Predicate-Argument Structure in Malagasy

EDWARD L. KEENAN
University of California at Los Angeles

1. Introduction

In 2 we show that Malagasy, although highly configurational, compares with Philippine languages like Tagalog and Cebuano with regard to the richness of its voice system and the split of "subject properties" between active and non-active Agent Phrases. These results are consistent with the point of view in Manaster-Ramer (1992), Guilfoyle, Hung and Travis (1992) and Voskuil (1993) but modify somewhat those in Keenan (1976).


2. Western Austronesian Clause Structure

We define a language L to be a WESTERN AUSTRONESIAN TYPE (= WA Type) language if there is a structural way of identifying an NP in each basic clause of L which satisfies (1a,b) below, where we write NP(S) for the NP identified1 in S:

\[ \text{NP(S)} \]

1To say that there is a structural way of identifying an NP (occurrence) in each basic clause is to say that there is a \textit{structure dependent} function, here noted NP, which maps each basic clause to an NP occurring in it. A function \( F \) is \textit{structure dependent} iff whenever \( S \) and \( S' \) are isomorphic (= have the same structure, whatever it is) then the value of \( F \) at \( S \) must be the isomorphic image of its value at \( S' \). For example, suppose that a complex expression ABC is isomorphic to \( A'B'C' \) by a function which maps A to A', B to B' and C to C'. Then if a structure dependent \( F \) maps ABC to B then \( F \) must map \( A'B'C' \) to \( B' \). See Keenan & Stabler (1991). In some languages a syntactic isomorphism (technically automorphism) must

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* I am particularly indebted to Dr. Cecile Manorohanta for consultation on many of the claims.

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Regarding (1b), only the *ang*- NP may be relativized (Bell 1983:156). Relative clauses (RCs) in Cebuano have the form "...N nga S", where S is an S with its *ang*- NP missing. The head N is interpreted as bearing to the verb of S whatever semantic role its *ang*- NP would have. Thus it is the verbal morphology (and not the invariable "linker" *nga*) which determines the role of the head N in the RC. So the S for "the rice that the woman cooked", must be built from (2b). If it was built from (2a), that is, (2a) less its *ang* NP, it could only mean "the rice that cooked rice in a ricepot", violating the selection restrictions of the verb *magluto*.

Similarly limited to *ang* NPs is hosting Possessor Ascension (Bell 1983:193), Raising from Complement Clauses (Shibatani 1983:122) and, largely, launching floating quantifiers (Bell 1983:154). These same phenomena are among those limited to NP(S) in Tagalog (Schachter 1976, 1977, Kroeger 1993).

But properties like antecedent reflexives and controlling missing arguments of complement verbs, are not vested in NP(S) in Cebuano (or Tagalog). An antecedent of a reflexive in Cebuano (Bell 1983:161) is the NP which bears the same semantic role to the verb as does the *ang* NP when the verb is in the *mag*- (= "active") Bell p.205) form. We adapt Schachter's term ACTORS for NPs identified in this partially semantic way. Extensionally it is the *ang* NPs of active Vs and the ni/la (= genitive) NPs of non-actives which antecedent reflexives. Similarly it is the Actor NPs of "promise" verbs which control the missing argument of their verbal complement. In Tagalog (Schachter, Kroeger op cit) additional properties like expressing the addressee of imperatives are associated with Actors as opposed to NP(S).

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2I am being a bit pedantic here to stress that the terms "active", etc. are just cover terms for the morphologies given; they do not presuppose any similarity with clauses in, e.g., English, which are also called "active".

3So contrary to Schachter's usage, the Actor NP in a clause is simply whatever NP bears the same semantic role to the verb as the *ang* NP does to the active (= *mag*) verb. Our usage does not imply that there is some common semantic or pragmatic factor that all verbs assign to their NP(S). So our claims remain true even if Cebuano presents some verbs which select arguments with "weird" or heretofore unheard of semantic roles.
2.1 An Advancement/Demotion Analysis

Within a Relational Grammar (RG) framework, Bell provides an analysis of Cebuano which accounts for the array of facts above in terms of ADVANCEMENT RULES, thought of as conditions which allow representations of a certain sort. See Bell (1983:148-52) and Perlmutter and Postal (1983) for clear statements of the theoretical background assumed.

In sketch form, the structure of a basic clause in RG terms can be given by a finite matrix, the rows of which are called strata, while the columns represent relations that expressions bear to the clause. So the (i,j)th entry gives the relation that expression j bears to the clause in stratum i. The relations we are concerned with here are Predicate, the TERM relations: Subject (1), Direct Object (2), Indirect Object (3); various non-terms relations like Benefactive, Instrument, Locative, and so forth. For each term relation n the Cho(n) relation discussed below.

In building a RN (relational network) for a basic clause it appears (Perlmutter and Postal 1984) that, despite a little latitude (Rosen 1984), the assignment of relations borne by expressions at the initial stratum is determined semantically — the Universal Alignment Hypothesis (UA). For non-term relations like Ben, Loc, Inst, etc. the assignment is perhaps transparent (though just how many locative relations we should distinguish is not obvious). For term relations the assignment is less obvious, but following "tradition", highly Agentive NPs will be 1s, Recipients with verbs of transmission will be 3s, etc.

RG constrains the allowable transitions from one stratum to the next. Advancement transitions sanction the reassignment of an expression at position n on the hierarchy 1 > 2 > 3 > non-term at a stratum i to a higher position n-1 stratum i+1. An n at stratum i is then denoted (=assigned the Cho(n) relation) at stratum i+1. Cho(n)s are not present in initial strata. The advancements Bell posits for Cebuano are:

\(2 \rightarrow 1, 3 \rightarrow 1, \text{Loc} \rightarrow 1, \text{Ben} \rightarrow 3, \text{and } x \rightarrow 1, \text{all non-terms } x \neq \text{Cho(n)}, \text{any } n.\)

Representing Joe cooked rice in the pot by (3) and Rice was cooked in the pot by Joe by (4) and ordering strata top down, (4) says that rice bears the 2 relation to the clause at stratum 1 and the 1 relation at stratum 2.

\[(3) \quad P \quad 1 \quad 2 \quad \text{Loc} \quad \text{cook} \quad \text{Joe} \quad \text{rice} \quad \text{in the pot}\]

\[(4) \quad P \quad 1 \quad 2 \quad \text{Loc} \quad \text{P} \quad 1 \quad 1 \quad \text{Loc} \quad \text{cook} \quad \text{Joe} \quad \text{rice} \quad \text{in the pot}\]

The RNs for (2b) and (2c) in Cebuano extend that for (2a) in the same way that (4) extends (3): the initial stratum of (4) is the same as the only stratum of (3). So in (2c) the locative changes relation, becoming a 1 in the final stratum, demoting 'Joe' to Cho(1) as in (4). In these terms the 'split subject' facts can be stated as follows:

(5) a. Only final 1's relativize, launch quantifiers, raise from their clause, and host Possessor Ascension.
b. Antecedence of reflexives and control of missing arguments is determined at the initial stratum and preserved by advancement operations.

