# ROOT INFINITIVES IN MALAGASY<sup>\*</sup>

### DIMITRIOS NTELITHEOS UCLA dntelith@ucla.edu

In this paper I present results of a longitudinal study of the acquisition of pronouns in Malagasy. I provide evidence for a Root Infinitive (RI) stage in Malagasy (Austronesian), a language typologically distinct from other RI languages. The claim is supported by the fact that Malagasy children use optionally the default 1st person pronominal form *izaho* as a trigger, in contrast to adult use of the marked form *aho*. This use of *izaho* co-occurs with verbal forms that lack prefixal tense and voice, while *aho* occurs mainly with fully inflected verbs. This fact is in line with approaches that associate the use of default pronouns to the underspecification of some functional projection in the verbal domain and provides *prima facia* evidence that Malagasy has an RI stage. This is further corroborated by the distribution of null arguments in the language.

#### 1. INTRODUCTION

One of the established beliefs within the generative enterprise is that grammars do not vary in unpredictable ways. In a similar way, it has been assumed that child grammars, like adult grammars, comply with the restrictions imposed by the principles and parameters of Universal Grammar (UG). The comparative study of adult languages has uncovered deep commonalities between diverse languages from different language families and similarly the detailed comparison of different child languages has revealed striking uniformity in development with respect to core principles of grammar. Hyams et al (2004) term this the 'universalist approach to grammatical development. For example, cross-linguistically children seem to exhibit a delay in the acquisition of certain kinds of A-movement (Borer and Wexler, 1987). Similarly, various studies show that the principle blocking local coreference of pronouns is delayed in development (Chien and Wexler 1990). Thus, the available cross-linguistic evidence shows uniform development with respect to the timing of core (morpho)syntactic parameters, a phenomenon Hyams et al (2004) refer to as 'uniform principle/parameter instantiation'. There are cases, however, in which differences in the target language influence the trajectory of development.

<sup>&</sup>lt;sup>\*</sup> The work reported here was done in collaboration with Cecile Manorohanta (Université Nord, Antsiranana Madagascar). I would like to thank her for collecting, transcribing and assisting in coding the data presented here. Many thanks to Nina Hyams, Hilda Koopman and Ed Keenan for valuable comments. Thanks also to the participants of the Psychobabble seminar at UCLA and GALANA, where earlier versions of this paper were presented, for questions, comments and feedback. All errors are my own.

One such case is the root infinitive (RI) phenomenon. Children acquiring certain languages show an early stage (around age 2-3) in which root verbs appear in infinitival form. In the various child languages that exhibit an RI stage, the phenomenon is quite robust and relates to a number of other salient properties of early language, which seems to suggest that RIs are not the result of production limitations or other performance factors, but are a genuine grammatical effect. However, the RI phenomenon is anything but universal. In a number of child languages, including Romance null subject languages, Italian, Spanish, Portuguese, Catalan, as well as Hungarian and Slovenian, (cf. Sano and Hyams 1994; Rhee and Wexler 1995), there is no observed RI stage. The studies mentioned above have shown that this variation with respect to the presence or absence of an RI stage in a language is closely related to morphosyntactic properties of the target language. Languages with syntactically rich agreement seem to resist the RI stage. This seems to indicate that even when variation in language development is attested, the patterns of variation can be predicted.

In this paper I report results of a longitudinal study of the acquisition of Malagasy, an Austronesian language spoken in Madagascar. I discuss issues associated with the acquisition of Malagasy pronominal forms including the acquisition of case morphology and its relation to the grammatical role that pronouns serve in the language. Furthermore, I discuss differences in the use of default pronominal forms in child and adult language and attempt to pinpoint the environments that license these differences. In particular, I show that children overuse the strong 1st person singular form *izaho*, conforming to the crosslinguistic tendency of children to use default pronominal forms in early stages. This default form appears with bare verbal forms providing support to proposals that associate default case overgeneralization to the underspecification of verbal functional projections (RIs). The claim that child Malagasy has a Root Infinitive (RI) stage is further supported by the fact that children drop the sentence-prominent argument (trigger) more often with bare verb forms than with fully inflected ones, conforming to the pattern observed in other better-studied RI languages (see Hyams et al 2004 and references therein). The fact that Malagasy behaves like a verb-second language with respect to the presence of an RI stage, is related to the syntactic structure of Malagasy which has also been claimed to be verb-second-like (Pearson 2001). Thus, the Malagasy data provides further support for the 'universalist' approach to grammatical development.

