bozaka
 black the cow all REL eat.ACT grass
 'All the cows eating grass are black.'

4.2.2. Pre-predicate particles

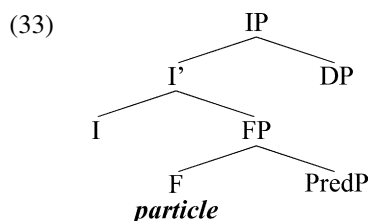
Malagasy also has a number of particles that immediately precede the predicate in VOS clauses. These pre-predicate particles are largely inflectional in nature and include *toa* 'seem', *tokony* 'should' (Paul, 2001a), *tena* 'indeed (affirmative emphasis)', and *ho* 'future/irrealis':

- (32) a. **tokony** hamangy an-dRabe Rasoa
 should visit.ACT ACC-Rabe Rasoa
 'Rasoa should visit Rabe.'

⁷ An anonymous reviewer points out that (28c) and (29c) should have different meanings due to the differing scope of the adverb *foana* 'always'. I have been unable to tease apart the two meanings in my language consultations.

- b. **tena** hovidin' ny zaza ny fiaramanidina
 EMPH buy.PASS the child the airplane
 'The child will indeed buy the airplane.'
- c. **ho** lasa dokotera Rabe
 FUT depart doctor Rabe
 'Rabe will be a doctor.'

Structurally, such particles might be heads located in I° or in one or more inflectional heads below I°:



The pseudocleft analysis of questions correctly predicts that these particles also immediately precede the wh-phrase in a wh-question because it too is a predicate:

- (34) a. **tokony** iza no hamangy an-dRabe?
 should who PRT visit.ACT ACC-Rabe
 'Who should visit Rabe?'
- b. **tena** inona no hovidin' ny zaza?
 EMPH what PRT buy.PASS the child
 'What will the child indeed buy?'
- c. %**ho** iza no vadinao?⁸
 FUT who PRT marry.PASS.2SG
 'Who (among them) will you marry?'

Under the fronting analysis, such data are unexpected because the wh-phrase is not a predicate. Instead, the fronting analysis predicts that the particles should necessarily appear farther to the right, before the verbal predicate. This position is possible, (35), but it is again allowed by both analyses because the verb constitutes the left edge of a second predicate under either approach.

⁸ The possibility of tense marking on wh-phrases varies with the wh-phrase but the phenomenon is compatible with the predicate status of wh-phrases. *Aiza* 'where' is normally marked for tense: *ho aiza* 'where (fut.)' and *taiza* 'where (past)'. Similarly, 'when' has two forms *oviana* 'when (non-future)' and *rahoviana* 'when (future)'. *Iza* 'who' is more unusual in this context but (34c) shows that tense marking is nonetheless possible in this context as well for some speakers.

- (35) a. iza no **tokony** hamangy an-dRabe?
 who PRT **should** visit.ACT ACC-Rabe
 ‘Who should visit Rabe?’
- b. inona no **tena** hovidin’ ny zaza?
 what PRT **EMPH** buy.PASS the child
 ‘What will the child indeed buy?’
- c. iza no **ho** vadinao?
 who PRT FUT marry.PASS.2SG
 ‘Who will you marry?’

One might defend the fronting analysis by saying that these particles are not pre-predicate particles but clause-initial particles located in some external head position above CP, as in the exploded CP structure of Rizzi (1997). If that were the correct description, the fronting analysis would account for the data in (34). Then however, the grammatical examples in (35) would remain unexplained. Regardless, other data indicates that clause-initial is not the correct description of the positioning of the particles. There is a topicalization construction in Malagasy in which a constituent is preposed, followed by the topic particle *dia* (Keenan, 1976):

- (36) a. Rasoa dia mamangy an-dRabe
 Rasoa TOPIC visit ACC-Rabe
 ‘Rasoa, she visits Rabe.’
- b. ny fiaramanidina dia hovidin’ ny zaza
 the airplane TOPIC buy.PASS the child
 ‘The airplane, the child will buy it.’

Both Flegg (2003) and Paul (2001a) suggest that the initial constituent in the *dia*-topicalization construction is not a predicate but a fronted element and, indeed, the pre-predicate particles cannot occur initially in this construction; they must precede the verbal predicate:

- (37) a. (***tokony**) Rasoa dia (**tokony**) hamangy an-dRabe
should Rasoa TOPIC **should** visit ACC-Rabe
 ‘Rasoa, she should visit 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’
- c. (***ho**) Rabe dia **h**-anoroka an-dRasoa
 FUT Rabe TOPIC FUT-kiss ACC-Rasoa
 ‘Rabe, he will kiss Rasoa.’

If the particles under consideration were in fact clause-initial particles, such data would be unexpected since here we see the particles associating exclusively with predicates, not clause-initial position.

A variant of this alternative analysis suggested by an anonymous reviewer is that the pre-predicate particles are higher predicates that take CP complements. This is schematized in (38a). The specific example in (32a) would receive the structural analysis in (38b).

- (38) a. [*particle* [_{CP} ...]]
 b. tokony [_{CP} hamangy an-dRabe Rasoa]
 should visit ACC-Rabe Rasoa
 ‘Rasoa should visit Rabe.’

