Predicate classes and PAn *ka-

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1 Background

• Some goals:
  1. unify several functions of *ka- in An languages
  2. better understand the morphosyntax of property denoting words and statives in An
  3. obtain a better account of synchronic differences between two word classes in Tagalog
  4. reconsider universalist claims about predicate decomposition

1.1 PAn *pa-, *<R>, *ka-

• This work is part of a larger project to investigate several widespread derivational prefixes Kauf-
man (2009b):

(1) a. *pa- CAUSATIVE (inner and outer)
  b. *<R> MIDDLE VOICE
  c. *<ŋ> DISTRIBUTIVE
  d. *ka- have’?

• Kaufman (2011) proposed that PAn *ka- was a type of existential morpheme in PAn. Here we
will sketch out its historical development and focus on its synchronic behavior in relation to what
are sometimes referred to as “stative” word classes involving ma- and ka- (Kroeger, 1990; Him-
melmann, 2006; Zeitoun and Huang, 2000; Yeh, 2000; Evans and Ross, 2001; Himmelmann, 2008,
2004).

• Ross (1995, p.740-1) – four major formal classes of roots:
i. those which took <um> directly to form the ACTOR VOICE
ii. those which had no affixes
iii. those who root began with *pa- and whose ACTOR VOICE began with *ma-
iv. those whose root began with *ka- and whose AV form began with *ma- (derived historically from um + ka) many of these verbs are complex roots formed with the prefix *ka- (perhaps INCHOATIVE).

- Inherently event-denoting roots could form event-denoting predicates with only <um> or without affixation. (The difference between classes I and II remains obscure and will not concern us here.)
- Class III appears to have required verbalization through the use of *pa-, a causative morpheme, although it’s far from clear that the roots in this class could be predicted on a purely semantic basis.
- The most semantically predictable class is IV, which in many languages includes emotion predicates and statives and requires the prefix *ka- (Zeitoun and Huang, 2000; Huang, 2000).

1.2 Blust (2003) on *ka-

- Blust 2003 reconstructs PAn *ka- with the following functions:
  1. stative marker in negative construction
  2. abstract nouns of quality
  3. past time (Brandstetter’s “adverbial formative”)
  4. past participle/achieved state (Brandstetter’s “passive formative”)
  5. inchoative verb/adjective
- Our first goal is to find the hidden common denominator behind these functions.

1.3 Stative marker in negative constructions

- Prefixes *ka- and *ma- appear to be in complementary distribution with each other as stative markers.
- In run of the mill positive polarity declaratives we typically find ma-, but ka- appears in several environments that Zeitoun and Huang (2000) called irrealis
• Clear examples can be seen in Atayal (2) where ka- is found alternating both with ma- and ∅, as well as Tanan Rukai (3) and Amis (4):

(2) Mayrinax Atayal (Huang, 2000; Yeh, 2000)
   a. kithuʔ ?ʔ? yayaʔ=mu
      AF:fat NOM mother=1SG.GEN
      ‘My mother is fat’
   b. iniʔ ka-kithuʔ ?ʔʔ yayaʔ=mu
      NEG AF:KA-fat NOM mother=1SG.GEN
      ‘My mother is not fat’
   c. ma-βuqaʔ kuʔ saraman
      AF:broken NOM.RF bowl
      ‘The bowl is broken’
   d. ini ka-βuqaʔ kuʔ saraman
      NEG AF:KA-broken NOM.RF bowl
      ‘The bowl is not broken.’

(3) Tanan Rukai (Li, 1973; Yeh, 2000)
   a. idi-a
      ‘Stand up!’
   b. *ma-bɨlɨŋ-a
      ‘Be tall!’
   c. ka-bɨlɨŋ-a
      ‘Become tall!’

(4) Amis (Fey, 1986)
   a. ma-fana’ kako
      ma-know 1SG.NOM
      ‘I know’
   b. caay ka-fana’ kako
      NEG ka-know 1SG.NOM
      ‘I don’t know’

   – Blust (2003:466):
     “the comparative evidence clearly allows a conjunction of these three environments, and hence an inference that in PAn *ka- ‘stative’ replaced *ma- ‘stative’ in what can appropriately be called irrealis (future, negative, imperative) constructions.”

• But such alternations are not specific to ka- and ma-. We find that PAn actor voice *<um> was probably absent in all irrealis environments.