The paper is organized as follows: In section 2 I provide a brief overview of Malagasy voice morphology and the pronominal system, with special attention to the distribution of default pronominal forms. In Section 3 I present the predictions and relevant data. I show that the nominative/default forms of pronouns are acquired earlier and appear more frequently than the genitive/bound forms, in contrast to the corresponding relative frequencies attested in adult language. Furthermore, when children make mistakes in the production of 1st person singular pronouns, these mistakes consist of substitutions of the default strong form *izaho* in place of both the weak form *aho* and the genitive form *-ko* and not the other way around. Finally, I show that these substitutions co-occur with bare verbal forms, supporting the claim that the latter are the equivalent of RIs in child Malagasy. Section 4 provides an additional argument for an RI stage from the domain of subject drop. Specifically, I show that null subjects occur most frequently

with bare verbs while overt subjects occur most often with inflected verbs. This pattern conforms to the pattern of subject omission in other well studied RI languages. Finally, Section 5 presents some concluding remarks.

### 2. OVERVIEW OF MALAGASY CLAUSE STRUCTURE AND PRONOMINAL SYSTEM

## 2.1. Voice

Malagasy is spoken by approximately 16 million people on the island of Madagascar, off the coast of East Africa. It is genetically a member of the Western Malayo-Polynesian branch of the Austronesian family. It is related closely to the languages of the Southeast Barito subgroup of southern Borneo and its closest relative is Ma'anyan of south Borneo (Kalimantan, Indonesia). It is also closely related to the Philippine languages such as Tagalog in that it is a verb-initial language (VOS) and has an elaborate voicing system. The voicing system has a distinctive morphology and it involves the promotion of an argument (actor, theme, instrument, etc.) to a referentially and syntactically prominent position, typically clause final position. Following traditional, theory-neutral terminology we refer to this prominent DP as the 'trigger'. The voice morphology on the verb identifies the grammatical function of the trigger, whether actor, theme, instrument, location, etc. Consider the following examples<sup>1</sup>:

- (1) a. n.i.vídy boky hoan'ny mpianatra <u>ny mpampianatra</u>. PST.AT.buy books for. DET student DET teacher 'The teacher bought books for the student.'
  - b. no.vid.in' ny mpampianatra hoan'ny mpianatra <u>ny boky</u>. PST.buy.TT.LNK DET teacher for' DET student DET books 'The books were bought by the teacher for the student.'
  - c. n.i.vidi.ana.n' ny mpampianatra boky <u>ny mpianatra</u>. PST.PFX.buy.CT.LNK' DET teacher books DET student 'The student was bought books for by the teacher.'

In (1a) the agent argument of the verb is promoted as the external argument (underlined in the example) and the verb shows Actor Trigger (AT) morphology (boldface on the verb). In (1b) the theme argument occupies the rightmost prominent position and the verb exhibits Theme-Trigger (TT) morphology. Finally, in (1c) the Benefactor is promoted and the verb has Circumstantial Trigger (CT) morphology. For a detailed account of the properties of these voices (or focus structures, as they are known in traditional literature) see Keenan & Polinsky (1998); Pearson (2001); Paul (2000).

<sup>&</sup>lt;sup>1</sup> The following conventions in abbreviating labels in the examples will be used: DET, determiner; DEM, demonstrative; 1, 2, 3, person; SG, singular; PL, plural; AT, agent topic focus or actor trigger; TT, theme topic focus or theme trigger; CT, circumstantial topic focus or oblique trigger; ROOT, verbal forms with no overt voice/tense morphology; NOM, nominative; GEN, genitive; ACC, accusative; LOC, oblique/prepositional case usually manifested as prefix an-; PRS, present; PST, past; FUT, future; FOC, focus particle; TOP, topic particle dia.