This proposal would correctly allow pre-predicate particles to embed *wh*-questions, as in (34). The ungrammatical examples in (37) speak against this, however, since the *dia*-topicalization construction can otherwise also be embedded:

- (39) manantena aho fa ny fiaramanidina dia hovidin’ ny zaza
 hope 1SG.NOM that the airplane TOPI buy.PASS the child
 ‘I hope that the airplane, the child will buy.’

The particles also cannot embed a CP with an overt complementizer, contrary to basic expectations if their complement were a CP:

- (40) a. *tokony fa/hoe/raha/mba iza no hamangy an-dRabe?
 should that/COMP.WH/if/COMP.IRREALIS who PRT visit.ACT ACC-Rabe
 (‘Who should visit Rabe?’)
 b. *tena fa/hoe/raha/mba inona no hovidin’ ny zaza?
 EMPH that/COMP.WH/if/COMP.IRREALIS what PRT buy.PASS the child
 (‘What will the child indeed buy?’)

A final difficulty is that the pre-predicate particles do not behave like lexical predicates. They never inflect for tense, irrealis mood, or voice morphology and they cannot be immediately followed by post-predicate particles, (41a). Instead, the post-predicate particles treat the pre-predicate particle as part of the larger, verbal predicate, (41b). I thus reject this alternative as well.

- (41) a. *tokony **daholo/anie/foana** hamangy an-dRabe isika
 should all/EXCL/always visit.ACT ACC-Rabe 1PL.NOM
 b. tokony hamangy an-dRabe **daholo/anie/foana** isika
 should visit.ACT ACC-Rabe all/EXCL/always 1PL.NOM
 ‘We should all/really/always visit Rabe.’

In summary, the fronting analysis does not allow the grammatical placement of a wide variety of clause-internal particles, while the pseudocleft analysis does. The *wh*-phrase in a

wh-question behaves like a predicate with respect to the position of these particles, as claimed in the pseudocleft analysis.

4.3. *Parallels with the focus construction*

Malagasy has a focus construction illustrated in (42) that is formally similar to wh-questions. There is an initial constituent in focus, the particle *no*, and the remainder of the clause. Dahl (1986) first proposed that this focus construction is a kind of cleft and Paul (2001a, 2003a) develops this analysis, assigning (42a) the pseudocleft structure in (43). The focused element is the predicate of the clause and the subject is a headless relative.

- (42) 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.’
- (43) [[predicate Rasoa_i] [subject/headless rel. no Op_i nihomehy t_i]]
 Rasoa PRT laughed
 lit. ‘The one who laughed was Rasoa.’

There are a number of non-trivial parallels between the focus construction and wh-questions which suggest that they should receive the same structural analysis. First, both are formed by preposing a constituent and following it immediately with the invariant particle *no*. Second, the two constructions place a focus interpretation on 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 in (20), that only subjects and adjuncts can be extracted. In (44), an adjunct is focused regardless of the voice of the verb (compare to the wh-questions in (19)). In (45), we see the ungrammaticality that results from focusing a non-subject argument.

- (44) a. ao ambanin’ ny fandriana no nanafina ny lakile ny zaza
 LOC under the bed PRT hide.ACT the key the child
- b. ao ambanin’ ny fandriana no nafenin’ ny zaza ny lakile
 LOC under the bed PRT hide.PASS the child the key
- c. ao ambanin’ ny fandriana no nanafenan’ ny zaza ny lakile
 LOC under the bed PRT hide.CIRC the child the key
 ‘It’s under the bed that the child hid the key.’
- (45) 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.')

Fourth, neither construction allows a resumptive pronoun corresponding to the fronted element:

- (46) a. *iza no nihomehy izy?
 who PRT laugh.ACT 3SG.NOM
 ('Who laughed?')
- b. *Rasoana no nihomehy izy
 Rasoana PRT laugh.ACT 3SG.NOM
 ('It was Rasoana who laughed.')

Finally, the focus construction shows the same predicate behavior of the initial constituent with respect to particle placement documented for *wh*-questions in section 4.2, (Paul, 2001a). Post-predicate particles immediately follow the initial focused element, (47), and pre-predicate particles immediately precede the initial element, (48).

- (47) a. ireo lehilahy ireo **daholo** no milalao baolina
 DEM man DEM **all** PRT play ball
 'All these men are playing ball.'
- b. Rasoana **anie** no nanapaka bozaka
 Rasoana EXCL PRT cut grass
 'It was really Rasoana that cut the grass!'
- c. Rasoana **foana** no mihomehy
 Rasoana **always** PRT laugh
 'It's always Rasoana who laughs.'
- (48) a. **tokony** Rasoana no hamangy an-dRabe
should Rasoana PRT visit ACC-Rabe
 'It should be Rasoana who visits Rabe.'
- b. **tena** Rabe no nahandro vary
indeed Rabe PRT cook rice
 'It's indeed Rabe who cooked the rice.'⁹

Analyzing *wh*-questions as pseudoclefts immediately accounts for these parallels since the two constructions have the same syntax. The parallels are perhaps unexpected under the

⁹ The focus construction is not possible with an initial future marker *ho* and a DP predicate:

- (i) ***ho** Rabe no (ho)fidina
 FUT Rabe PRT elect.PASS
 (It will be Rabe who is elected')

I have no explanation for this fact but note that some *wh*-questions with initial *ho*, specifically those with *iza* 'who' as in (34c), are also dispreferred and judged ungrammatical by some speakers.

fronting analysis in which the two constructions have rather different derivations. If wh-questions are derived by fronting, then the parallels are possibly accidental and may require independent explanations in each case.¹⁰

4.4. Discontinuous wh-phrases

The final argument for the predicate status of initial wh-phrases comes from split or discontinuous wh-phrases.¹¹ Under some conditions, initial wh-phrases can be split, with the wh-portion at the left and the remainder, in this case a partitive PP, appearing at the end of the clause:

- (49) a. **iza tamin' ireo boky ireo** no novakin-dRabe?
 which PREP DEM **book** DEM PRT read.PASS-Rabe
 b. **iza** no novakin-dRabe **tamin' ireo boky ireo**?
 which PRT read.PASS-Rabe PREP DEM **book** DEM
 ‘Which of these books were read by Rabe?’