Note that the RNs in (3) and (4) do not express the voice (mag-, etc.) marking on the verb or the case marking on the NPs. Bell (1983:184-5) explicitly gives the additional, feature assigning, rules. (And of course to properly generate clauses, rules spelling out the actual morphology would be needed). Informally:

(6) Mark the verb +active if no transition to 1 was used, mark it +objective if a 2 → 1 was used, +locative if 3 → 1 or Loc → 1 was used, and +inst if any other advancement rule was used. Thus,

a. The voice morphology on the verb is determined as a function of the Advancements that have taken place.
b. The case marking on NPs is determined as a function of the final grammatical relations they bear.

2.2 Malagasy Clause Structure

Malagasy is a WA Type language with a split in subject properties comparable to (but not identical with) that seen in the Philippine case. Compare (7) and (8) with Cebuano (2). Glosses on the verbal morphology and the constituent bracketing anticipate usage defined later.
(7) a. \[ \text{[N+an+tolotra (Nanolotra) vary (hoan)
  past+act+present rice (to)
  the
  vahiny t+amin'ny
  guest past+on'the
  dishes new
  lsg(nom)]}
\]

\[ \text{I presented rice to the guests on the new dishes. '}
\]

b. \[ \text{[N+a+tolotra+ko (Natolotro) (hoan)
  past+pass₁+present-lsg(gen)
  (to)
  theguests
  t+amin'ny
  lovía vaovao
  past+with'the
  dishes new
  therice]}
\]

\[ \text{The rice was presented by me to the guests on the new dishes.'}
\]

c. \[ \text{[No+tolotra+ana+ko (Notolorako) vary
  t+amin'ny
  past+offer+pass₂-lsg(gen)
  rice
  past+with'the
  lovía vaovao}
  ny vahiny
  dishes new
  theguests]}
\]

\[ \text{The guests were presented rice on the new dishes by me.'}
\]

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4I use standard orthography (except for the use of + ). The orthography-phonology correspondence is direct: o = /o/, j = /dʒ/, and word final -y = word internal -i = /i/. Stress is phonemic and with some exceptions penultimate except in words ending in “weak” syllables -ka, -na, -tra where it is antepenultimate.

5Most of my textual examples do not use the preposition. Malzac (1926) asserts its optionality for several other ditransitive verbs, and the double accusative paradigm is well established in Malagasy, both for manome ‘give’ and causatives of transitives. Either can be NP(S) with the passive -ina morphology.

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(8) a. \[ \text{[N+i+vidy ity lobaka ity
  past+act+buy this
  shirt this
  hoan-dRasoa]}
  Rabe
  for-Rasoa
\]

\[ \text{Rabe bought this shirt for Rasoa.'}
\]

b. \[ \text{[No+vidi+ina+Rabe (=novidin-dRabe)
  past+buy+pass+Rabe
  hoan-dRasoa]
  for-Rasoa
\]

\[ \text{This shirt was bought for Rasoa by Rabe.'}
\]
the relation between the PredPh and NP(S), as with the "floated" quantifiers in Cebuano and Tagalog.

The yes-no question particle ve (va) separates the Pred-Ph and NP(S):

(10) a. M+i+vidy mofo eto ve izy ireo?
Pres+act+buy bread here ? they (nom)

'Do they buy bread here?'

b. *Mividy ve mofo eto izy ireo?
*Mividy mofo ve eto izy ireo?

(11) Tsy h(o)+amp+i+asa+ina+nay (hampiainay) intensify
not fut+cause+act+work+pass+us(excl) longer

ireto fanaka ireto
these furniture these

'These pieces of furniture will no longer be used by us.'
2.2.3 Evidence From Relative Clauses, Embedded Questions, Raising Contexts and Nominalizations

PredPhs (regardless of verbal morphology) constitute a semantic unit: They are interpreted as properties which (possibly abstract) objects may have (or fail to have): the property expressed by the PredPh in (7a) holds of an object \( x \) iff \( x \) offered rice to the guests on the new dishes; that in (7b) holds of an object \( y \) iff \( y \) was presented by Rabe to the guests on the new dishes, etc. And PredPhs recur with this property denoting meaning in a very wide range of syntactic contexts besides that which defines them as PredPhs.

2.2.3.1 Relative Clauses

Relative clauses (RCs) are of the form Det + N + (izay) + PredPh + (Det). Izay is the optional morphologically constant complementizer (= Cebuano nga). Deriving RCs from full Ss after izay we see that only NP(S) in Malagasy is relativizable. The parallel with the Philippine case is exact. Thus,

(12) a. ny olona (izay) n+i+vidy ny mofo
the person that past+act+buy the bread
hoan’ny zaza
for the child

'The person that bought the bread for the child.'

b. ny mofo (izay) no+vidi+n-dRabe
the bread that past+buy+pass-Rabe
hoan’ny zaza
for the child

'The bread that was bought by Rabe for the child.'

2.2.3.2 Embedded Questions

Embedded questions are of the form [izay + (N) + PredPh]. Relevant examples are in (13).

(13) a. Tsy fantatro izay [PREDPH nividy mofo
not known+1sg comp bought bread
hoan’ny zaza]
for the child

'Who bought bread for the child isn’t known by me.'

b. Tsy fantatro izay [novidin-dRabe
not known+1sg comp pst+buy+pass-Rabe
hoan’ny zaza]
for the child

'What was bought by Rabe for the child isn’t known by me.'
c. Tsy fantatro izay zaza [nividianan-dRabe mofo] not known+1sg comp child pst+buy+circ-Rabe bread

'For/because of which child Rabe bought bread isn't known by me.'

2.2.3.3 Raising to Object Contexts

Samples of these constructions, \([V + NP_{acc} + ho + PredPh + NP_{nom}]\), are shown in (14).

(14) a. Mihevitra an-dRasoan ho [PredPh n+i+vidy thinks acc-Rasoan as past+act+buy

akanjo hoan’ny zaza] Rabe clothes for the child Rabe

'Rabe thinks Rasoan to have bought clothes for the child.'

b. Mihevitra ny akanjo ho [no+vidi+n-dRasoan thinks the clothes as past+buy+pass-Rasoan

hoan’ny zaza] Rabe clothes for the child Rabe

'Rabe thinks the clothes as having been bought for the child by Rasoan.'

c. Mihevitra ny zaza ho [n+i+vidi+anan-dRasoan thinks the child as past+buy+circ-Rasoan

akanjo] Rabe clothes Rabe

'Rabe thinks the children as having been bought clothes for by Rasoan.'

d. *Mihevitra ny akanjo ho [n+i+vidy hoan’ny thinks the clothes as past+act+buyfor’the

zaza Rasoan] Rabe child Rasoan Rabe

Deriving (14a-d) by NP raising from an "S" following ho we see that just NP(S) raises; (14d) is uninterpretable.