(5) Cebuano
   a. mag-daːgan si Dodong
      <AV>pag-run P.NOM Dodong
      ‘Dodong will run.’
   b. pag-daːgan!
      pag-run!
      ‘Run!’
• If stative *ma- is actually the combination of ka- with the actor voice infix <um>, as proposed by Ross (1995), then we expect ka- to surface wherever <um> cannot appear.

• Because of its appearance in imperatives and negatives, ka- was susceptible to analogical reanalysis as a marker of these categories.

• This is what seems to have happened in Amis and Paiwan to some extent:

\[(6)\] Amis (Wu, 2000, p.96-97)
  a. k<um>aen ku lutoŋ tu pawli <AF>eat Nom monkey ACC banana 'The monkey is eating a banana.'
  b. ka-k<um>aen kisu tu pawli KA-<AF>eat 2S.NOM ACC banana 'Eat banana!'

\[(7)\] Paiwan (Yeh, 2000, p.26)
  a. ini=aŋa ka t<om>aŋal it kama tua vava NEG=still ka <AV>drink NOM father ACC wine 'Father has not drunk wine yet.'
  b. ini=aŋa ka-kən a madudu NEG=still ka-1SG.NOM LNK angry 'I am not angry.'

1.4 Abstract nouns of quality

• Blust (2003:446) cites the following forms, among others, in support of ka- as a formative for abstract nouns.

• In most cases, a property denoting word usually beginning in ma- has a ka- initial counterpart that refers to the abstract entity characterized by the root. (Note however that several forms below do not appear with ma- in their plain adjectival function.)

<table>
<thead>
<tr>
<th>Language</th>
<th>Property</th>
<th>ka-form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Itbayaten</td>
<td>ayah = red color</td>
<td>ka-vayah = redness</td>
</tr>
<tr>
<td>Bontok</td>
<td>a-dalem = deep</td>
<td>ka-dalem = depth</td>
</tr>
<tr>
<td>Ifugao</td>
<td>tagu = person</td>
<td>ka-tagu = manhood</td>
</tr>
<tr>
<td>Aklanon</td>
<td>ma-tamʔis = sweet</td>
<td>ka-tamʔis = sweetness</td>
</tr>
<tr>
<td>Sarangani Manobo</td>
<td>init = hot, warm</td>
<td>ke-init = heat, warmth</td>
</tr>
<tr>
<td>Bolaang Mongondow</td>
<td>mo-loben = large</td>
<td>ko-loben = size, magnitude</td>
</tr>
<tr>
<td>Malagasy</td>
<td>tsara = good</td>
<td>ha-tsara = goodness</td>
</tr>
<tr>
<td>Banggai</td>
<td>ma-lanak = greasy</td>
<td>ka-lanak = greasiness</td>
</tr>
</tbody>
</table>
1.5 Past time

- Blust (2003:445) cites a number of languages which show *ka-* in the word for ‘yesterday’. The same formant can also be seen in ‘when’ for languages that differentiate a past and future ‘when’.

<table>
<thead>
<tr>
<th>Language</th>
<th>Time</th>
<th>Formant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paiwan</td>
<td>nu-tiaw</td>
<td><em>ka-tiaw</em></td>
</tr>
<tr>
<td>Ivatan</td>
<td>ma-koyab</td>
<td><em>ka-koyab</em></td>
</tr>
<tr>
<td>Binongan Itneg</td>
<td>gidaŋ</td>
<td><em>ka-gidaŋ</em></td>
</tr>
<tr>
<td>Tagalog</td>
<td>gabi</td>
<td><em>ka-gabi</em></td>
</tr>
<tr>
<td>Sindangan Subanun</td>
<td>ale-labun</td>
<td><em>ka-labun</em></td>
</tr>
<tr>
<td>Tausug</td>
<td>ma-hapun</td>
<td><em>ka-hapun</em></td>
</tr>
<tr>
<td>Minangkabau</td>
<td>patang</td>
<td><em>ka-patang</em></td>
</tr>
<tr>
<td>Sangir</td>
<td>hebi</td>
<td><em>ka-hebi</em></td>
</tr>
<tr>
<td>Bolaang Mongondow</td>
<td>gobii</td>
<td><em>ko-gobii</em></td>
</tr>
</tbody>
</table>

1.6 Past participle/achieved state

- Blust states that reflexes of *ka-* with achieved state semantics are found “from at least the southern Philippines to the central Pacific.”