This phenomenon is not limited to wh-phrases. In (50) and (51), it occurs with numerals and the quantifier *maro* ‘many’ in the focus construction introduced in section 4.3.

- (50) a. **dimy tamin' ireo boky ireo** no novakin-dRabe
 five PREP DEM **book** DEM PRT read.PASS-Rabe
 b. **dimy** no novakin-dRabe **tamin' ireo boky ireo**
 five PRT read.PASS-Rabe PREP DEM **book** DEM
 ‘Five of these books Rabe read.’
 (51) a. **maro tamin' ireo boky ireo** no novakin-dRabe
 many PREP DEM **book** DEM PRT read.PASS-Rabe
 b. **maro** no novakin-dRabe **tamin' ireo boky ireo**
 many PRT read.PASS-Rabe PREP DEM **book** DEM
 ‘Many of these books Rabe read.’

Under the pseudocleft analysis of wh-questions, I analyze this alternation as rightward extraposition of the partitive PP from the predicate. (49b), (50b), and (51b) are derived from (49a), (50a), and (51a), respectively. The extraposed phrase, which I will call the (split) dependent, appears to the right of the subject.

The extraposition approach receives immediate support in that Malagasy shows wide use of extraposition from the predicate elsewhere. In active clauses, various adverbials

¹⁰ The parallels would also be accounted for if both the focus and wh-question constructions were analyzed using the fronting analysis; however, the other data presented here and in Paul (2001a) would then be problematic.

¹¹ Thanks to Joachim Sabel for pointing out the data to me, although he does not reach the same conclusion about them. See Butler and Mathieu (2004) and Fanselow and Damir (2002) for cross-linguistic discussion and analysis of discontinuous constituents.

(boldfaced below) can appear optionally in a right peripheral, extraposed position, (52). (52c) in particular shows that partitive PPs introduced by the preposition (*t*)*amina*, as used in (49), are indeed capable of being extraposed.

- (52) a. hanao izany (noho izaho) Raso (noho izaho)
do.ACT that because.of 1SG.NOM Raso **because.of 1SG.NOM**
'Raso will do that because of me.'
- b. namaky boky (androany) ny mpianatra (**androany**)
read.ACT book today the student **today**
'The student read a book today.'
- c. fahatelo (tamin' ireo mpianatra ireo) i Be (**tamin' ireo mpianatra ireo**)
third PREP DEM student DEM Be **PREP DEM student DEM**
'Be was third among these students.'

Preliminary investigation indicates that extraposition is possible only from the predicate. A dependent of the lexical predicate may appear clause-finally, as in the above examples, but the dependent of a subject or complement may not. The ungrammatical examples in (53) and (54) support this generalization, which I state in (55).

- (53) **extraposition from subject*
- a. novakin-dRabe **ny maro tamin' ireo boky ireo** omaly
read.PASS-Rabe **the many PREP DEM book DEM** yesterday
'Many of these books were read by Rabe yesterday.'
- b. *novakin-dRabe **ny maro** omaly **tamin' ireo boky ireo**
read.PASS-Rabe **the many** yesterday **PREP DEM book DEM**

- (54) **extraposition from object*
- a. namaky **dimy tamin' ireo boky ireo** Rabe
read.ACT **five PREP DEM book DEM** Rabe
'Rabe read five of these books.'
- b. *namaky **dimy** Rabe **tamin' ireo boky ireo**
read.ACT **five** Rabe **PREP DEM book DEM**

- (55) *Malagasy extraposition*
Extraposition of an XP to clause-final position is allowed only for immediate dependents of the lexical predicate

Under the pseudocleft analysis then, split wh-phrases instantiate extraposition from the predicate, an operation independently available in Malagasy.

Under the fronting analysis, the derivation of split wh-phrases is less clear. Joachim Sabel (personal communication) suggests that it involves subextraction from the subject. The example repeated in (56a) has the analysis in (56b) in which the wh-portion of the subject DP, *iza* 'which', undergoes leftward wh-movement to the clause-initial position, stranding the prepositional phrase in the subject position.

- (56) a. **iza** no novakin-dRabe **tamin' ireo boky ireo**?
which PRT read.PASS-Rabe PREP DEM book DEM
 'Which of these books were read by Rabe?'
 b. [_{CP} **iza**_i [_C no [_{IP} [_{VP} novakin-dRabe] [_{DP} **tamin' ireo boky ireo**]]]]
 which PRT read.PASS-Rabe PREP DEM book DEM

The fronting analysis of the split wh-phrase data encounters a number of problems, however, which the pseudocleft analysis does not face. First, it is unclear in the derivation in (56) whether what is moving is even a phrasal constituent. It would appear to be a determiner head moving to a specifier position. Second, unlike with extraposition, there is no independent evidence for the subextraction portion of the above derivation. In fact, data suggest that such subextraction is *not* available in Malagasy. To begin to see this, consider (57a). It shows that subextraction is not possible from object position. The illicit derivation would be as in (57c), in which the fronted wh-determiner subextracts from the object DP.