#### 2.2. The Pronominal System

Malagasy has a very impoverished system of inflection in the nominal paradigm. However, the pronominal system of the language exhibits morphological alterations that depend on the grammatical function that pronouns serve. There are three major classes of pronouns corresponding to external or topic noun phrases (c.f. 2.a), internal objects (c.f. 2.b), and internal agent phrases (c.f. 2.c), possessors (2.d) or objects of prepositions (2.e), traditionally termed Nominative, Accusative, and Genitive respectively (c.f. Keenan & Polinsky, 1998; Paul, 1996).

- (2) a. Nahita ny ankizy izy PST.AT.see DET children 3.NOM 'He/She saw the children'
  - b. Nahita azy ny ankizy PST.AT.see 3.NOM DET children 'The children saw him/her'
  - c. Hita-ko ny ankizy see.TT.ROOT-1SG.GEN DET children 'The children, I saw (them)'
  - d. ny sotro -ko DET spoon -1SG.GEN 'my spoon'
  - e. ami -ko with -1SG.GEN 'with me'

Table 1 lists the three types of the Malagasy Pronominal Paradigm:

Person	Nominative	Accusativ	Genitive
		e	
SG.			
1	aho, izaho	ahy	-ko / -o
2	ianao	anao	-nao / -ao
3	izy	azy	-ny / -y
PL.			
1 (inclusive)	isika	antsika	-ntsika / -tsika
1 (exclusive)	izahay	anay	-nay / -ay
2	ianareo	anareo	-nareo / -areo
3	izy (ireo)	azy (ireo)	-ny / izy ireo

T-1.1.	1.	N.C. 1		D		D	
I able	1:	Ma	lagasy	Prone	ominai	Paradign	n

2.3. Distribution of Default Pronouns

Paul (1996), Zribi-Hertz & Mbolatianavalona (1999), and Pearson (2001) show that the nominative/free forms of Malagasy pronouns substitute for the genitive/bound forms in a number of environments, including pronominal augmentation used for pronoun-modification (3b) and co-ordination (4.b):

- (3) a. Hita -ny ... see.TT.ROOT -3SG.GEN 'He/she saw...'
  - b. Hita -n' izy roa .... see.TT.ROOT -LNK 3NOM two 'The two (of them) saw ...'
- (4) a. Hita **-ny** t -any an -tokotany i Koto see.TT.ROOT -3SG.GEN PST-there LOC-garden DET Koto 'She/He saw Koto in the garden'
  - b. Hita.n' [izy sy ny zaza] t -any an -tokotany i Koto see.LNK 3NOM and DET child PST-there LOC -garden DET Koto 'She/He and the children saw Koto in the garden'

Free forms also appear in non-case-licensing positions in structures that involve focalization (5), and *dia*-topicalization (6):

- (5) **Izahay** no n.a.nasa ny vilia 1.PL.EXCL.NOM FOC PST.AT.wash DET dishes 'It was us, who washed the dishes'
- (6) Izy dia n.a.hita ny alika.
  3.NOM TOP PST-AT.see DET dog
  'As for him/her/them, (he/she/they) saw the dog.'

For the purposes of the present study we will assume a theory of default case as implemented in Schütze (2001:206), where it is assumed that default case forms are the forms that are used to spell out nominal expressions that are not associated with any syntactically determined case feature. Pronominal modification and co-ordination involve a blocking of case spreading from the head to the other elements in the constituent, resulting in the modified or coordinated pronouns emerging with default case (c.f. Schütze 2001:226). Focalization and topicalization simply involved clause-external non-case-licensing positions. While the assumption that nominative forms of pronouns are default forms works satisfactorily for all other pronouns, it breaks down for 1st person singular pronouns. 1st person singular in Malagasy allows for three different non-accusative forms to surface: the nominative strong form *izaho* and weak form *aho* and the genitive (bound) form -ko. In the cases in which the 1st singular is the trigger, it appears as the weak form *aho* (7a). However, in non-case-licensing positions, as in focalization (7.b) or *dia*-topicalization (7.c), the strong form *izaho* appears:

- (7) a. N.a.hita ny alika **aho** PST.AT.see DET dog 1SG.NOM 'I saw the dog'
  - b. **Izaho** no nahita ny alika 1SG.STR.NOM FOC PST.AT.see DET dog 'It was me who saw the dog.'
  - c. **Izaho** dia nahita ny alika 1SG.STR.NOM TOP PST.AT.see DET dog 'As for me, (I) saw the dog.'

