Argument-Structure and Referential Participant Nominals in Malagasy
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1. Introduction

Malagasy participant nominals (PNs) fall into at least two different categories, in the same way that action nominals do (Grimshaw, 1990; Borer 2005; Alexiadou et al, 2007; Alexiadou, 2010):
- argument-structure PN (ASPNs), which contain event and argument structure; and
- referential PN (RPNs), which do not

1. Rakoto dia ny mpampianatra teny gasy an-dRasoa isan’andro
   Rakoto TOP DET NMLZ. CAUS.V.learn language Malagasy ACC-Rasoa every day
   ‘Rakoto is the one who teaches Rasoa Malagasy every day.’
2. n.an.asa [mp.aka sary telo] i Rasoa t.ami.n’ny f.an.ambadi.ana
   PST.V.invite NMLZ. take picture three DET Rasoa PST.for LNK DET NMLZ.V.marry.CT
   ‘Rasoa invited three photographers to the wedding.’

I show that the distinction is robust with respect to a number of diagnostic tests established in the literature for action nominals.

I try to capture the distinction within a syntactic approach of nominalizations:
- PNs have the structure of reduced headless relative clauses,
- the different properties of the two types of nominals are attributed to different number of functional projections within the derived nominalization/reduced headless relative clause,
- assuming different attachment heights for the same nominalizer.

2. Argument Structure vs. Referential Nominals

A subpart of action nominals (Argument Structure Nominals, ASNs) exhibit core verbal and clausal properties, while other deverbal nominals (Referential Nominals, RNs) do not (see Grimshaw, 1990; Borer, 2005; Alexiadou et al, 2007; among others)1:

2. Diagnostics for Argument Structure Nominals and Referential Nominals

<table>
<thead>
<tr>
<th></th>
<th>ASNs</th>
<th>RNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obligatory internal arguments</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Aspectual Modifiers (singular Ns)</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Genitives as agents</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Agent-oriented modifiers</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Able to appear in plural</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
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1 A third class of Simple Event nominals is ignored as it is not relevant to the Malagasy data discussed here.
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Malagasy PNs

3. a. The examination *(of the patient) for an hour annoyed the nurse.
   b. The exam *(of the patient) *(for an hour) is on the table.

4. a. The vet’s examination of the cat took a long time.
   b. The vet’s examination was long.

5. a. The vet’s intentional examination of the cat took a long time.
   b. * The vet’s intentional examination was long.

6. a. * The/some a lot of examinations of the cat ...
   b. one exam; two exams

Earlier formal and typological work ignored participant nominals as they were assumed to have the properties of underived nouns:

“... the difference between the forms in Class A (action) and those in Class B (participant) is that A forms retain certain properties of the verbs or adjectives they are related to, while those in B typically behave syntactically like other nouns in the language, bearing only morphological and (often unpredictable and idiosyncratic) semantic relations to the associated verb or adjective.” Comrie and Thompson (1986:349):

7. a. The teacher (of Linguistics) was in the classroom.
   b. The teacher of Linguistics *(for 2 hours) was in the classroom.
   c. The teacher of the syntactic movement section *(in three hours) ...
   d. John’s teacher of Linguistics was in the classroom.
   d. All the teachers of Linguistics were in the classroom.

Recent work on agentive and instrumental nominals (Alexiadou and Schäfer, 2007, and references therein): PNs contain certain elements of structure such as eventive or episodic interpretation, argument structure realization (Larson, 1998; Alexiadou, 2001; Alexiadou & Schäfer, 2010; Roy & Soare, 2011), and use of aspectual modifiers like “frequent” (Roy and Soare, 2011) for episodic PNs (but not for dispositional PNs which denote habitual events):

8. Olga is a beautiful dancer.

9. a. the defenders *(of human rights)
   b. a devourer of fresh fruit/*a (good) devourer
   c. she devours fresh fruit/*she devours

10. a. un consommateur fréquent de plusieurs drogues douces
    a frequent user of many soft drugs
   b. # un consommateur fréquent
    # un vendeur fréquent de voitures
    a frequent consumer
    a frequent seller of cars

2 See for example Comrie, 1976; Noonan, 1985; Comrie & Thompson, 1986; Koptjevskaja-Tamm, 1993; Malchukov, 2004; and others.
3. Malagasy PNs

Malagasy voice system:

11. a. n.i.vídy boky ho an’ny mpianatra ny mpampianatra.
PST.V.buy books for’ DET student DET teacher
‘The teacher bought books for the student.’

11. b. no.vid.in’ ny mpampianatra ho an’ny mpianatra ny boky.
PST.buy.TT/LNK’DET teacher for’ DET student DET books
‘The teacher bought books for the student.’

11. c. n.i.vidian.an’ ny mpampianatra ny boky ny mpianatra.
PST.V.buy CT/LNK’DET teacher books DET student
‘The teacher bought books for the student.’