- (57) a. ***iza** no namaky **tamin' ireo boky ireo** Rabe?
 which PRT read.ACT PREP DEM book DEM Rabe
 b. ***iza** **tamin' ireo boky ireo** no namaky Rabe?
 which PREP DEM book DEM PRT read.ACT Rabe
 ('Which of these books did Rabe read?')
 c. *[_{CP} **iza**_i [_C no [_{IP} [_{VP} namaky [_{DP} **tamin' ireo boky ireo**]] Rabe]]]
 which PRT read.ACT PREP DEM book DEM Rabe

This is not surprising however given that the subject extraction restriction repeated below rules out extraction of an object, (57b).

- (58) *Malagasy extraction restriction*
 Only subjects and some adjuncts can be extracted

We might hypothesize that subextraction can only occur out of elements that can themselves be extracted. Subextraction from a subject would be allowed but subextraction from an object would not. In conjunction with (58), this predicts that subextraction from adjuncts should be possible. (59) shows, however, that subextraction from an adjunct is ungrammatical, (59a), even when extraction of the whole adjunct is allowed, (59b).

- (59) a. ***rahoviana** no hivory **amin' ireo andro ireo** isika?
 when PRT meet.FUT.ACT PREP DEM day DEM 1PL.NOM
 b. **rahoviana amin' ireo andro ireo** no hivory isika?
 when PREP DEM day DEM PRT meet.FUT.ACT 1PL.NOM
 'Which of these days will we meet?'

If subextraction exists in Malagasy, it is licensed only from subject position.

At the same time, there is evidence that even subject subextraction is not generally available. In the previous section I followed Flegg (2003) and Paul (2001a) in taking the *dia*-topicalization construction in (60a) to be derived by fronting of the subject. It therefore has a very similar derivation to wh-questions under the fronting analysis, both being derived by leftward A'-movement of the subject to a higher specifier position. The fronting analysis thus predicts that the *dia*-topicalization construction and wh-questions should have similar syntactic behavior. In particular, subextraction from the subject of a *dia*-topicalization example should also be possible. (60b) shows that it is not, with the putative derivation in (60c). Instead, the whole subject must be fronted, (60a).

- (60) a. **dimy tamin' ireo boky ireo** *dia* novakin-dRabe
 five PREP DEM **book** DEM TOPIC read.PASS-Rabe
- b. ***dimy** *dia* novakin-dRabe **tamin' ireo boky ireo**
 five TOPIC read.PASS-Rabe PREP DEM **book** DEM
 'Five of these books, Rabe read them.'
- c. *[_{CP} dimy_i [_C *dia* [_{IP} [_{VP} novakin-dRabe] [_{DP} t_i tamin' ireo boky ireo]]]]
 five TOPIC read.PASS-Rabe PREP DEM **book** DEM

(60) forms a minimal pair with the wh-questions from (49), repeated as (61). A split phrase is permitted with wh-questions but not the *dia*-topicalization construction. Under the fronting analysis, the contrast in the b examples is unexpected because the two constructions have fundamentally the same derivation. In particular, the ungrammaticality of (60b) is surprising if subextraction from a subject is possible in Malagasy.

- (61) a. **iza tamin' ireo boky ireo** no novakin-dRabe?
 which PREP DEM **book** DEM PRT read.PASS-Rabe
- b. **iza** no novakin-dRabe **tamin' ireo boky ireo**?
 which PRT read.PASS-Rabe PREP DEM **book** DEM
 'Which of these books were read by Rabe?'

The pseudocleft analysis predicts this contrast. The focus construction in (61) is a pseudocleft and (61b) is derived by extraposition from the predicate. The *dia*-topicalization example, (60b), by contrast, has no derivation because the initial element is not a predicate and so a split dependent is correctly expected to be illicit since extraposition is only possible from predicates, (55).

The third difficulty for the subextraction analysis of split wh-phrases comes from split adjuncts. In contrast to (59), adverbials, such as *aiza* 'where' and (*rah*)*oviana* 'when', do allow split dependents when the PP appears clause-finally:

- (62) a. **aiza amin' ireo fandriana ireo** no miafina ny saka?
 where PREP DEM **bed** DEM PRT hide.ACT the cat

- b. **aiza** no miafina ny saka **amin' ireo fandriana ireo?**
where PRT hide.ACT the cat **PREP DEM bed DEM**
 'Where among these beds is the cat hiding?'
- (63) a. **rahoviana amin' ireo andro ireo** no hivory isika?
when PREP DEM day DEM PRT meet.FUT.ACT 1PL.NOM
 'Which of these days will we meet?'
- b. **rahoviana** no hivory isika **amin' ireo andro ireo?**
when PRT meet.FUT.ACT 1PL.NOM **PREP DEM day DEM**
 'Which of these days will we meet?'