### 3. THEORETICAL IMPLICATIONS, PREDICTIONS AND DATA

### 3.1. Theoretical Implications

Acquisition data from mainly European languages has shown that children tend to use defaultcase forms of pronouns quite early and in positions in which adults use other forms. For example, children acquiring English as a first language use accusative pronouns even in subject positions of clauses where adults use nominative forms (examples from Radford, 1990:175-176):

- (8) a. Me got bean.
  - b. Me talk. Me look.
  - c. Her go back in.

Similarly in French, children acquire the free forms of pronouns earlier than the clitic forms (Clarke, 1985:699). In fact children seem to use the free forms even in places where adults would use the clitic forms obligatorily, i.e. again as subjects of clauses. Importantly, French children use non-finite verb forms in these contexts in contrast to the finite forms used by adults, (examples from De Cat, 2002):

(9) a. Je vais mettre ça comme Pol. (Adult) I will put that like Pol 'I will put it like Pol.' b. Moi mettre ça comme Pol. (Max, 2;3) me put that like Pol 'It was me who saw the dog.'

Similar patterns have been found in other languages (see for example Babyonyshev 1993 for Russian; Schütze 1995 for German; Powers 1995 for Dutch; Jonas 2002 for Faroese). As is obvious from the English and French examples, children tend to use these default forms with non-finite verbs that appear in root clauses, traditionally termed 'root infinitives' (Rizzi, 1994; Wexler, 1994; Hyams, 1996; Schütze, 1997; Hoekstra and Hyams, 1998, among others).

#### 3.2. Predictions

Based on the patterns attested in the Indo-European languages mentioned in section 3.1, and the distribution of default forms in Malagasy illustrated in section 2.3, we predict the following:

- 1. Nominative forms of pronouns in Malagasy should be acquired before genitive forms. In particular, the strong form izaho should be acquired before the weak form aho and the bound form -ko.
- 2. Child Malagasy is expected to have a greater number of izaho than aho and -ko forms in comparison to the language of adults, and in general, nominative forms are expected to appear more frequently than genitive forms as compared to adult language.
- 3. If children make mistakes in the production of 1st person singular pronouns, these mistakes should consist of substitutions of the strong form izaho in the place of both the weak form aho and the genitive form –ko and not the other way around.
- 4. If these substitutions take place in an environment that also includes reduced/bare verbal forms, then these forms can be argued to be the Malagasy equivalent of RIs.

### 3.3. The Data

#### 3.3.1 Subjects and Data Collection

The subjects of this study are 3 Malagasy-speaking children, Tsiorisoa, Sonnia, and Ninie. The children are from families that speak the Merina dialect spoken in and around the capital city, Antananarivo. Merina is also the basis for the standard written Malagasy and has been the focus of much of the linguistic research on Malagasy. The children are from middle class families and some of their parents are affiliated with the university. All of the children were taped 3-5 times monthly; Tsorisioa and Sonnia were taped over a 9-month period (from April to December 2000) and Ninie, over a 6-month period (from April to September 2000)<sup>2</sup>. Table 2 shows the number of

 $<sup>^{2}</sup>$  Some of the sessions were rather short and thus we collapsed all recordings within a single month into a single file according to age. For example, Tsiorisoa was taped 4 times in April 2000. These 4 files are included in Tsiorisoa 2;0.

files in the data, number of utterances, and children's ages and corresponding MLUs for the first and last file for each child.