2.2.3.4 Tensed Nominalizations

[Det + PredPh + (Det)] constructions are displayed in (15).

(15) a. Zava-dratsy sy maha+menatra ny thing-bad and cause+shame the

m+a+galatran omby pres+act+steal cow

'Stealing cows is shameful and a bad thing.'

b. Tsy tia+n-dRakoto ny n+a+tao+nao azy not like+pass-Rakoto the past+pass+do+2sg(gen)3acc

'Rakoto didn’t like what you did to him.'

c. izy no nitantara ny nitondran’ ny she foe relate the past+carry+circ’ the

jirika sy ny namonjen-dRainilaimanga azy brigand and the past+save+circ-Rainilaimanga her

'It was she who recounted the carrying-off by the brigand and the saving by Rainilaimanga of her.' [IKM.47]
d. Faly amin’ izao h+ananan’i Soa happy about’ this fut+have(circ)’art Soa
tokantrano izao izahay mivady household this we(excl)’spouses

‘We (husband and wife) are happy about Soa’s future founding a household (=getting married).’ [PM]

A regularity is observed: Determiners and NP(S)s are in complementary distribution. A PredPh combines with a Det to make an NP or with an NP(S) to make an S.

Note that non-verbal PredPhs like predicate nominals enter these same paradigms:

(16) a. Mpi+i+solo ahy izy er+act+replace 1sg(acc) 3(nom)

‘He is my replacement.’

b. ny vevihavy izay mpampianatra the woman that teacher
t+any Betafo past+there Betafo

‘The woman who was a teacher in Betafo.’

c. Nielsen’ azy ho mpamboly ve ianao? thought him as planter? you(nom)?

‘Did you think he was a planter?’

d. ny mpianatra any the students there

2.2.4 Summary

(9) – (16) establish the constituency of the PredPh and show that NP(S) in Malagasy shares crucial properties with NP(S) in Cebuano/Tagalog. Relativization and Raising are limited to NP(S) and predicate level quantifiers are interpreted only as quantifying over NP(S).

(NP(S) also hosts Possessor Ascension in Malagasy, but recent observations suggest other NPs also do, though not Actors different from NP(S)s).

2.3 Case

Like its Philippine cousins, Malagasy pronouns distinguish three cases:

(17) Singular: 1 2 3
nom aho (h)janao izy
acc ahy anao azy
gen -ko -nao -ny

Plural: 1 excl 1 incl 2 3
nom izahay isika (h)ianareo izy
acc anay antsika anareo azy
gen -nay -tsika -nareo -ny

A plural interpretation in 3rd person may be forced by augmenting them with an overtly plural demonstrative like ireo or a kin term like mivady in izy mivady ‘they husband & wife’. There are other, familiar, 2nd person forms like italhy and ise. Pronouns in the gen series, like their full NP counterparts, are always bound to a host. Except for the monosyllabic -ko and -ny they may carry stress (phonemic in Malagasy) and so are not in general clitics. Case marking on full NPs in Malagasy is less explicit than in Cebuano/Tagalog. But pronouns occur where the corresponding full NPs do, whence pronominal replacement is a test for the case of an NP.

2.3.1 Nominative

This is the case of NP(S). It has no distinctive markings other than the pronoun forms. Equally, Predicate nominals, (16a), adjectives and PPs combine solely with nominative NPs to form Ss. nom is never selected by Vs in forming PredPhs or by Ns or As in forming NPs and APs. In general it is structurally assigned rather than selected by heads (though two Preps select nom NPs: noho ‘than, because of’, and afa-tsy ‘except’, lit: ‘free-not’).
2.3.2 Accusative

Accusative case is distinguished by its pronoun series (acc). In addition proper nouns, some kin terms and, optionally, demonstratives are overtly marked accusative with an- . acc is selected by many Vs, (7a) and (8a), some Ns (below), a few Ps (tahaka azy 'like him') and a few as (fenov azy 'full (of) it'). The definite article ny plus NP\textsubscript{acc} translates predicate possessives (ny ahy 'the me' = 'mine', as in Mine is black, yours is white).

2.3.3 Genitive

Genitive is the master case in Malagasy. It is the dominant case selected by Ns, As, and Ps. Vs divide on the issue. Vs which cannot take an argument in the genitive, as in (7a) and (8a), will be called active and those which can non-active, e.g. (7b,c,d) and (8b,c). Formally, genitive NPs are morphologically bound to their hosts by a complex process I call \textit{n-bonding}, which we exemplify without defining (for lack of space).

2.3.3.1 n-bonding

This process combines a host H and an NP\textsubscript{gen} α to form an expression \textit{nbound}(H,α) whose category depends on that of H. For example, if H is a Prep then the category of \textit{nbound}(H,α) is PP. The precise form of \textit{nbound}(H,α) depends on whether H is "weak" (= ends in -na , -ka , -tra, stressed on the antepenult) or not. Weak endings are dropped or modified according to whether NP\textsubscript{gen} is a pronoun, an augmented pronoun, a coordinate NP, or a full NP beginning with a vowel, the proper noun articles Ra-or i-, or the definite article ny. If H is not weak, a segment -n- is inserted between it and a non-pronominal NP\textsubscript{gen}. NP\textsubscript{gen}'s occur as Possessors of Ns, (18a), complements of transitive N's, (19), objects of most prepositions, (20), complements of most adjectives, (21), and Actor NPs with non-active predicates: (18b), (15b), (10c), (8b,c), (7b,c,d). (nr = n\textsubscript{dr} is phonologically regular in Malagasy).

(18) a. tranon ity tranon+ n+Rabe (=tranon-dRabe) ity
   house this house+ gen+Rabe this
   'this house of Rabe's'

   b. a+roso+n+Rabe (aroson-dRabe)
   pass+serve+gen+Rabe
   'served by Rabe'

   Note that Possessor's do not compete for position with Dets. They do compete somewhat with Adjectives modifying the head, and their joint presence is often felt as awkward even when acceptable. Adjectives may always follow and sometimes (e.g. inherent property Adjectives; Jan Voskuil p.c.) precede NP\textsubscript{gen}:

(19) a. ny tranon+n-dRabe fotsy
   the house+gen-R white
   b. ny tranon fotsi+n-dRabe
   the house white+gen-R
   c. ny mpiasa+n-dRabetezitra
   the worker+gen-R angry
   d. *ny mpiasa tezi-dRabe
   the worker angry+gen-R

   In (20) we see both lexical Ns (tahota 'fear' and alahelo 'sadness') and the derived N fitiavana 'love' (with f- replacing the tense marker) selecting two complements, gen and ace ones.