The split wh-phrase examples in (62b) and (63b) are straightforwardly accounted for by the pseudocleft analysis as extraposition from the adverbial wh-phrase predicate. The fronting analysis, on the other hand, cannot assign them a derivation. They cannot illustrate subextraction from a subject because the adjunct is not the subject. The verbs are in their active forms, indicating that the subjects are *ny saka* 'the cat' and *isika* 'we', respectively. In order for the adjuncts to correspond to subjects, the circumstantial verb form would have had to have been used. The derivations also cannot involve subextraction from within a predicate-internal adjunct followed by extraposition, because we already saw that the first subextraction step is impossible, (59a).¹²

In conclusion, the pseudocleft analysis provides a straightforward account of split wh-phrases. If wh-questions are pseudoclefts and the initial wh-phrase is a predicate, they instantiate extraposition from the predicate. Subextraction derivations are unnecessary and, I have tried to show, impossible. Combined with the predicate-related particle data, the facts provide clear evidence of the predicate status of initial wh-phrases.

5. Conclusion

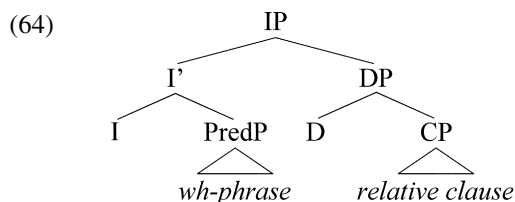
5.1. Summary

This paper has argued that wh-questions in Malagasy with an initial wh-phrase are not derived by operator movement of the wh-phrase to a left-peripheral position. They have a

¹² The remaining derivational option that I cannot entirely rule out is that the examples illustrate subextraction from an extraposed adjunct. This seems unlikely to me however as extraposed constituents are typically islands. Data in Flegg and Paul (2003) suggest that so-called subject-to-object raising in Malagasy, a complex construction evidencing characteristics of both A and A' movement, cannot take place out of extraposed clauses in Malagasy. Instead, the language resorts to a base-generated prolepsis (resumption) structure. Furthermore, even though Malagasy is a wh-in-situ language, the putative source for the subextraction from extraposed adjunct derivation is ungrammatical:

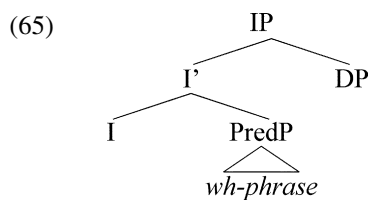
- (i) a. *miafina ny saka **aiza amin' ireo fandriana ireo**
 hide.ACT the cat **where PREP DEM bed DEM**
 ('Where among these beds is the cat hiding?')
- b. *hivory isika **rahoviana amin' ireo andro ireo**
 meet.FUT.ACT 1PL.NOM **when PREP DEM day DEM**
 ('Which of these days will we meet?')

pseudocleft structure in which the *wh*-phrase is a clause-initial predicate and the remaining material, a headless relative clause, is the subject:



The pseudocleft analysis of *wh*-questions was shown to be superior in a number of independent domains. It captures the predicate behavior of the initial *wh*-phrase and it unites the analysis of *wh*-questions and the focus construction. Potsdam (in press) shows that it also provides a superior analysis of certain multiple-*wh* questions documented and analyzed in Paul (2000) and Sabel (2003).¹³

Given the structure in (64), the subject of the *wh*-phrase predicate need not actually contain a relative clause. We expect that the subject can be any DP, complex or not. Most generally then, the structure of *wh*-questions is as in (65), where the clause-final subject is some independently acceptable Malagasy DP.



Since Malagasy is a predicate-initial language that allows non-verbal predicates and *wh*-in-situ, this structure cannot be ruled out, even in a grammar that adopted a fronting analysis for the structurally complex examples discussed above. This more general structure is instantiated by the non-verbal questions in (66). In these examples, the predicate is a *wh*-phrase and the subject is a clearly identifiable DP: a simple DP, pronoun, or name. The particle *no* cannot be inserted into these examples, supporting the conclusion that it is part of a headless relative clause.

- (66)
- a. iza ny prezida?
 who the president
 ‘Who is the president?’
 - b. an’ iza ity boky ity?
 to who DEM book DEM
 ‘Whose is this book?’

¹³ It is worth pointing out that the above argumentation does not rule out a dual analysis scenario in which *wh*-questions have *both* fronting and pseudocleft structures. We have only ruled out the possibility that *wh*-questions have only a fronting analysis. Given that a dual analysis scenario is not the optimal situation, I will not consider it.

- c. ho aiza ianao?
 FUT where 2SG.NOM
 ‘Where will you be?’
- d. aiza i Soa?
 where DET Soa
 ‘Where is Soa?’

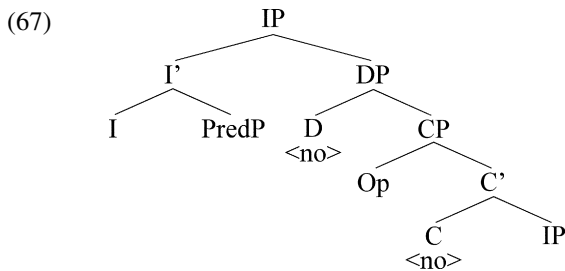
Strictly speaking, these sentences are not pseudoclefts, as the subject is not a headless relative. For simplicity however, I will continue to refer to the analysis represented by (65) as the pseudocleft analysis regardless of whether or not the subject DP is structurally complex. The characteristic that they share is that the predicate is a wh-phrase.