]	TSIORISOA			Sonnia			Ninie	
Age	MLU	Utter	Age	MLU	Utter	Age	MLU	Utter
2;0	1.68	24	1;6	2.84	61	1;10	3.09	88
2;1		200	1;7		122	1;11		156
2;2		31	1;8		27	2;0		42
2;3		35	1;9		50	2;1		14
2;4		41	1;10		81	2;3		33
2;5		58	1;11		90	2;4		33
2;7		85	2;0		31	2;5		68
2;8	4.5	38	2;1		29	2;6	4.09	74
			2;2	3.46	107			
Total		512			598			508

Table 2. Age, MLU and number of utterances

The children used 257 tokens of different types of pronominal forms. From these, 192 tokens (75%) are different 1st person singular forms. Because of the high frequency of 1st singular pronoun production and the idiosyncratic properties of the distribution of the 1st singular pronoun in Malagasy, we will restrict our discussion to the acquisition of this form, leaving the discussion of other forms to further research pending more data from later stages of acquisition.

#### 3.3.2 Prediction 1

In almost all cases the free forms emerge earlier in the data than the bound forms. Bound forms functioning as Agent arguments in TT constructions (for example -ko in (2.c)) appear later than possessive bound forms, which in turn appear later than free forms. Table 3 presents the order of appearance of the different forms<sup>3</sup>. The emergence of the bound genitive form has been divided into two columns, one representing its function as a possessor (c.f. 2.d) and the second as the Agent argument in TT constructions (c.f. 2.c):

<sup>&</sup>lt;sup>3</sup> The order is calculated taking into account the first occurrence of the pronominal form. In all cases the first occurrence of a type is followed by sporadic use of the form in the immediately following and most subsequent files and thus is assumed to have been acquired by the children.

Person	<b>Free Form</b>		Weak Form		<b>Bound Form</b>		
	Form	Age	Form	Age	Form	Poss.	Agent
1SG	izaho	1;8	aho	1;10	-ko	1;8	1;11
2SG	ianao	1;11			-nao	1;11	1;11
3SG	izy	1;9			-ny	1;11	
1PL (incl.)	isika	1;10			-tsika	1;11	
1PL (excl.)	izahay	2;4			-nay	2;5	
2PL	ianareo	2;6			-nareo	2;7	
3PL	izy (ireo)				-ny		

Table 3: Co	mparison o	of Chronological	Appearance	of Bound	versus F	Free Pro	nominal	Forms
		0						

As we can see in the above table, in most cases the free form seems to emerge at least a month earlier than the bound form. This is the case for the 3rd singular, 1st plural exclusive and inclusive, and 2nd plural. The only apparent exceptions are the 1st person strong form *izaho*, which seems to appear at the same time as the bound form -ko (1;8), and the 2nd person *ianao*, which appears at the same time as the bound form -nao. In the first person the bound form -ko emerges at 1;8 as a possessive. Its first appearance as an agent argument is three months later (1;11) and thus it confirms the prediction at least partially. In the case of the second person, the appearance of the bound form as an agent and a possessive is simultaneous (1;11). However, the number of tokens of these forms is very small (9 tokens for both types in total, compared to 159 tokens for the equivalent forms in 1st person singular) and so it is not clear what to make of this finding. In any case, the data for second person singular is not representative, since in all other persons free forms appear before bound forms.

#### 3.3.3 Prediction 2

The second prediction is that child language will have a greater number of izaho than aho and – ko forms in comparison to the language of adults. More generally, nominative forms are expected to appear more frequently than genitive forms, as compared to adult language. The prediction is not easy to confirm. Child-directed adult language in the available recordings consists mainly of yes/no and wh-questions to the children with no occurrences of 1st person singular pronouns. Thus, the only numbers related to frequencies of case-marked DPs in Malagasy come from Keenan (1995); Keenan & Manorohanta (2004). In these studies a text count based on two newspaper articles and selections from three novels in Malagasy found that pronominal case is distributed as in (10):

(10)	Nominative/Free	Accusative	Genitive/Bound
	33.6%	23%	43.4%

We see that in adult language the bound forms appear significantly more frequently than the free forms. A count of the pronominal forms in the child data, though, shows a different pattern (excluding proforms, indeterminate cases):

(11)	Nominative	Accusative	Genitive
	130 (57.5%)	4 (1.7%)	92 (40.7%)

Thus, nominative/free forms are significantly more frequent than genitive/bound forms, in contrast to the adult data<sup>4</sup>. As far as the relative frequencies of *izaho* and *aho* are concerned, the second prediction seems to be confirmed. A word count of text from Malagasy romance novels<sup>5</sup> reveals that in a sample of 23,241 words there are 124 free 1st person singular pronominal forms. (13) illustrates the relative frequencies of *izaho* versus *aho* in both adult and child counts:

	aho	izaho
(12) Adult Count	120 (96.7%)	4 (3.3%)
Child Count	57 (61.3%)	36 (38.7%)

As we can see *izaho* appears a lot more frequently in the child data. This is an expected distribution if *izaho* is the default form.