(20) a. ny tahotra-dRabe
   the fear+gen+Rabe
   'the fear Rabe has'

   b. ny tahotra an-dRabe
   the fear ace-Rabe
   'the fear of unspec for Rabe'
c. ny taho-dRabe azy 
the fear+gen+ Rabe +3sg(acc) 
'Rabe's fear of him.'

d. ny alahelo+n-dRazay an-dra+ny 
the sadness+gen-R. acc-father+her 
'Razay's sadness for her father'

e. ny f+i+tla+van'ny zaza azy 
the nom+act+love+circ+gen'the child him 
'the child's love of him'

Most prepositions (Rajemisa-Raolison (1971) lists 30+) select a genitive NP complement.

(21) a. amina 
'with'

b. ami+ko 
'with me'

c. amin-dRabe 
'with Rabe'

d. amin'ny zaza 
'with the child'

e. imason'ny vahoaka 
'in view of the populace'

f. hatry ny ela 
'since the long time'

Also directional and measure expressions take gen complements: roa kilometra atisimo+n'ny tanantsika 'two kilometers to the South of our village'; ny haben'ny trano 'the size of the house'. And adjectives productively take gen complements usually with an Agent or Cause interpretation, but sometimes with an Experiencer one:

(22) a. maty 'dead' 
matin'ny jirika 'killed by the brigands';

b. jamba 'blind' 
jamban'ny vola 'blinded by money';

c. marary 'sick' 
mararin'ny tazo 'sick from the fever';

d. sasatra 'tired' 
sasatry ny dia 'tired from the trip';
e. mamy 'sweet' 
mamiko 'sweet to me'.

2.3.4 Summary

Statistical counts of the distribution of NPs in the various cases support the grammaticality facts above. In a text count based on two newspaper articles and three random selections from novels/short stories, there were a total of 1,237 NPs. Their case distribution is given in the table below and compared with a sample from English (also two newspaper articles and page selections from 3 novels) are given for comparison:

<table>
<thead>
<tr>
<th>number of NPs</th>
<th>nom</th>
<th>acc</th>
<th>gen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malagasy</td>
<td>1,237</td>
<td>33.6%</td>
<td>23.0%</td>
</tr>
<tr>
<td>English</td>
<td>1,345</td>
<td>38.9%</td>
<td>47.1%</td>
</tr>
</tbody>
</table>

Table 1

Genitive is the most widely occurring in Malagasy, compared with accusative in English, nominative falling in second place in the two

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5 Tensed S complements, predicate nominals and appositives were not counted. Pronoun replacement was the major criterion for deciding the case of an NP. of the town was counted as genitive in the mayor of the town. The OFP in strongly locative or temporal PPs, as in John was ready in five minutes, was not counted accusative. A conjunction of two NPs was counted twice (not three times). In Malagasy if the second was animate it was counted nominative since that is the "default" case it would have on pronoun replacement.
languages. Clearly the dominant expression of the Predicate + Argument relation in English is the Verb + Object one, whereas it is the Head + Possessor one in Malagasy.

2.4 Voice

We defined non-active (active) V's as ones which may (may not) take a genitive argument. By extension, affixes which form (non-)active V's will also be called (non-)active. Other morphology distinguishes active from non-active V's: Only active V's mark present tense with $m$; non-actives use $\emptyset$. And only actives form agent nominalizations with $np$ replacing the tense marker. In Malagasy, grammars active affixes are accompanied with the present tense $m$, as V's in Malagasy never occur untensed (as with English infinitives, gerunds or participles).

Active affixes are all prefixes: primary ones such as i- and an- (and a few others) build active V's from roots. Secondary ones like amp-'cause', if- 'reciprocal' and aha- 'ablative-cause' prefix to other active prefixes. Tense marking prefixes to secondary affixes if present, otherwise to primary ones. There are two tertiary active prefixes, raha- 'become' and laraaka 'do/be together'. They combine with tensed active V's forming tensed active V's and carry their own tense markers. So such V's are marked twice for tense.

Non-active morphology consists of circumstantial and other. To form a circumstantial V add the suffix -(C)ana to an active verb, sometimes with reduplication of the syllable -na, shifting stress on one syllable to the right (for V's not stressed on their final syllable). The choice C of consonant is determined by the root, many roots not taking any. All other non-active morphology will be called passive, although the class is not morphologically or relationally uniform. The passive prefixes are a-, voa- and tafoa--; suffixes are -ina and -ana. All these morphologies are similar to the active in that they combine directly with roots to form verbs. Thus in distinction to the circumstantial morphology they do not in general cooccur with active morphology.

We observe finally that the semantic role assigned to the NP(S) of an active V is the same as that assigned to the genitive NP of any non-active V. This role is Agent if the V takes one (but of course many do not).

2.5 Split Subjects in Malagasy

We first note a definiteness requirement (23) on NP(S) in Malagasy which differentiates it from Cebuano and Tagalog. Then we see that like those languages, control of missing arguments and antecedence of anaphors are vested in Actors rather than NP(S).

Bare N's in Malagasy do not occur as NP(S), even with a cardinality quantifier.

(23) a. *Nijery azy olona maro watched him people many

'Many people were watching him.'

b. Nojeren' olona maro izy watched+pass' people many he

'He was being watched by many people.'

c. Nijery azy ny olona maro watched him the people many

'Many people were watching him.'

d. Nisy olona maro nijery azy Existed people many watch him

'There were many people watching him.'

So a semantically indefinite NP(S) must be overtly marked definite (23c) in distinction to Cebuano and Tagalog.

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7There are two exceptions to this claim. First a very few suffix passives, clearly recognized as exceptional in descriptive grammars, are built on the active form: (m)angatika 'ask', angatahina 'be asked'. By contrast, causatives are productively passivized, as in (11) built from the active h+amp+i+asa = kampiasa 'will use'.
2.6 Reflexive & Reciprocal Antecedence in Malagasy

Reciprocal affixes, and bare N reflexives are locally anteceded by Actors: noms of active Vs, gens of non-active Vs.

(24) a. \[N + if + an + soratra (= Nifanoratra) taratasy past + rec + act + write\]
Rabe sy Rasoa
Rabe and Rasoa

'\textit{Rabe and Rasoa wrote letters to each other.}'

b. \[N + if + an + soratra + ana + Rabe sy past + rec + act + write + circ Rabe and}\nRasoa (=nifanoratan-dRabe sy Rasoa) ireto Rasoa

taratasy ireto
letters these

'These letters were written to each other by Rabe and Rasoa.'

c. ireto taratasy (izay) nifanoratan-dRabe
those letters (that) wrote + to + each + other + by + Rabe
sy Rasoa ireto
and Rasoa those

'Those letters that were written to each other by Rabe and Rasoa.'