<table>
<thead>
<tr>
<th>Language</th>
<th>Action</th>
<th>Formant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maanyan</td>
<td>rengey ‘to hear’</td>
<td><em>ka-rengeye</em></td>
</tr>
<tr>
<td>Old Javanese</td>
<td>bebed ‘badn, tie, bandage’</td>
<td><em>ka-bebed</em> ‘bound, entwined’</td>
</tr>
<tr>
<td></td>
<td><em>dawut</em> ‘pull out, uproot’</td>
<td><em>ka-dawut</em> ‘uprooted’</td>
</tr>
<tr>
<td>Fijian</td>
<td>basu ‘break, open a person’s eyes or mouth’</td>
<td><em>ka-basu</em> ‘torn open’</td>
</tr>
</tbody>
</table>

1.7 Inchoative

- The inchoative function claimed by Ferrell (1982, p.91-92) and Starosta (1995) is by far the most weakly attested of all those discussed here.
- Blust cites only two examples with the second one, from Paiwan, not being an easy fit:

(8) Thao
    a. ma-bazay
       ‘be worn and thin, as clothing’
    b. *ka-bazay
       ‘become worn and thin, as clothing’

(9) Paiwan
    a. vala
       ‘fortunate’
    b. *ka-vala
       ‘feel something to be fortunate’
• Yeh (2000) provides another good inchoative example from Li’s description of Tanan Rukai. Note though that ka- only appears in the Irrealis and is difficult to differentiate from ‘will be tall’ without further context.

(10)  
\textit{Tanan Rukai} (Li 1973: 214, Yeh 2000:32)  
a. ma-biliŋ ku-ani aŋatu  
\textbf{MA-tall that tree}  
‘That tree is tall.’  
b. *ay-ma-biliŋ ku-ani aŋatu  
\textbf{will-MA-tall that tree}  
c. ay-ka-biliŋ ku-ani aŋatu  
\textbf{will-KA-tall that tree}  
‘That tree will get tall.’

1.8 The empirical data thus far

• Generally, ka- “replaces” ma- in all contexts where \texttt{<um>} cannot appear or appears earlier in the word.

• This includes certain (irrealis) moods as well as environments where ka- is simply not word initial.

(11)  
\textit{Pazeh} (Li and Tsuchida, 2002; Wolff, 2009)  
a. Ini ma-ngesel aku  
\textbf{NEG afraid 1SG.NOM}  
‘I am not afraid.’  
b. Pa-ka-ngesel-i  
\textbf{CAUS-STA-fear-IMP}  
‘Cause (him) to be afraid.’

• It is more profitable to look for commonalities between environments where \texttt{actor voice} \texttt{<um>} cannot appear rather than where ka- does appear.

2 PAn *ka- as have’

• What is have’?
– Not a full lexical verb but rather a functional element that signals that one argument is in
the possession of another argument.
– A universal atom of meaning which combines with other lexical and functional material to
form complex predicates.

• Some comparative evidence for reconstructing *\textit{ka-} as \textit{have'} (Kaufman, 2011):

\begin{enumerate}
\item \textbf{Tagalog} (Usup et al., 1981)
\begin{verbatim}
(12) mag-ka-pera
    \textit{AV-have-money} 'to have money'
\end{verbatim}
\item \textbf{Bolaang-Mongondow} (Usup et al., 1981)
\begin{verbatim}
(13) ko-put
    \textit{have-tail} 'to have a tail'
\end{verbatim}
\item \textbf{Pendau} (Quick, 2003, p.139)
\begin{verbatim}
(14) a’u nday ’o-piso
    1SG.NOM NEG \textit{have-knife} 'I have a machete'
\end{verbatim}
\item \textbf{Murut} (Prentice, 1971, p.252)
\begin{verbatim}
(15) ati-ati puluʔ-rali, maka-ulun noyo bagu whichever headland-DET.PL AV.NOM-EXT-person already PRT
    'As for whichever were the headlands, there were people (there).' 
\end{verbatim}
\item \textbf{Bugis} (Sirk, 1996, p.170)
\begin{verbatim}
(16) Nakko əngka tau-pa-sala
    if EXT person-TR-sin 'If there is a guilty person'
\end{verbatim}
\item \textbf{Wolio} (Anceaux, 1988, p.14)
\begin{verbatim}
(17) ko-bulu
    \textit{have-hair} 'to be hairy'
\end{verbatim}
\item \textbf{Nabay} (Cohen, 1999)
\begin{verbatim}
(18) ma-ka-talingo aku
    AV-\textit{have’-ear} 1SG.NOM 'I have ears.'
\end{verbatim}
\item \textbf{Bunun} (De Busser, 2009)
\begin{verbatim}
(19) a. ka-las
    \textit{have’-fruit} 'grow fruits (of plants)'
\end{verbatim}
\begin{verbatim}
(19) b. ka-puaq
    \textit{have’-flower} 'bloom'
\end{verbatim}
\end{enumerate}
• Forms like Wolio \textit{ko-bulu} do not have a stative meaning (‘to be hair’), nor an inchoative meaning
(‘to become hair’), nor an achieved state meaning.