The picture we are led to is that Malagasy is a wh-in-situ language. Wh-phrases may appear in-situ in all positions: argument, adjunct, or predicate. There is never wh-movement in Malagasy, in keeping with Cheng’s (1997) Clausal Typing Hypothesis and the claim that there are no optional wh-movement languages. While other languages may challenge the CTH, Malagasy, I conclude, is not a counterexample.

5.2. Remaining issues

I take the pseudocleft analysis of wh-questions to be fundamentally correct. Nevertheless, a number of analytical details remain. Although there is not the space to solve them here, I would like to present them for future work before ending.

The first concerns the exact status of the particle *no*. Assuming that it is a head, it could be either a determiner or a relative clause complementizer in C° . Both options are shown in the schematic in (67).



I have assumed that it is a complementizer, following Potsdam (in press), but the evidence is not decisive and a more solid conclusion is desirable.

A related issue concerns the restricted distribution of *no*. Independent of its status as D° or C° , the structure in (67) predicts that a phrase introduced by *no*, [$_{DP}$ *no* ...], should have the distribution of a DP. In wh-questions at least, they alternate with unequivocal DPs. Each of the bracketed strings in (68b–d), which replaces the *no* DP in (68a) is a DP.

- (68) a. iza [no namaky ilay boky]?
 who PRT read DEM book
 lit. “The one who read that book is who?”
 ‘Who read that book?’
- b. iza [_{DP} ny mpianatra namaky ilay boky]?
 who the student read DEM book
 lit. “The student who read that book is who?”
 ‘Which student read that book?’
- c. iza [_{DP} ilay mpianatra]?
 who DEM student
 ‘Who is that student?’
- d. iza [_{DP} ianao]?
 who 2SG.NOM
 ‘Who are you?’

This expectation is not realized. Such *no* DPs only appear in the subject position of wh-questions and the focus construction. They cannot occur as predicates, in direct object position, as an object of a preposition, or as a fronted topic:

- (69) a. *[no mihomehy] Rabe PREDICATE
 PRT laugh Rabe
 (‘Rabe is the one who is laughing.’)
- b. *mahalala [no mihomehy] aho DIRECT OBJECT
 know PRT laugh 1SG.NOM
 (‘I know the one who is laughing.’)
- c. *nipetraka tao ankaikin’ [no nihomehy] aho OBJECT OF P°
 sit LOC beside PRT laugh 1SG.NOM
 (‘I sat beside the one who was laughing.’)
- d. *[no nihomehy] dia iza? FRONTED TOPIC
 PRT laugh TOPIC who
 (‘As for the one who laughed, who is he?’)

This is somewhat surprising if *no* DPs are simply headless relatives. Malagasy has headless relatives introduced by the relativizer *izay* which do have the distribution of DPs (Potsdam, *in press*). If the pseudocleft analysis is correct, the distribution of *no* is sharply restricted and will ultimately need to be accounted for.

Finally, any full treatment of wh-questions must account for the extraction restriction repeated below.

- (70) *Malagasy extraction restriction*
 Only subjects and some adjuncts can be extracted

While an analysis is beyond the scope of this paper (see MacLaughlin, 1995; Paul, 2002; Pearson, 2005; and Sabel, 2002 for possible analyses), a couple of observations are in order. Under the pseudocleft analysis, (70) must reflect a restriction on null operator movement in the headless relative clause since the *wh*-phrase itself is not moving anywhere. The null operator in *no* headless relatives, Op_{no} , must originate in a subject or adjunct position. This is a reasonable starting point but it raises an immediate problem with respect to the larger Malagasy grammar. Ordinary relativization in headed relative clauses is more restricted in that it can only target subjects. (71) shows relativization on the subject. (72) illustrates that it is ungrammatical to relativize on the object, in keeping with (70).

- (71) a. ny lehilahy izay nivity ny akoho
 the man REL buy.ACT the chicken
 ‘the man who bought the chicken’
- b. ny akoho izay novidin’ i Bao
 the chicken REL buy.PASS Bao
 ‘the chicken that was bought by Bao’
- (72) a. *ny akoho izay nivity i Bao
 the chicken REL buy.ACT Bao
 (‘the chicken that Bao bought’)
- b. *ny lehilahy izay novidina ny akoho
 the man REL buy.PASS the chicken
 (‘the man who the chicken was bought by’)

In contradiction of (70) however, adjuncts cannot be directly relativized. They must first advance to subject position via circumstantial voice morphology. The relative clauses below are grammatical with circumstantial voice morphology in the a cases but not active voice morphology, the b cases.

- (73) a. ny toerana izay nianjeran-dRabe
 the place REL fall.CIRC-Rabe
 ‘the place where Rabe fell’
- b. *ny toerana izay nianjera Rabe
 the place REL fall.ACT Rabe
- (74) a. ny andro izay nanapahan-dRasoaz bozaka
 the day REL cut.CIRC-Rasoaz grass
 ‘the day Rasoaz cut the grass’
- b. *ny andro izay nanapaka bozaka Rasoaz
 the day REL cut.ACT grass Rasoaz

- (75) a. ny antony izay nandehanan-dRabe
 the reason REL go.CIRC-Rabe
 ‘the reason Rabe left’
- b. *ny antony izay nandeha Rabe
 the reason REL go.ACT Rabe

In brief, the ordinary relativization operator, Op_{rel} , apparently must correspond to a subject only. The difference between the two relative operators will need to be accounted for in future work and Pearson 2001 provides one avenue of explanation.