Malagasy Action Nominals exhibit similar distinctive properties differentiating between ASNs and RNs (see Ntelitheos 2010 for discussion). What about participant nominals?

Malagasy Participant Nominals

Agentive nominals: formed by attaching the nominalizer mp- (pronounced [p]) to the AT form of the verb (11.a):

12. a. Rakoto dia ny mpampianatra teny gasy an-dRasoa isan’andro
Rakoto TOP DET NMLZ. CAUS.V.learn language Malagasy ACC-Rasoa every day
‘Rakoto is the one who teaches Rasoa Malagasy every day.’

12. b. n.an.asa [mp.aka sary telo] i Rasoa t.ami.n’ny f.an.ambadi.ana
PST.V.invite NMLZ.take picture three DET Rasoa PST.for.LNK’DET NMLZ.V.marry.CT
‘Rasoa invited three photographers to the wedding.’

Instrumental Nominals: formed by attaching the generic nominalizer f- to the CT form of the verb (11.c): (with the exception of a certain class of “tools” which are formed by attaching f- to the AT form of the verb, see Ntelitheos 2012):

13. a. ny f.an.doah.an-dRabe rindrina tsara dia ilay fantsika
DET NMLZ.V.drill. CT/LNK-Rabe wall well TOP DEM nail
‘The (instrument for) Rabe’s drilling walls well is this nail.’

13. b. n.i.vidy ilay f.i.as.ana vaovao roa aho
PST.V.buy DEM NML.V.work.CT new two 1SG/NOM
“I bought these (aforementioned) two new tools (lit. things to work with)”

The agentive nominal in (12.a) and instrumental nominal in (13.a):

• allow for case-marked definite internal arguments,
• allow for low adverbial modification (e.g. manner and frequency adverbs), and
• force an eventive interpretation (e.g. an event of “teaching” or an event of “drilling” have occurred in some unspecified time).
In contrast, the “noun-like” profession name nominalization in (12.b) and the tool of (13.b):

- allow productively for adjectival and quantifier modification
- lack a definite, case-marked internal argument and
- lack an eventive interpretation (i.e. no event of photograph-taking or “tool-working” is implied)

The implied events in (12.a) and (13.a):

- can be interpreted as “episodic” in that they may have occurred at a specific time (i.e. they are not necessarily habitual).
- However they are not time-anchored with respect to the time of utterance (unless a temporal modifier like “yesterday” is inserted)

Following current terminology I refer to the nominals in (12.a) and (13.a) as argument-structure PNs (ASPNs), which contain event and argument structure; and the nominals in (12.b) and (13.b) as referential PNs (RPNs), which do not contain event and argument structure.

The two types of nominals produce robust results with respect to further diagnostic tests discussed in (3) (Alexiadou et al, 2007; Alexiadou, 2010 and references therein):

- For instrumental nominals, the linked element in RPNs is interpreted as a possessor (3.b), while it is necessarily an agent in ASPNs (3.a);
- finally, ASPNs are compatible with aspectual modifiers while RPNs are not (4).

14. a. ny f.an.doah.an-dRabe rindrina dia an-dRasoa
DET NMLZ. V.drill. CT/LNK-Rabe wall TOP LOC-Rasoa
‘Rabe’s (instrument for) drilling walls belongs to Rasoa.’
Rabe can only be interpreted as the user of the drill.

b. no.hita.ko ny f.i.pasohan-dRasoa
PST.find.1SG/GEN DET NMLZ.V.iron.CT/LNK-Rasoa
“I found Rasoa’s iron.” The iron Rasoa used, borrowed, talked about, and so on...

15. * tia.ko ilay mp.amp.i.anatra matetika
like/TT.1SG/GEN DEM NMLZ.CAUS.V.study frequent
“I like this frequent teacher (the one who teaches frequently).”

The obvious question then is how the two nominals in (12.a) and (15) differ, given that they share the same form mpampianatra.

4. A Syntactic Approach to Malagasy PNs

The clausal structure in Malagasy is built starting of the low, lexical/root domain, to which a number of functional layers related to voice, adverbial modification, eventive interpretation and tense are added:
16. \[ \text{TENSE \ EVENT \ [ \text{ASP} \ [ \text{FP} \ \ldots \ [ \text{VOICE} \ [ \text{V} \ \text{ROOT}\] ] ] ] ]} \]

- A root is augmented by a verbalizer which is termed AT voice and is present in the formation of both AT and CT verbs (perhaps a null counterpart is involved with TT verbs).
- Voice morphology (for example Voice\text{CT}) is attached higher up, licensing verbal arguments.
- Subsequent functional projections host adverbs in a hierarchical fashion (Cinque, 1999).
- The aspectual projections AspP hosts a definite DP corresponding to the internal argument of the verb and assigning accusative case (observable only in pronouns and proper names in Malagasy).
- EventP introduces the event variable (Travis, 1994; Pearson, 2001).
- Tense anchors the event relative to some specified time (usually utterance time) (Zagona, 1990; Stowell, 1996).