- Knowing what we know about grammaticalization, it is very difficult to imagine how semantically complex functions such as those seen earlier could lead to have’.
- Conversely, I argue that deriving all these functions from the simpler have’ is highly plausible and has excellent analogues in unrelated languages.

2.1 The evolution of *ka-

- Comparative evidence supports the following functional expansion of have’:

```
      PAn *ka- have'
     /       \
    [+-DYNAMIC] [+-DYNAMIC]
   /           \
POSSESSIVE     ACHIEVEMENT
 /           /
[-VOLITIONAL]   [+VOLITIONAL]
EXPERIENCER    ACCIDENTAL ABILITATIVE PERFECT
```

2.1.1 From have’ to experiencer predicate

- The canonical complement of have’ denotes something within the subject’s “domain”.
- This can be a property (‘to have intelligence’) or a concrete entity (‘to have a horse’).
- Austronesian roots appear to have been inherently entity-denoting, as suggested by unexpected interpretations of bare roots across Philippine and several Formosan languages (Kaufman, 2009a). This can be gleaned from the ACD (Blust, 1995/2011) entry for *takut.
Roots that denoted emotions like *\textit{takut} would thus require an extra semantic step before being able to predicate directly with a subject as a property, i.e. fear $\rightarrow$ afraid.

Noonan (1993) and Harley (1995) argue that the subjects of psychological predicates are possessors, as is transparently the case in languages like French.

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\end{itemize}

\begin{itemize}
\item If *\textit{k<um>a-} is the \textsc{actor voice} of \textit{have}’ then the following forms mean, just as in French, ‘to have fear’.
\end{itemize}
2.1.2 From have’ to accidental

- The basis for the extension of have’ from experiencer predicates to accidental actions is clear.
- Emotion and and other experiencer predicates are characterized by the subject’s lack of control.
- If lack-of-control is taken to be the criterial feature of have’ predicates then its use in constructions like (21) is predicted.

(21)  
Tagalog
Halos na-lúnod si Juanito  
almost have’-drown P.NOM Juanito  
‘Juanito almost drowned.’

(22)  
Malay
Susanto hampir ke-tenggelam  
Susanto almost have’-drown  
‘Susanto almost drowned.’

- The same extension has been made with English get as can be seen in the difference between the two passives in (23).

(23)  
UNINTENTIONAL get  
a. John got hit [-intentional]  
b. John was hit [+intentional]

2.1.3 From have’ to abilitative

- The expression of both an accidental and abilitative function by a single morpheme has often been considered to be an unnatural state of affairs. At the same time, the connection between the two has been surprisingly persistent, even holding over unrelated morphemes such as Malay ter- (e.g. ter-makan ‘accidentally eaten/edible’, tak ter-makan ‘inedible/not accidentally eaten’).
- It has been noted by others that a similar semantic overlap exist in Salish languages.
• In fact, English provides evidence from the get construction in (24) that have’ can be responsible for both functions cross-linguistically.

(24) **ABILITATIVE get**
    to get to talk = to be able to talk

• Garifuna, an Arawakan language of Central America, also shows the same dual function (also coincidentally stemming from an earlier existential ka- prefix).

• In (25), we see a regular verb with ga- have’ and an entity-denoting root seinsu ‘money’. When combined, the resulting verb means, as expected, ‘to have money’.

• When combined with an event-denoting root, however, ga- is interpreted with an abilitative function, yielding ‘I can sing’ from eremuha ‘sing’.

(25) **Garifuna**
    ga-seinsu-tina
    **have-money-1SG**
    ‘I have money.’

(26) **Garifuna**
    a. eremuha-tina
    sing-1SG
    ‘I sing.’
    b. g-eremuha-tina
    **have-sing-1SG**
    ‘I can sing.’