In (24a) NP(S) \textit{Rabe sy Rasoa} antecedes the reciprocal affixes on the verb, but in (24b) it is the genitive Agent Phrase which is the semantic antecedent. The NP(S) in (24b) is 'those letters'. It is replaceable by a nominative pronoun, takes question particles in front of it, and relativizes as in (24c).

(25) a. \[M + an + vono (= mamono) tena\_i hoan'ny zanaka pres + act + kill self for the children\]
ny ray aman-dreny rehetra\_i
the parents all

'\textit{All parents kill themselves for the children.}'

b. Amonooan'ny ray aman-dreny rehetra\_i tena\_i kill + circ the parents all self
ny zanaka\_i (j \not\equiv i)
the children

Same meaning as (24a).

In the active (25a) NP(S) 'all parents' antecedes the reflexive \textit{tena} 'self'. But in (25b), (Manaster-Ramer (1992)), the antecedent is the genitive Agent. NP(S) is \textit{ny zanaka} 'the children' which bears a benefactive relation to the circumstantial predicate and cannot be interpreted as antecedent. The Patient here just happens to be reflexive. It could be replaced by any (animate) accusative NP. Here are a few other examples which show non-nominative Actor antecedence in somewhat different contexts.

(26) ny antony izay tsy
the reason that not
\[
\emptyset + an + haja + ana + Rabe (= anajan-dRabe\_i) self pres + act + respect + circ + Rabe tena\_i
\]

'The reason that Rabe does not respect himself.'

(27) a. \[M + an + doka tena\_i ny mpianaatra tsirai\_ray pres + act + flatter self the student each\]

'Each student flatters himself.'
These examples are comparable to the Philippine anaphora pattern. But (23) blocks the simplest cases:

\begin{itemize}
\item But more must be said to account for the pattern below:
\item a. ?Novonoin-dRabe ny tena+ny kill+pass-Rabe the self+his
\item b. ??Novonoin'ny miaramila rehetra ny tena+ny kill+pass' the soldiers all the self+their
\end{itemize}

NP(S) ny tena+ny 'the self+his' is definite, (i.a) is less natural than the active (24a) but not grammatical. See Randriasamimanana (1986), (i.b) with a quantified antecedent is less good than (i.a). But in contrastive contexts like (ii) the definite reflexive seems good (but more extensive consultative work is needed here):

\begin{itemize}
\item Derain'ny olona rehetra ny ray praise+pass'the person all the father
\item amin-drengi ny sy ny tena+ny and-mother+his and the self+his
\end{itemize}

'His parents and himself are praised by each person.'

The judgmental problems here concern the binding relation, not absolute grammaticality. NPs of the form ny tena + NP[gen] 'the self of NP' are used emphatically and need not be bound:

\begin{itemize}
\item iii. Ekena fa ho soa tokoa raha tonga mamangy agreed that fut good very if arrive visit
\item any Sahavato ny tena'ny Profesora Zafy Albert there Sahavato the self the Prof. Zafy Albert
\item 'To be sure it would be very good if Prof. Zafy Albert himself comes visit Sahavato.' [LK 20/10/92]
\item iv. A'eks Bill Clinton no noliday Mr. Bill Clinton foc chosen+by+them
\item 'It was Bill Clinton who was chosen by them.'
\item Miarahaba azy ny tenako Congratulate him the self+my
\item 'My humble self (Ross Perot) congratulates him.' [LK 12/13/92]
\end{itemize}
b. N+a+tsaha-dRabe no+loko+ina ny trano
   past+pass+stop-Rabe past+pain+pass the house

' The house was stopped being painted by Rabe.'

In both Ss Rabe controls the missing argument of 'paint'. ny trano 'the house' is clearly NP(S) in (29b). For example it takes questions particles, (30a) and relativizes (30b):

(30) a. Natsaha-dRabe nolokoina ve nytrano?

' Was the house stopped being painted by Rabe?'

b. ny trano izay natsaha-dRabe nolokoina

'the house that was stopped being painted by Rabe.'

A related paradigm is given in (31) where 'paint the house' is nominalized, taking the definite article ny, and behaving grammatically as an argument of 'stop'. In particular it occurs as NP(S) in the passive, (31b), from which ny cannot be omitted preserving grammaticality:

(31) a. N+i+tsahatra ny n+an+doko
   past+act+stop the past+act+paint

   ny trano Rabe
   the house Rabe

'Rabe stopped painting the house.' = (29a)

b. N+a+tsaha-dRabe ny n+an+doko
   past+pass+stop-Rabe the past+act+paint

   ny trano
   the house

Same meaning as (31a).

Rabe is the painter in both (31a,b). NP(S) in (31b) is ny nandoko ny trano
- it takes question particles and clefts:

(32) a. Natsaha-dRabe ve ny nandoko ny trano?

' Has Rabe stopped painting the house?'

b. Ny n+an+doko ny trano
   the past+act+paint the house

   no natsaha-dRabe
   foc was+stopped+by+Rabe

' It was painting the house which was stopped (being done) by Rabe.'

Observe that genitive NPs of predicate nominals also control into such NP(S)s:

(33) a. Adidy+n+ny (=Adidin'ny) tsirairay ny
duty+gen+the each the

   m+an+a
toires fananampokonononeveryone's duty.

[33]

b. Anjara+n'ny hafa ny m+an+angana
   role+gen+the others the pres+act+pick

   anim- pitiavana ny potiky ny
   with love the pieces+gen

   maha-olona ao amin'ny zazavavi+
   personality there from+the young women+

   n'izao tontolo izao [E]
gen+this world this

'It is the role of others to pick up with love the pieces of the personality chez the "young women of this world".'
3. Predicate Building vs. Advancement

Here I pursue a Predicate Building (PB) approach, one that addresses what I consider to be some conceptual and empirical shortcomings of the RG one.

Conceptually, non-active Ss (RM's) in RG extend active ones by changing the relations that NPs bear to the Clause. So we may expect non-actives to differ from their actives in NP-level markings and clause level markings. But only the former is instantiated, e.g., no language forms passives by putting a particle at the beginning or end of an active S, or by modifying the intonation contour of the active, though Yes-No Question Formation, a properly clause level operation, routinely uses these options (Keenan 1985).

But most importantly, RG does not lead us to expect differences in the morphology of active and non-active verbs since the relation the verb bears to the clause is unchanged under advancements. We can, as Bell (1978,1983) does for Cebuano, observe correlations between verbal inflection and advancements, but the degree to which Cebuano satisfies the empirically non-trivial laws of RG would not change if verbs did not inflect at all for voice.

Furthermore, RG builds in a syntactic asymmetry between actives and non-actives (the latter extending the former) which seems to me not present in WA Type languages. We might expect that the more complex (non-active) forms would have a more restricted distribution. But by a variety of criteria the Malagasy (and I believe the Philippine) data do not conform to this expectation. I cite three instances of this disconformity.