Despite these challenges, the pseudocleft analysis seems empirically superior.¹⁴ If it is correct, it also allows us to eliminate Malagasy as a counterexample to Cheng’s Clausal Typing Hypothesis.

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References

- Aldridge, E., 2002. Nominalization and wh-movement in Seediq and Tagalog. *Language and Linguistics* 3, 393–427.
- Aldridge, E., 2004. Ergativity and Word Order in Austronesian Languages. Ph.D. dissertation, Cornell University.
- Bowers, J., 1993. The syntax of predication. *Linguistic Inquiry* 24, 591–656.
- Butler, A., Mathieu, E., 2004. *The Syntax and Semantics of Split Constructions*. Palgrave Macmillan, New York.
- Chang, M.Y., 2000. On Tsou wh-questions: movement or in situ? *Language and Linguistics* 1, 1–18.
- Cheng, L.L., 1997. *On the Typology of Wh-Questions*. Garland, New York.
- Chomsky, N., 1991. Some notes on economy of derivation and representation. In: Freidin, R. (Ed.), *Principles and Parameters in Comparative Grammar*. MIT Press, Cambridge, MA, pp. 417–454.
- Chomsky, N., 1995. *The Minimalist Program*. MIT Press, Cambridge, MA.
- Chung, S., 2005. What fronts? On the VP raising account of verb-initial order. In: Carnie, A., Collberg, S.D., Harley, H. (Eds.), *Verb First: Papers on the Syntax of Verb Initial Languages*. John Benjamins, Amsterdam, pp. 9–29.
- Cole, P., Hermon, G., Aman, N., in press. Clefted questions in Malay. In: Gil, D., Collins, J. (Eds.), *Malay/Indonesian Linguistics*. Curzon Press, London.

¹⁴ Law (2005) offers a cleft analysis, rather than a pseudocleft analysis, of Malagasy wh-questions. The differences between these two analyses are much harder to tease apart. Potsdam (2005) offers some evidence against the cleft analysis.

- Dahl, O.C., 1986. Focus in Malagasy and Proto-Austronesian. In: Geraghty, P., Carrington, L., Wurm, S.A. (Eds.), *FOCAL 1. Pacific Linguistics, Series C, No. 93*. Canberra, Australian National University, pp. 21–45.
- Fanselow, G., Damir, C., 2002. Distributed deletion. In: Alexiadou, A. (Ed.), *Theoretical Approaches to Universals*. John Benjamins, Amsterdam, pp. 65–107.
- Flegg, J.H., 2003. Topics and clitic left dislocation in Malagasy. Paper presented at the Tenth Austronesian Formal Linguistics Association, University of Hawaii.
- Flegg, J. H., Paul, I., 2003. On the differences between raising and control. In: Riehl, A., Savella, T. (Eds.), *Cornell Working Papers in Linguistics 19: The Proceedings of the Ninth Austronesian Formal Linguistics Association*. CLC Publications, Ithaca, NY, pp. 50–63.
- Georgopoulos, C., 1991. *Syntactic Variables: Resumptive Pronouns and A' Binding in Palauan*. Kluwer, Dordrecht.
- Guilfoyle, E., Hung, H., Travis, L., 1992. Spec of IP and Spec of VP: two subjects in Austronesian languages. *Natural Language and Linguistic Theory* 10, 375–414.
- Keenan, E.L., 1976. Remarkable subjects in Malagasy. In: Li, C.N. (Ed.), *Subject and Topic*. Academic Press, New York, pp. 247–301.
- Keenan, E.L., 1995. Predicate-argument structure in Malagasy. In: Burgess, C.S., Dziwirek, K., Gerds, D. (Eds.), *Grammatical Relations: Theoretical Approaches to Empirical Questions*. CSLI, Stanford, CA, pp. 171–216.
- Keenan, E.L., Comrie, B., 1977. NP accessibility and universal grammar. *Linguistic Inquiry* 8, 63–100.
- Law, P., 2005. Questions and clefts in Malagasy. Paper presented at the Twelfth Austronesian Formal Linguistics Association, University of California, Los Angeles.
- Law, P., Gärtner, H.-M., 2005. Restrictions on in-situ wh-phrases in Malagasy, Tagalog, and Tsou. Paper presented at the Twelfth Austronesian Formal Linguistics Association, University of California, Los Angeles.
- MacLaughlin, D., 1995. Wh-movement in Malagasy: an extraction asymmetry. In: Akinlabi, A. (Ed.), *Theoretical Approaches to African Linguistics*. Africa World Press, Trenton, NJ, pp. 117–128.
- Massam, D., 2000. VSO and VOS: Aspects of Niuean word order. In: Carnie, A., Guilfoyle, E. (Eds.), *The Syntax of Verb Initial Languages*. Oxford University Press, Oxford, pp. 97–116.
- Massam, D., Smallwood, C., 1997. Essential features of predication in English and Niuean. In: SKusumoto, K. (Ed.), *Proceedings of the 27th North East Linguistic Society, University of Massachusetts GLSA, Amherst, MA*, pp. 263–272.
- Paul, I., 2000a. *Malagasy Clause Structure*. Ph.D. dissertation, McGill University.
- Paul, I., 2000b. Malagasy existentials: a syntactic account of specificity. In: Paul, I., Phillips, V., Travis, L. (Eds.), *Formal Issues in Austronesian Linguistics*. Kluwer, Dordrecht, pp. 65–83.
- Paul, I., 2001a. Concealed pseudo-clefts. *Lingua* 111, 707–727.
- Paul, I., 2001b. *Ve* as a second-position clitic. *Oceanic Linguistics* 40, 135–142.
- Paul, I., 2002. On extraction asymmetries. In: Rackowski, A., Richards, N. (Eds.), *MIT Working Papers in Linguistics 44: The Proceedings of the Eighth Austronesian Formal Linguistics Association*. MITWPL, Cambridge, MA, pp. 211–224.
- Paul, I., 2003a. Multiple topics: evidence from Malagasy. In: Riehl, A., Savella, T. (Eds.), *Cornell Working Papers in Linguistics 19: The Proceedings of the Ninth Austronesian Formal Linguistics Association*. CLC Publications, Ithaca, NY, pp. 137–148.
- Paul, I., 2003b. On the lack of wh-movement in Malagasy. Paper presented at the Tenth Meeting of the Austronesian Formal Linguistics Society, University of Hawaii.
- Pearson, M., 1996. Domain phrases and topic arguments in Malagasy existentials. In: Pearson, M., Paul, I. (Eds.), *UCLA Occasional Papers in Linguistics 17: The Structure of Malagasy*. UCLA Department of Linguistics, Los Angeles, pp. 113–141.
- Pearson, M., 1998. Rightward object shift and the syntax of adverbs. In: Paul, I. (Ed.), *UCLA Occasional Papers in Linguistics 20: The Structure of Malagasy II*. UCLA Department of Linguistics, Los Angeles, pp. 34–49.
- Pearson, M., 2001. *The Clause Structure of Malagasy: A Minimalist Approach*. Ph.D. dissertation, UCLA.
- Pearson, M., 2005. The Malagasy subject/topic as an A' element. *Natural Language and Linguistic Theory* 23, 381–457.
- Pensalfini, R., 1995. Malagasy phrase structure and the LCA. In: Pensalfini, R., Ura, H. (Eds.), *MIT Working Papers in Linguistics 27: Papers on Minimalist Syntax*. MITWPL, Cambridge, MA, pp. 209–222.