2.1.4 **From have’ to achievement to perfect**

• The grammaticalization of have’ to perfect(ive) has been the most discussed cross-linguistically, featuring prominently in the history of the Romance and Germanic languages.

(27) **Latin**
    Ego librum scriptum habeo
    1SG.NOM book.ACC written have
    ‘I have written a book.’

• For Tagalog, Dell (1983-84) and Travis (2000b,a, 2005) identify ka- as relating to telicity (see also Zorc n.d. who identifies *ka- as a Proto-Philippines perfective).
• The path from have’ to accomplishment goes via the meaning of “possessing” an entire event in one’s domain. Uses such as that in (28) are ubiquitous throughout Austronesian.

• Note the equivalence of the English paraphrase with have’

(28) Nabay (Cohen p.21)

Pakapadusu’ poiyo iro, paka-kito iro du dipo.

after at.af.swim incom 3p.f at.af-see they nm snake.o

‘After they went swimming, they happened to see a snake.’

‘Having gone swimming...’

• Blust (2003:447) ventures that the “past participle” function of *ka- only developed in PMP but evidence from Rukai such as the following suggest that it was already present in PAN:

(29) Rukai (Zeitoun, 1997; Yeh, 2000, p.132-133)

a. sa-maka-twatum-naku ka watan-naku ku aga
when/if-finish-work-1s.nom will eat-1s.nom obl rice

‘When I finished working, I ate.’

b. nu-maka-twatum-naku ka aykan-naku ku aga
when/if-finish-work-1s.nom will eat-1s.nom obl rice

‘When I finish working, I will eat.’

2.2 *ka- in the Actor Voice

• k<um>a- predicates in Austronesian are the only predicates containing <um> yet assigning an undergoer role to their subject.

• How then could actual actors be introduced? With causative *pa- (cf. Starosta 1995:701).

• This explains the widespread alternations between non-actor voice ma-/ka- and actor voice maka-/paka- (Himmelmann and Wolff, 1999).
3 Tagalog ka-

- Tagalog possesses two broad types of ma- formations:
  - ganda-type: ma-ganda ‘beautiful’, ma-taas ‘tall’...
  - putol-type ma-pútol ‘to get cut off’, ma-túlog ‘to sleep’, ma-básag ‘to break’...
- These two classes possess very distinct morphosyntactic behaviors.
Table 2: Two types of ma- predicates in Tagalog

<table>
<thead>
<tr>
<th>Morpheme</th>
<th>√GANDA ‘beauty’</th>
<th>√PÚTOL ‘a cut of s.t.’</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma-</td>
<td>ma-ganda</td>
<td>ma-pútol</td>
</tr>
<tr>
<td>AV:have’</td>
<td>‘beautiful’</td>
<td>‘X to get cut’</td>
</tr>
<tr>
<td>na-</td>
<td>*na-ganda</td>
<td>na-pútol</td>
</tr>
<tr>
<td>AV:PRF:have’</td>
<td></td>
<td>‘X got cut’</td>
</tr>
<tr>
<td>&lt;um&gt;</td>
<td>g&lt;um&gt;anda</td>
<td>p&lt;um&gt;útol</td>
</tr>
<tr>
<td>AV</td>
<td>‘to become beautiful’</td>
<td>‘X to cut’</td>
</tr>
<tr>
<td>-in</td>
<td>*ganda-hin</td>
<td>putúl-in</td>
</tr>
<tr>
<td>BEG</td>
<td></td>
<td>‘to cut X’</td>
</tr>
<tr>
<td>ma- -han</td>
<td>ma-ganda-han</td>
<td>ma-pútal-an</td>
</tr>
<tr>
<td>AV:have’-LV</td>
<td></td>
<td>‘X to feel obl. is beautiful’</td>
</tr>
<tr>
<td>nápaka-</td>
<td>nápaka-ganda</td>
<td>*nápakaputol</td>
</tr>
<tr>
<td>EXCLM</td>
<td></td>
<td>‘how beautiful!’</td>
</tr>
<tr>
<td>ang</td>
<td>ang ganda!</td>
<td>*ang putol!</td>
</tr>
<tr>
<td>NOM</td>
<td>‘how beautiful!’</td>
<td></td>
</tr>
<tr>
<td>PL</td>
<td>ma-ga-ganda</td>
<td>m&lt;añ&gt;a-pútol</td>
</tr>
<tr>
<td></td>
<td>‘beautiful (pl.)’</td>
<td>‘X to get cut (pl.)’</td>
</tr>
<tr>
<td>RESULTATIVE</td>
<td>*ganda</td>
<td>putol</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘cut’ (as in ‘The branch is cut’)</td>
</tr>
</tbody>
</table>