3.1 Active/Passive Symmetries In Malagasy

First, as with Tagalog (Schachter, Kroeger) the major voice categories in Malagasy — actives, prefix passives, suffix passives, circumstantial — have their own imperative forms.

For example, the verbs in (7) [in order] have the following imperatives: manolora (act), atolory, tolory, anolory. So Imperative Formation treats all four types of verbs alike, rather than restricting its application to active verbs, which is largely the case in English. (But NB: voa- and tafa- passives lack imperative forms).

Second, genitive Actors present a frequency spectrum characteristic of core arguments, not classical chomereus.

In German only 17.6% of passives present Agent Phrases (Stein 1979). The figures for English run from 13% to 20% (Svartvik 1966, Duskova 1971, Givon 1979). By contrast K&M (Keenan and Manorohanta, in prep) show that 60% of non-actives in Malagasy present overt Agent Phrases (a percentage comparable to that found by Shibatani (1988) for Cebuano). And this percentage is inaccurately low since many overtly agentless passives have their missing Agent controlled. Contexts like (29b) are common. Another case is the first conjunct in (34a,b), counted by K&M as agentless but whose Agent is clearly understood to be that of the second conjunct.

(34) a. A + tao + ko fa voa + jery sy pass + do + 1sg (gen) that pass + see and

voa + dinika + nao (= voadinikao) tsara ireo pass + examine + 2sg (gen) good those

sary teo pictures there

'I think that those pictures there have been seen (by you) and examined well by you.' [VR]

b. araka izao ahitana sy a hafantaranareo according that se + circ and know + circ + 2pl

ahy izao me that

'according to that which is seen and understood by you of me.' [VR.43]

Third, empirically, voice morphology in Malagasy is not definable as a function of the advancement (or even revaluation) history of the clause. I touch here on two problems; the first has two parts.

3.1.1 Anomalies in Malagasy Active/Passive Morphology

(i) Active morphology which varies in the absence of revaluations (and so advancements in particular), cannot, therefore, be given as a function of revaluation history.

(ii) In basic cases, active and passive morphology are in complementary distribution, so neither is built from the
other. But circumstantial morphology is added to active morphology.

With respect to (i), we have already seen active V's built from *i- and *an-* (there are two other primary active morphologies and a very few active roots). In basically all cases the Ss they build present no argument changing operations. Note that many *i-* verbs are transitive (and thus not unaccusative): *nikapoka* 'beats', *mifidy* 'chooses', *miorina* 'builds'. And many *an-* verbs are intransitive — *mndainga* 'tell lies', *mandihy* 'dance', *mandeha* 'go', *mangovitra* 'shudder', *mandrivotra* 'be windy' — so an-* cannot be identified as a causative operator.

The more positive point here is that the argument structure (number, case marking, and semantic role of the arguments) of an active V is predictable from the voice morphology plus root and so must be handled independently of revaluation history. And doing this explicitly is just the Predicate Building approach.

As far as (ii) goes, many examples show that affixal active and passive verbs are each built by directly affixing the root. Neither is derived by affixing the other, even though the most widespread passive affixes -*ina* and -*ana*, being suffixes, do not compete for position with the active prefixes. So active and passive V's are morphologically independent. But in RG active and (anti-)passives clauses are not: the RN for the latter includes that for the former. So active and (anti-) passive V's have the same quantity of voice morphology but differ in number of advancements (0 vs.1). Again voice morphology is not correlated with revaluation history.

Passive versus circumstantial V's present the opposite problem. The Ss they build exhibit one advancement each in RG. But the circumstantial V retains the active morphology and thus has two voice affixes, while the passive only has one. Again the presence of voice morphology fails to correlate with advancement history.\(^2\) Note that circumstantial V's are not blindly derived from actives, they must see their internal structure. First, whether to reduplicate *na* and which initial consonant (if any) to use depends on the root, not the active prefix:

\(^2\)Morphology - advancement mismatches also occur in Cebuano. For each aspect (durative, volitional, potential) in the Realis Mode, the locative morphology suffixes -*an* to the objective form of the verb (Bell 1983:205).
In (39b) -ina correlates with 2 → 1 as in (8b). But that a- marks Inst → 1 in (39c) is surprising. In many other cases, (7d) and (40), Inst → 1 triggers circumstantial morphology:

\[(40)\]
\[
\text{a. manasa lamba amin’ity savony ity aho wash(act) clothes with’this soap this I}
\]
\[
\text{‘I wash clothes with this soap.’}
\]

\[
\text{b. an+sasa+ana+ko (=anasako) lamba ity savony ity act+wash+circ+1sg(gen) clothes this soap this}
\]
\[
\text{‘This soap is washed clothes with by me.’}
\]

But in fact the example in (39c) is typical. Dez (1980) even calls the a-voice “Instrumental”. My own judgment is that it is best to think of NP(S) in an a- clause as a kind of “intermediary” in an action. That will be the Theme with a verb of transmission but in many other cases an Instrument. Roots like sasa in (39) which don’t take a- use the circumstantial form when the instrument is NP(S).
Finally, there are other cases where a given morphology correlates with more than one type of advancement: In (7c) passive -ana licensed 3 → 1, but in (9c) and several other cases it correlates with 2 → 1. Also circumstantial morphology sometimes licenses 3 → 1:

(41) a. N+i+laza izany t+aamin-drabo aho
past+act+say that past+to-Rabe 1sg(nom)

'I told that to Rabe.'

b. N+i+laza+ana+ako (=nilazako) izany Rabe
past+act+say+circ+1sg(gen) that Rabe

'Rabe was told that by me.'

These and other data show that overall we have little predictability of the verbal morphology merely given the advancement history of a clause. So to generate verbal clauses we need independent access to the verb root and morphology. But given that alone we have excellent predictability (see fn. 5) of the argument structure of the clause; viz. given the verbal morphology and root we can generate the range of nuclear clauses intended to be accounted for by active clauses + advancements in RG; so it seems to me that the independent apparatus of advancement rules is unnecessary. This, at least, is the Predicate Building approach taken here.

3.2 A Predicate Building [PB] Analysis of Voice in Malagasy

PB does not posit any direct syntactic relation among e.g. the Ss in (7). They are similar in that all are formed by combining a PredPh with an NP\_nom. Their differences all lie within the PredPh. PB treats the voice morphology as functions which build PredPhs, beginning with roots. So we give the form and interpretation of a PredPh as a function of that of the root it is derived from. In general (Keenan 1980) the only semantic relations which obtain between active and non-active Ss are those determined by their PredPhs. Here we show that antecedence of reflexives by NP(S) in actives and NP\_gen in non-actives falls out of the semantics we give for PredPhs without reference to the notion of subject (at any level).