- Pesetsky, D., 1987. Wh-in-situ. Movement and unselective binding. In: Reuland, E., ter Meulen, A. (Eds.), *The Representation of (In)definiteness*. MIT Press, Cambridge, MA, pp. 98–129.
- Potsdam, E., 2003. Evidence for semantic identity under ellipsis from Malagasy sluicing. In: Kadowaki, M., Kawahara, S. (Eds.), *NELS 33: Proceedings of the North East Linguistic Society*, GLSA Publications, Amherst, MA, pp. 285–302.
- Potsdam, E., in press. The cleft structure of Malagasy wh-questions. In: Gaertner, H.-M., Law, P., Sabel, J. (Eds.), *Clause Structure and Adjuncts in Austronesian Languages*. Mouton de Gruyter, Berlin.
- Potsdam, E., 2005. Malagasy sluicing and its consequences for the identity requirement on ellipsis. Manuscript, University of Florida.
- Rabenilaina, R.-B., 1998. Voice and diathesis in Malagasy: an overview. In: Paul, I. (Ed.), *UCLA Occasional Papers in Linguistics 20: The Structure of Malagasy II*. UCLA. Department of Linguistics, Los Angeles, pp. 2–10.
- Rackowski, A., 1998. Malagasy adverbs. In: Paul, I. (Ed.), *UCLA Occasional Papers in Linguistics 20: The Structure of Malagasy II*. UCLA Department of Linguistics, Los Angeles, pp. 11–33.
- Rackowski, A., Travis, L., 2000. V-initial languages: X or XP movement and adverbial placement. In: Carnie, A., Guilfoyle, E. (Eds.), *The Syntax of Verb Initial Languages*. Oxford University Press, Oxford, pp. 117–141.
- Richards, N., 1998. Syntax versus semantics in Tagalog wh-extraction. In: Pearson, M. (Ed.), *UCLA Occasional Papers in Linguistics 21*. UCLA Department of Linguistics, Los Angeles, pp. 259–275.
- Rizzi, L., 1997. The fine structure of the left periphery. In: Haegeman, L. (Ed.), *Elements of Grammar*. Kluwer, Amsterdam, pp. 281–337.
- Sabel, J., 2002. Wh-questions and extraction asymmetries in Malagasy. In: Rackowski, A., Richards, N. (Eds.), *MIT Working Papers in Linguistics 44: The Proceedings of the Eighth Austronesian Formal Linguistics Association*. MITWPL, Cambridge, MA, pp. 309–323.
- Sabel, J., 2003. Malagasy as an optional multiple wh-fronting language. In: Boeckx, C., Grohmann, K. (Eds.), *Multiple Wh-Fronting*. John Benjamins, Amsterdam, pp. 229–254.
- Travis, L., 2005. VP-, D°-movement languages: Malagasy in Wonderland. In: Gaertner, H.-M., Law, P., Sabel, J. (Eds.), *Clause Structure and Adjuncts in Austronesian Languages*. Mouton de Gruyter, Berlin.
- Yoshida, T., 2000. Question particles and wh-elements. *ICU Language Research Bulletin* 15, 133–145.