Explanandum:

1. Why does only the ganda-type allow for exclamatives with nápaka and ang?
2. Why can’t the ganda-type predicates take aspectual inflection with na-?
3. Why are ganda-type ACTOR VOICE predicates inchoatives while putol-type predicates transitive?
4. Why are only putol-type predicates compatible with PATIENT VOICE?
5. Why does only the ganda-type allow for experiencer subject construction (w/ ma- -an)?
6. Why do only putol-type predicates allow for the length deleting resultative?

- Today’s answer:
  - the ganda-type predicates which do not take direct aspect inflection are relational nouns which project a possessor. They require have$^{\text{Poss}}$, a productive morpheme which functions much like an applicative in promoting a possessor to subject.
– All other examples take the other flavor of have' which serves to license experiencers in addition to contributing the non-volitional and potentiive semantics associated with ka-forms.
– The most important functional split of PAn *ka-have' was [+DYNAMIC] and [-DYNAMIC]

3.1 Sabbagh 2011: unergative and unaccusative adjectives

• Sabbagh (2011) notes the ban on putol-type exclamatives:

(30) a. napaka-ganda niya! exclm-beautiful 3SG.GEN
   'How beautiful she is!'
   b. ang ganda niya! nom-beauty 3SG.GEN
   'How beautiful she is!'

(31) a. *napaka-basag niya! exclm-broken 3SG.GEN
   b. *ang basag niya! nom-broken 3SG.GEN

• This is taken as evidence of two adjectival classes in Tagalog: unergative (ganda-type) and unaccusative (putol-type).

• The adjectival category head a does not assign case
• When T is active, the unaccusative argument of an adjectival passive can raise to get case (presumably at LF)
• Case from T is unavailable in “impersonal constructions” (where the subject surfaces with genitive case)
• T cannot agree with the unaccusative subject because it’s locked in its phase.

• A related phenomenon that Sabbagh tackles is the asymmetric behavior with the equative comparative *kasing-.

(34) Kasing-talino ni Elena si Maria
   equal-intelligence p.gen Elena p.nom Maria
   ‘Maria is as intelligent as Elena.’

(35) *Kasing-pagod ni Elena si Maria
   equal-tired p.gen Elena p.nom Maria
   for, ‘Elena is as tired as Maria.’

• Here the explanation is a little different but still relies on the fact that the subject of ma- adjectives is an external argument
  – Confusingly, both arguments in (34) are treated by Sabbagh as nominative despite one sur-
    facing with genitive case.
  – It is unclear how the argument in Spec,aP can obtain nominative case. A suggestion in a
    footnote alludes to multiple agree but this would be difficult to reconcile with the rest of the
    analysis.

• Essentially anything in Spec,aP can be licensed but unaccusative adjectival arguments require
  special conditions.
• An immediate problem with the locality approach to this problem is that the same facts hold when there is no competition.

• A reflexive comparative exists, *magkasing- in which a single plural argument occupies subject position

• But as seen in (37), the “unaccusative” adjectives are equally bad here.

(36) mag-kasing-talino ang dalawang babae
\[
\text{REFL-EQUAL-intelligent NOM two:LNK woman}
\]
‘The two women are equally smart.’

(37) *mag-kasing-pagod ang dalawang babae
\[
\text{REFL-EQUAL-tired NOM two:LNK woman}
\]
(for, ‘The two women are equally tired.’)

(38)
\[
\text{DegP} \\
\text{DP} \quad \text{Deg'} \\
\text{si Maria} \\
\text{Deg} \quad aP \\
\text{kasing-} \\
\text{DP} \quad a' \\
\text{ni Elena} \quad \text{a AP} \\
\text{talino}
\]

• Similarly, the superlative construction cannot be classified as ‘impersonal’, it does not involve any genitive (“accusative”) arguments but rather takes the form of a copular sentence with two nominative phrases. Nonetheless, it only allows *ganda*-type predicates:

(39) a. Si Kenkoy ang pinaka-magaling
\[
\text{P.NOM Kenkoy NOM SUPERLAT-great}
\]
‘Kenkoy is the greatest.’

b. *Si Kenkoy ang pinaka-pagod
\[
\text{P.NOM Kenkoy NOM SUPERLAT-great}
\]
‘Kenkoy is the most tired.’
Finally, T appears completely irrelevant to the licensing of “unaccusative” subjects. They are perfectly at home in embedded clauses where we would imagine T to be defective, as in (40).