Syntactically, we treat active transitive verbs like nividy 'buys' (ignoring tense, always) as expressions which combine first with an accusative NP, NP\_acc to form a PredPh, which in turn combines with an NP\_nom to form an S. Extending standard subcategorization notation to include subjects and writing it on a single line we note this category as

S[NP\_nom, NP\_acc]. So the thing it combines with first to form a constituent is written on the right, and the constituent structure of nividy azy izy 'He bought it' is given by [[nividy azy] izy. 'PredPh' itself now just abbreviates S[NP\_nom], the category of expressions which combine with nominative NPs to yield Ss. Passive vidina 'is bought' has category S[NP\_nom, NP\_gen] as it combines first with a genitive NP to form a PredPh. And circumstantial ividianana in (8c) has category S[NP\_nom, NP\_acc, NP\_gen]. As a cover term we write P\_n, n-place predicate, for expressions which combine with n NPs in appropriate cases to form an S.

The P\_3 category of circumstantial ividianana 'is bought for by' already makes a somewhat surprising prediction: combining it with an NP\_gen yields an expression of category S[NP\_nom, NP\_acc,], ordinary transitive verbs. We expect then to be able to coordinate active transitive Vs and agented circumstantial forms of transitive Vs, and we can. ((42c) is adapted from a first grade reader!)

(42) a. Nividianako ilay boky ianao
bought(circ)+1sg(gen) that book you

'You were bought that book by me.'

b. Namaky ilay boky ianao
read(act) that book you

'You read that book.'

(43) a. Nanondroako ilay toerana ianao
past+point+out(circ)+1sg(gen) that place you

'You were indicated that place by me.'
b. Nanondoako sy nijery
   past+point+out(circ)+1sg(gen) and
   saw(act)

   ilay toerana ianao
   that place you

   'You [[were indicated by me and saw] that place.]

Semantically we interpret P, as n-ary relations, R, S, R, one place relations, are functions mapping objects (possibly quite abstract ones) from the domain D of discourse into \{True, False\}. R, S are functions mapping objects to R, S are functions mapping objects to R, S. So we represent "a bought b" compositionally in Malagasy as nividy(b)(a). (Bracketing is always to the left: F(y)(x) means (F(y))(x) = F is a one place function whose value at y is a function taking x as argument. We interpret common nouns as sets of objects.

NPs are interpreted as generalized quantifiers (GQs), enriched shortly to account for semantic roles like AGENT. GQs are functions mapping n+1 ary relations to n-ary ones. In fact here we can restrict NPs to just take P, as arguments, mapping them into \{T, F\}. For example (every boy) maps laugh to T iff laugh(b) = T, all b ∈ boy. (We write denotations over a given domain D in boldface. (exactly two boys)(laugh) = T iff \[b ∈ boy \land \text{laugh}(b) = T\] has exactly two members.

We classically think of a proper noun like Mary as directly denoting an object, say m, in the domain D, and an S like Mary laughed would have the truth value laugh(m). But to interpret NPs like neither Mary nor Sue, Mary and some student, everyone but Mary, etc. we treat proper nouns as GQs, ones called individuals. Given an object m ∈ D, the individual I,m generated by m is that GQ mapping each P, function p to whatever truth value p maps m to. A function F from P, denotations into \{T, F\} is an individual iff F = I,m for some m ∈ D. We interpret proper nouns as individuals, obtaining the same truth values as the classical approach in simple cases but yielding correct interpretations for complex NPs built from proper nouns as well.

NPs and NP, can be restricted to map R, to R, and R, to R, S, e.g., accusative an-dR, maps an R, like see to that R, true of an object d iff 'd sees Rabe', i.e., iff see(r)(d) = T. (every boy)(see)(d) = T iff for each b ∈ boy, see(b)(d) = T, that is iff 'd sees every boy'.

Generally we are not concerned here with which functions a given NP denotes, the one exception being the reflexive pronoun tena. It combines with P, to form P, and denotes that function self mapping each binary relation F to that unary relation self(F) which maps each object d ∈ D to the truth value F(d)(d). Thus the compositional representation for 'Rabe praises himself' is as in (44). It is true iff (praise Rabe) is true of Rabe.

\[
\begin{array}{ccc}
\text{m} & \text{i} & \text{dera} \\
\text{tena} & \text{Rabe} & \text{I,} \\
\end{array}
\]

(44) \[\text{def of individual} \quad = T \quad \text{iff self(praise)(r) = T}\]

(45) \[\text{def self} \quad \text{iff praise(r)(r) = T}\]

3.2.1 Roots and Affixes

We illustrate the analysis for one active, one passive, and one circumstantial case. See Rajaona (1972) and Rabenilaina (1993) and Abinal et Malzac (1976) for empirically extensive studies. Consider the active S nividy ny boky Rabe 'Rabe bought the book', nividy ny boky 'bought the book' is a P, of category S[NP,]. Semantically it is true or false of objects like Rabe. The P, nividy 'buy' has category S[NP,]. The active morphology i- combines with the root vidy to form a P, so semantically it can denote a function I which maps root denotations to R, possible P, denotations. We represent the denotation of the root vidy as a set VIDY of ordered pairs. I maps this set to a P, function which places semantic role conditions on its arguments. Specifically, for R any set of pairs (such as VIDY), and x and y elements of D,

\[
\begin{align*}
\text{ THEME}(y, R) \land \text{ AGENT}(x, R) \land R(x, y) & \quad \text{iff} \\
\end{align*}
\]

So THEME, AGENT, etc. are relations between objects and relations denoted by roots. THEME(y, R) says that y bears the THEME relation to R. i- only combines with roots so the domain of I may be given by listing. It may contain relations with semantic roles different from \{AG, TH\}. For
each distinct sort of argument, conditions analogous to those in (45) must be given. A compositional representation for ‘Rabe bought the book’ is:

(46) n i- vidy ny boky Rabe

I

VIDY

I_b

I_r

I(VIDY)

I_b(I(VIDY))

I(I_b(I(VIDY)))

(def individual) = I(VIDY)(b)(r)

= True iff THEME(b,VIDY) & AGENT(r,VIDY) & VIDY(r,b)

(by (45))

3.2.2 The Role of Voice Morphology

Like i-, the role of voice morphology is to build argument structure:

(47) Syntactically, voice morphology builds predicates, determining the number and case of the NPs they combine with. Semantically, voice morphology assigns semantic roles to the arguments of the relation which interpret the predicates it builds.

Note that it is the compositional interpretation which associates NP denotations with the arguments of the verb, the verbal morphology just tells us what semantic roles those arguments have.