The full tensed clause can be selected by the definite determiner *ny* in Malagasy, forming a headless relative clause (see Keenan & Polinsky, 1998:615):


18. sosotra ny n.an.deha t.any Antsirabe fa … frustrated DET PST.V.go PST.there Antsirabe because…

‘The ones that were going to Antsirabe were frustrated because…’

The fact that the string following the definite determiner in (18) is a headless relative clause is supported by binding facts, as well as evidence from weak crossover, parasitic gaps, and so on (see Ntelitheos 2012 for discussion).

The proposal here is that the corresponding agentive nominalization, exemplified below, also involves a headless relative clause:


20. sosotra ny mp.an.deha t.any Antsirabe fa … frustrated DET NMLZ.V.go PST.there Antsirabe because…

‘The ones that were going to Antsirabe were frustrated because…’

The only interpretive difference between (18) and (20) is that in (18) the event of “going” is time-anchored by tense morphology, while in (20) it is not and time-reference is deduced by the aspectual marker *t-* on the preposition.

Evidence that PNs involve a headless relative clause source is provided by their interpretation: agentive nominals involve the AT form of the verb, the form that promotes the external argument.
of the verb. On the other hand instrumental nominalizations involve the CT form of the verb, the form that promotes/relativizes obliques.

I assume that in (18), the definite determiner ny selects for the full clausal structure of (16), while in (20), the nominalizer mp- replaces tense. This means that all clausal projections up to Tense are contained within the nominalization, accounting for all the properties of Malagasy ASPNs as discussed in Section 3:

- allow for case-marked definite internal arguments,
- allow for low adverbial modification (e.g. manner and frequency adverbs), and
- force an eventive interpretation (e.g. an event of “teaching” or an event of “drilling” have occurred in some unspecified time).
- a linked argument is interpreted as the external argument

What about RPNs of the type in (15), repeated here as (21):

21.  * tia.ko ilay mp.amp.i.anatra matetika
    like/TT.1SG/GEN DEM NMLZ.CAUS.V.study frequent
    “I like this frequent teacher (the one who teaches frequently).”

In terms of morphological form this is identical to the ASPN of (12.a), repeated here as (22):

22.  Rakoto dia ny mpampianatra teny gasy an-dRasoa isan’andro
    Rakoto TOP DET NMLZ.CAUS.V.learn language Malagasy ACC-Rasoa every day
    ‘Rakoto is the one who teaches Rasoa Malagasy every day.’

The proposal is that in this case the nominalizer merges much lower in the structure, and specifically above the voice projections:

23.  [DET ny CP EVENT ASP [NMLZP mp [VOICE [V [ROOT]]]]]

The double strike-through notation indicates that merging the nominalizer above Voice, renders higher clausal projections unavailable, as the projection becomes nominal. This means that clausal properties related to adverbial modification and aspectual/eventive interpretation are replaced by corresponding nominal properties of adjectival modification and number. This explain the set of properties exhibited by RPNs:

- allow productively for adjectival and quantifier modification
- lack a definite, case-marked internal argument and
- lack an eventive interpretation (i.e. no event of photograph-taking or “tool-working” is implied)
- a linked argument is interpreted as possessor (in instrumental nominals)

One property that ASPNs exhibit, which distinguishes them from ASNs, is the ability to pluralize (see (20)) and below:
While pluralisation of argument structure nominals is in general forbidden (at least when non-telic aspect is available within the nominalized structure, see Iordachioaia & Soare, 2008), ASPNs can be interpreted as plural.

This is a direct consequence of the structure adopted here, since these nominals are relative clauses referring to entities, i.e. it is the null nominal head of the reduced relative clause which is interpreted as plural.

This head has real nominal properties in that it can also be modified by adjectives, or surface as a generic overt noun phrase:

25. ilay olona mp.i.vavaka …
   DEM  people NMLZ.V.prayer …
   ‘those church-goers’ (lit. ‘people who pray’)

5. Conclusion

I have shown that Malagasy exhibits a robust distinction between ASPNs and RPNs with respect to a number of diagnostic tests established in the literature for action nominals.

I captured this distinction within a syntactic approach of nominalizations, proposing that Malagasy PNs have the structure of reduced headless relative clauses and that the different properties of the two types of nominals can be attributed to the different “amount” of functional projections within the derived nominalization/reduced headless relative clause, assuming different attachment heights for the same nominalizer.

The proposals can be extended to capture similar facts in other better-studied languages like English, and also provide preliminary typological predictions as to what type of PNs are expected to be found cross-linguistically (see Ntelitheos, 2012) for further discussion).

References
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Malagasy PNs