(40)  
gusto ko=ng tapos na ang lahat
want 1SG.GEN=LNK finish already NOM all
'I want it to be all finished.'

3.2 An alternative account

3.2.1 ganda-type roots

• The first thing to notice about the above cases is the presence of ka- in all the constructions: napaka-, kasing, pinaka-.

• The case is further strengthened by (41), another type of comparative construction in which the subject has no competition and takes nominative case.

(41)  
a. ganito ka-tangkad si Maria
like.this have'-height P.NOM Maria
'Maria is this tall.'

b. *ganito ka-pagod si Maria
like.this have'-tired P.NOM Maria

• Pelaez-Soberano (1977) shows data from other Tagalog dialects in which the one consistent element in the napaka- construction is ka-:

(42)  
a. napaka-laki ‘how big!’
Manila Tagalog
b. paka-laki ‘how big!’
Western Marinduque
c. maka-laki ‘how big!’
Eastern Marinduque

• Having observed the consistent alternation between ma- and ka- across Austronesian languages it seems clear that this ka- is none else then have’ minus ACTOR VOICE <um>.
Because it is only the *ganda*-type roots that take *have* in their property denoting predicate function, it is expected that only these roots will be able to take *ka*.

But why do they need it? They are essentially relational nouns which are inherently evaluative. The evaluated argument is projected as a possessor.

One apparent exception to the morphological generalization involving *ka* are the bare exclamatives:
Case is not the problem here. Exclamatives of the above type are a unique property of evaluative nouns in Tagalog.

- Only *yaman* 'wealth' belongs to the *ganda* class of relational nouns.
- *Pera* 'money' is a run of the mill entity-denoting noun and thus does not project an evaluated argument as a possessor.

3.2.2 *putol*-type roots and psych predicates

- Sabbagh’s *putol* type “adjectives” actually belong to two distinct classes: psych-predicates (e.g. *gálit* ‘anger’) and ordinary bivalent predicates (e.g. *pútol* ‘cut’).
- These show different behavior and are posited here to project two different structures.
- Psych-predicates do not project an Agent but rather an Experiencer, as expected.
(52)

TP

PredP

PredP

PredP

AspP

Asp

VoiceP

<\textit{um}>

\textit{Have}^{\textit{ExpP}}

ka-

\textit{tuwa}[\textit{Efft,Exp}]

sa iyo

si Maria

\textit{Have}^{\textit{ExpP}}

\textit{have'-happy Obl 2sg P.NOM Maria}

'\textit{Maria was pleased with you.'}

(53)

TP

PredP

T'

PredP

T

DP

Asp

VoiceP

<\textit{um}>

\textit{Have}^{\textit{ExpP}}

ka-

\textit{ni Maria ang kahoy}

\textit{pútol}[\textit{Agt,Pat}]

\textit{Maria(could/accidentally) cut the wood.'}
Q: How is the structure in (53) possible if <um> typically selects the highest argument as ang phrase?
A: The Actor is introduced low and <um> selects the (experiencer) argument of have' not pútol. Additional evidence for this is the licensing of Actors without any voice morphology at all:

(54) pútol/kúha/sábi ni Maria
    cut/take/say     P.Gen Maria
    ‘the cut/taken/said thing of Maria’ (what Maria cut/took/said)

Q: How do we know the effector is projected by the root?
A: Because the effector is licensed with bare roots and resultatives:

(55) tuwa=ng tuwa ako sa iyo
    happy=LNK happy 1SG.NOM OBL 2SG
    ‘I’m very happy due to you.’
(56) *masaya=ng masaya ako sa iyo
    happy=LNK happy 1SG.NOM OBL 2SG
    (cf. English ‘I’m very happy by you’)

Q: Why can’t the ganda-type predicates take aspectual inflection with na-?
A: Possession is inherently stative. Experience is not.

(57) Hebrew (Folli et al 2005:1379)

a. Kimea ye sag dâr-e
    K. one dog have-3sg
    ‘Kimea has a dog.’
b. ‘Kimea dâr-e ye sag dâr-e
    K. have-3sg one dog have-3sg
    (Lit. ‘Kimea is having a dog.’)