Now consider the passive morphology -ina. It combines with the root vidy to form vidina of category S[NP$_{nom}$,NP$_{gen}$]. The argument of INA is, as with I, the root denotation VIDY. So both active and passive morphology are functions on the same roots rather than the passive being a function of the active. The value of INA is given generally for arguments of this type in (48) and compositional interpretation illustrated in (49):

(48) INA(R)(a)(b) = True iff AGENT(a,R) & THEME(b,R) & R(a,b)

The last lines in (46) and (49) are logically equivalent, differing only by order of conjuncts. The equivalence falls out of the independently assigned interpretations to roots, affixes, and the NPs rather than any syntactic relation between the Ss themselves. Keenan (1980) notes that actives and agented passives typically fail to be paraphrases when the arguments are not of the individual sort. No editor read every poem is not logically equivalent to Every poem was read by no editor.

The reflexive pronoun tena has category NP$_{acc}$ and so combines with P$_2$s (= S[NP$_{nom}$,NP$_{acc}$]) to form P$_1$s (= S[NP$_{nom}$]) but will not combine with P$_1$s (It is not an NP$_{nom}$). Keenan (to appear) provides a syntax and semantics for the Batak reflexive which, like those of Cebuano and Tagalog, does combine with P$_1$s.

3.2.3 Circumstantial Verbs

We treat predicate level PPs as Predicate Modifiers (PredMods). They denote restricting functions mapping R$_1$s, P$_1$ denotations, to R$_1$s. So sing in the park denotes (IN THE PARK)(SING). (F is restricting iff for each P$_1$ denotation P and each object b, F(P)(b) = T implies P(b) = T). PredMods in English are in general restricting: If Joe sang in the park, he sang; if he bought a shirt for Sue, he bought a shirt. Preps themselves denote functions mapping NP denotations to PredMod denotations. Call this
set of functions $\text{Den(Prep)}$. Observe the compositional interpretation of (50) 'Rabe bought the hat for Rasoa':

(50) $N \quad \text{i} \quad \text{vidy} \quad \text{ny} \quad \text{satroka} \quad \text{hoan-dRaso} \quad \text{Rabe}$

Consider the circumstantial form *ividlanana* 'is bought for by'. Syntactically circumstantial -ana maps the pair (*i-, vidy*) to *ividlanana* of category $S[\text{NP}_{\text{nominative}}, \text{NP}_{\text{accusative}}, \text{NP}_{\text{genitive}}]$. So -ana sees both the prefix and the root, (35). The denotation $\text{ANA}$ of -ana is given in (51). F, G, and H range over GQs and ACT is any active prefix denotation:

(51) $\text{ANA(ACT,R)(F)(G)(H)} = \text{True} \quad \text{iff} \quad \exists p \in \text{Den(Prep)}, \quad F(p(H)(G(\text{ACT(R)}))) = T$

(52) gives the compositional interpretation of the circumstantial 'Raso was bought the shirt for by Rabe'. It differs from (50) only in quantifying over the Prep denotation where (50) has $h$. So (50) entails (52) but not conversely. In (52) we just know that Rasoa stands in some Prep type relation to the buying of the hat, but we don't know which relation. And this is empirically correct, Rasoa could have been the cause or even the instrument of the buying in (52) but not in (50). So contra Bell (1983) and Guilfoyle, Hung and Travis (1992), (52) is not ambiguous but merely unspecified as to which relation Rasoa bears to the action of Rabe's buying.

So the syntax and semantics of the circumstantial suffix has been given with enough adequacy to capture the basic semantic relation between Ss like (50) and their circumstantial correspondents (52). And coupled with the independently given semantics for tena it predicts nom NP antecedence for reflexives in actives (53) and gen NP antecedence in circumstantialis, (54). Here the child is $I_2$ and Rabe is $I_4$:

(53) a. $M+an+vono$ (mamono) tena hoan'ny zanaka Rabe pres+act=kil self for 'the child Rabe

'Rabe kills himself for the child.'

b. $I_2(h(I_2)(\text{self(AN(VONO))})$

(def individual) $\quad = (h(I_2)(\text{self(AN(VONO))}))(r)$

(h(I_2) is restricting) $\quad = \text{self(AN(VONO))}(r) \quad \text{'Rabe kills himself.'}$
(54) a. an+vonono+a+ana+Rabe (= amonoan-dRabe) tena act+kill+circ+Rabe self ny zanaka the child

Same meaning as (53a)

b. ANA(AN, VONO)(I)(self)(I,

= T iff \exists p \in Den(Prep), I(p(I,)(self(AN(VONO)))) = T

(def individual) iff \exists p \in Den(Prep), (p(I,)(self(AN(VONO))))(r) = T

(p(I,) is restricting) => self(AN(VONO))(r) 'Rabe kills himself.'

For reasons of space this will have to suffice to show what a Predicate Building approach looks like. We conclude by resuming some of the advantages of a PB approach.

3.3 Summary

First, verbal morphology has a non-trivial role: it determines the argument structure of predicates (47).

Second, PB accounts for the syntactic and interpretative independence of actives and passives. But circumstantial is partially dependent on the actives. The interpretation of a circumstantial verb refers to the value of the active affix applied to the root, that is, to the interpretation of the active verb.

Third, with respect to lexical exceptions on a PB approach we must give the domains and values (= define) of the twenty odd voice functions i-, an-, a-, etc. The fact that the roots of transitive Vs like mianatra 'study' and mitorina 'build' do not lie in the domains of any of the passive functions is unremarkable - many roots do not lie there. But on an RG (or other standard) approach these facts are "exceptions" to supposedly structure dependent rules. Similarly the existence of suppletive passive forms is unremarkable on a PB approach. For example, one might expect the passive of mitondra 'carry' to be tondraina or atondra, or tondrana, but in fact it is entina, an -ina form built from a different root. In RG the rules spelling out rules mitondra[+passive] will have to have an exception (as will several other verbs). On a PB approach entina is listed as a root passive in the lexicon, its relation to mitondra being merely semantic, as in buy and sell in English. More could be said here, but the general point is clear.

References


Source materials


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Excorporation and (Non)-1AEX

YOSHIHISA KITAGAWA

Indiana University

In this paper, I will explore a syntactic approach to morphologically complex predicates, adhering to the spirit, though not the technical details, of the minimalist approach proposed by Chomsky (1992). After summarizing the major theoretical assumptions adopted, I will outline the content and motivations of what I will refer to as the Excorporation Approach to complex predicates in Japanese, which was originally proposed in Kitagawa (1986). I then proceed to extend this approach to the analysis of passivization in English, which will permit us to minimize artificial assumptions and mechanisms in accounting for the mysterious properties of this construction. Finally, I will attempt to capture under the Excorporation Approach certain typological distinctions among different languages regarding the compatibility of passive and other morphosyntactic constructions with different verb classes. In the process of this attempt, I will also reach the conclusion that the 1-Advancement Exclusiveness Law (Perlmutter and Postal 1984) captures only a special case of a much larger generalization, and hence cannot be regarded as a universal principle of grammar.

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