#### 3.3.4. Prediction 3

As far as the third prediction is concerned, the data again seem to confirm the hypothesis. The prediction is that any mistakes that the children make are expected to include substitutions of the bound form -ko and the weak form *aho* by the strong form *izaho*. We found a limited number of substitutions in the data. These are illustrated in Table 4<sup>6</sup>:

Function	Environ.	Correct	Incorrect
Topic DP (aho)	76	55 (72%)	21 (28%)
Agent DP (-ko)	35	33 (94%)	2 (6%)
Possessor (-ko)	33	30 (91%)	3 (9%) (aho)

Table 4: Correct vs. Incorrect Use of 1st SG Pronouns in Child Speech

As we can see from the table, the children make few mistakes in their production of pronouns. Most of the mistakes are with the weak form *aho* as the external argument/topic of active

<sup>&</sup>lt;sup>4</sup> Keenan & Manorohanta (2004) provide a number of further reasons why nominative forms appear more often in child language. The first is that child speech consists mainly of short utterances, most of them headed by intransitive verbs with only one argument realized as the topic argument in the free pronominal form. The second reason is that prepositional elements like ami(na) which are quite common in adult speech and which take genitive complements are completely absent from child speech. To these two reasons we add the fact that the bound form -ko is substituted by the strong form *izaho* in some cases. It is further substituted by *izaho* and *aho* in three cases when it functions as a possessor.

<sup>&</sup>lt;sup>5</sup> The texts used in the count are the same as in Keenan & Manorohanta (2001).

 $<sup>^{6}</sup>$  The first row shows substitutions of the marked trigger form also by the default form izaho. The second row exhibits substitutions of the bound form –ko by izaho in predicate-internal positions of the agent. Finally, row three exhibits substitutions of –ko by also in when the former functions as a possessor in noun phrases.

structures. As we have seen, these positions constitute environments in which *aho* appears obligatorily in adult language. Children in fact do use *aho* in these environments in most cases, as Table 4 indicates. Therefore, *izaho*-substitutions (14b) co-occur with correct usage of *aho* (14a):

(9)	a.	Nitomany PST.AT.cry 'I cried'	aho 1sg.nom	(Tsiorisoa 2;7)
	b.	Tomany cry 'I cried'	za 1sg.nom.str	(Tsiorisoa 2;7)

#### 3.3.5. Prediction 4

As is often the case in children's grammars, verbal forms in the Malagasy acquisition data can appear reduced or bare with missing tense/voice morphology. To these we can add a number of verbal forms that are never affixed with voice or tense morphology in adult grammar and always appear as verbal roots that are inherently active or passive. We adopt as a working hypothesis that these bare and (some of the) root forms are the equivalent of RIs in Indo-European languages<sup>7</sup>.

If this is on the right track, the prediction is that izaho will emerge as a default case mainly with bare verbs in the children's utterances, while also will appear predominately with fully inflected forms. This seems to be true:

Child	Pronoun	Inflected Verbs	Bare Forms
Tsioroso	aho	10	1
а	izaho	0	1
	aho	1	1
Sonnia	izaho	5	8
	aho	29	13
Ninie	izaho	0	7
Total	aho	40 (73%)	15 (27%)
	izaho	5 (24%)	16 (76%)
		χ2(1	) = 15, p 0.0001

Table 5: Distribution of *izaho* and *aho* with bare and inflected verbs

<sup>&</sup>lt;sup>7</sup> Similar patterns for example have been found in the acquisition of Swahili (Deen, 2003), Inuktitut (Swift & Allen, 2002), and Siswati (Kunene, 1979) (c.f. also the English examples in 9.a.-9.d.).

Furthermore, *izaho* appears in environments in which adults obligatorily use the bound form – *ko*:

(10)	a.	Lani -k	0	io	(Adult Form)
		finish.TT.ROOT -1	SG.GEN	DEM	
		'This was finishe	d by me'		
	b.	Io any any		za	(Sonnia 1;9)
		DEM finish.TT.RO	OT .RED?	1sg.str	
		'This was finishe	d by me'		

If we add these cases to the percentage of *izaho/aho* substitutions we get an overall 88% percentage of *izaho*-substitutions with bare verbs. This is close to percentages of default-case substitutions in non-finite contexts observed in English, French, and German (c.f. Schütze, 1997).

### 4. FURTHER SUPPORT FOR AN RI STAGE

There are many syntactic properties that distinguish RIs from their finite counterparts, but one that is particularly relevant to the present discussion is that RIs typically occur with null subjects. Hyams et al (2004) show that in Malagasy bare verbs occur most frequently with null triggers while inflected verbs occur most often with overt triggers:

	Null Subject	Overt Subject
Bare Verb	251 (60%)	165 (40%)
Finite Verb	279 (46%)	325 (54%)

Table 6: Rate of subject omission with finite and bare verbs

The relation of bare verbs to null triggers is marginally significant (p=.08) by a Friedman chi square<sup>8</sup>. This is predicted if we assume that the Malagasy bare verb is an RI analogue and a fortiori that Malagasy has an RI stage. No other analysis seems at present to be able to account for the empirical facts in a satisfactory way.

### 5. CONCLUSION

We examined the acquisition of the pronominal system of Malagasy based on a longitudinal study of production data from three Malagasy children. We showed that the children overuse the strong 1st person singular form *izaho*. Furthermore, we showed that these substitutions occur predominately with bare verbal forms. This fact provides prima facia evidence that Malagasy has an RI stage. Finally, we provided further support for an RI stage in Malagasy from trigger

<sup>&</sup>lt;sup>8</sup> C.f. Hyams et al (2004) for discussion of factors that increase the strength of this association.

omission patterns. We showed that bare verbs occur most often with null triggers, while inflected verbs occur most often with overt triggers.

The Malagasy data provides support for a 'universalist' approach to grammatical development, which claims that there is uniformity in the grammatical development of diverse languages, with respect to core principles of grammar.

#### References

- BABYONYSHEV, M. 1993. Acquisition of the Russian case system. In C. Phillips (ed.), *Papers on case & agreement II, MIT Working Papers in Linguistics 19*, 1–43.
- BORER, HAGIT & KENNETH WEXLER. 1987. The maturation of syntax. In T. Roeper and E. Williams (ed.), *Parameter Setting*, D. Reidel Publishing, Dordrecht.
- CHIEN, YU CHIN & KENNETH WEXLER. 1990. Children's knowledge of locality principles in binding as evidence for the modularity of syntax and pragmatics. *Language Acquisition 1*, 225-295.
- CLARK, EVE V. 1985. The Acquisition of Romance with Special Reference to French In D. I. Slobin (ed.) *The Crosslinguistic Study of Language Acquisition, Vol 1: The Data*. Hillsdale, NJ: Lawrence Erlbaum Associates, 687-782.
- DE CAT, CÉCILE. 2002. Apparent non-Nominative subjects in L1 French. In J. Paradis and P. Prévost (eds.), *The Acquisition of French in Different Contexts: Focus on Functional Categories*. Amsterdam: J. Benjamins, 53-88.
- DEEN, KAMIL UD. 2003. Underspecified Verb Forms and Subject Omission in Nairobi Swahili. In Barbara Beachley, Amanda Brown & Frabces Conlin (eds.), *The proceedings to the 27th annual BUCLD*. Somerville, MA: Cascadilla Press, 220-231.
- HOEKSTRA, TEUN AND NINA HYAMS. 1998. Aspects of root infinitives. Lingua 106, 81-112.
- HYAMS, NINA. 1996. The Underspecification of Functional Categories in Early Grammar. In Harald Clahsen (ed.) *Generative Perspective on Language Acquisition*, Amsterdam, Philadelphia: John Benjamins Publishing Company, 91-127.
- HYAMS, NINA, DIMITRIS NTELITHEOS & CECILE MANOROHANTA. 2004. *The Acquisition of the Malagasy Voice System*. Ms. Department of Linguistics, UCLA.
- JONAS, DIANNE. 2002. Case and clause structure in Faroese child language. Paper presented at the *19th Scandinavian Conference of Linguistics*, 10-12 of January 2002, Universitetet i Tromsø, Norway.
- KEENAN, EDWARD L. 1995. Predicate-Argument Structures in Malagasy. In C. Burgess, K. Dziwirek, and D. Gerdts (eds.) *Grammatical Relations*, Stanford: CSLI, 171-217.
- KEENAN, EDWARD L. & MARIA POLINSKY. 1998. Malagasy (Austronesian). In A. Spencer & A. Zwicky (eds.) *The Handbook of Morphology*, Oxford: Oxford University Press, 563-623.
- KEENAN, EDWARD L & CECILE MANOROHANTA. 2001. A Quantative Study of Voice in Malagasy. In *Oceanic Linguistics* 40, 67-85.

——. 2004. Malagasy Clause Structure and Language Acquisition. Paper presented at *AFLA XI*, Berlin, April 2004.

- KUNENE, EUPHRASIA. 1979. The Acquisition of SiSwati as a First Language: A Morphological Study with Special Reference to Noun Prefixes, Noun Classes and some Agreement Markers. Unpublished Doctoral Dissertation, UCLA
- PAUL, ILEANA. 1996. The Malagasy Genitive. In M. Pearson & I. Paul (eds.) The Structure of Malagasy, vol. 1, UCLA Occasional Papers in Linguistics 17, Department of Linguistics, UCLA.
- ——. 2000. *Malagasy Clause Structure*. Ph.D. Dissertation, Department of Linguistics, McGill University.
- POWERS, SUSAN M. 1995. The Acquisition of Pronouns in Dutch and English: The Case for Continuity. In *Proceedings of BUCLD* 19, 439-450.
- PEARSON, MATTHEW. 2001. *The Clause Structure of Malagasy: A Minimalist Approach*, UCLA Dissertations in Linguistics 21, Department of Linguistics, UCLA.
- RADFORD, ANDREW. 1990. Syntactic Theory and the Acquisition of English Syntax, Cambridge, Mass.: Basil Blackwell.
- RHEE, JAEMIN & KENNETH WEXLER. 1995. Optional infinitives In Hebrew. *MIT Working Papers in Linguistics 26*, 383-402.
- RIZZI, LUIGI. 1994. Some notes on linguistic theory and language development: the case of root infinitives. In *Language Acquisition 3*, 371-393.
- SANO, TETSUYA and NINA HYAMS. 1994. Agreement, finiteness, and the development of null arguments. In Merce Gonzàlez (ed.) *NELS 24: Proceedings of the North East Linguistic Society 2*, 543-558.
- SCHÜTZE, CARSON T. 1995. Children's subject case errors: Evidence for case-related functional projections. In *Proceedings of FLSM VI, Vol. 1*, 155–166.
- ——. 1997. *INFL in Child and Adult Language: Agreement, Case, and Licensing*. PhD thesis, MIT.
- -----. 2001. On the nature of default case, *Syntax 4(3)*, 205-238.
- SWIFT, MARY & SHANLEY ALLEN. 2002. Contexts of Verbal Inflection Dropping in Inuktitut Child Speech. Proceedings of the Boston University Conference on Language Development. 26, 2. Boston MA; Cascadilla Press, 689-700.
- WEXLER, K. 1994. Optional infinitives, head movement, and the economy of derivations in child grammar. In D. Lightfoot & N. Hornstein (eds.) *Verb movement*. Cambridge University Press, Cambridge, 305–350.
- ZRIBI-HERTZ, A. AND L. MBOLATIANAVALONA. 1999. Towards a modular theory of linguistic deficiency: Evidence from Malagasy personal pronouns. *Natural Language and Linguistic Theory 17*: 161-218.