(58) Hebrew (Folli et al 2005:1379)

a. Kimea Papar-o dust dâr-e
    K. P.-scf friend have-3sg
    ‘Kimea loves Papar.’
b. ‘Kimea dâr-e Papar-o dust dâr-e
    K. have-3sg P.-scf friend have-3sg
    (Lit. ‘Kimea is having love Papar.’)

3.2.3 Resultative length-deletion

- Sabbagh (2011) treats resultatives as inherently unaccusative adjectives but they are derived by a morphological process which removes vowel length (if present) from the root (and occasionally adds CV-reduplication when combining with voice).

- This morpheme, which I take to be the only real adjectival head in Tagalog is only compatible with roots that project Patients or Experiencers.
AFLA 19, Academia Sinica  

Predicate classes and PAn *ka-

Kaufman

<table>
<thead>
<tr>
<th>derivation</th>
<th>form</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>√_{Agt,Pat}</td>
<td>súnog</td>
<td>‘fire’</td>
</tr>
<tr>
<td>a &gt; √_{Agt,Pat}</td>
<td>sunog</td>
<td>‘burnt’</td>
</tr>
<tr>
<td>Asp_{In,f} &gt; Voice_{Pat} &gt; √_{Agt,Pat}</td>
<td>sunús-in</td>
<td>‘thing to be burnt’</td>
</tr>
<tr>
<td>Asp_{Pr,f} &gt; Voice_{Pat} &gt; √_{Agt,Pat}</td>
<td>s&lt;in&gt;unog</td>
<td>‘thing that was burnt’</td>
</tr>
<tr>
<td>a &gt; Voice_{Pat} &gt; √_{Agt,Pat}</td>
<td>sunúg-in</td>
<td>‘thing to be burnt’</td>
</tr>
<tr>
<td>*Asp_{Pr,f} &gt; a &gt; Voice_{Pat} &gt; √_{Agt,Pat}</td>
<td>*s&lt;in&gt;unog</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: a derivations with √_{Agt,Pat}

<table>
<thead>
<tr>
<th>derivation</th>
<th>form</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>√_{Poss}</td>
<td>yáman</td>
<td>‘wealth’</td>
</tr>
<tr>
<td>a &gt; √_{Poss}</td>
<td>‘yaman</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: No a derivations with √_{Poss}

- Can we derive this behavior from what we have seen so far?
- a searches for a patient/experiencer. If it attaches low to a relational noun (or any entity-denoting root) there is nothing for it to apply to.

(59) \[nP\]

(60) \[^aP\]

- The a morpheme incidentally also shows us where Agents come from: AspP.
- Because Aspect in Tagalog (which is historically inherited from a nominal category) cannot take an adjectival complement, genitive phrases associated with higher aP can only be interpreted as possessors, never Agents.

(61) Hindi ko ba~basá-hin ang ba~basa-hin-μ ko
    NEG 1SG.GEN IMPRF-read-PV NOM a~read-PV-a 1SG.GEN

23
'I won’t read my readings.'

- The resultative’s selection of Patient/Experiencer explains the overlap between roots which are compatible with length deletion and those compatible with Patient voice and experiencer ma- (cf. Sabbagh 2011:1430).

sunúg-in ‘to burn X’, sunog ‘burnt’, patay-in ‘to kill X’, patay ‘dead’
ma-tulog ‘to sleep’, tulog ‘asleep’, ma-tuwa ‘to be happy’ tuwa ‘happy’

3.2.4 A more complete picture

- The challenge is deriving the behavior of the various root classes from their theta-grids, as this must be given on all theories.

<table>
<thead>
<tr>
<th>Form</th>
<th>Gloss</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;um&gt;-in</td>
<td>ACTOR VOICE</td>
<td>selects highest argument</td>
</tr>
<tr>
<td>ka-length-deletion</td>
<td>have’</td>
<td>introduces POSSESSOR/EXPERIENCER</td>
</tr>
<tr>
<td></td>
<td>RESULTATIVE</td>
<td>selects EXPERIENCER/PATIENT</td>
</tr>
</tbody>
</table>

Table 5: Essential morphology

Examples | Roles | PV | AV | have’-AV | have’-AV-ASP | RESULT |
---|---|---|---|---|---|---|
√SAYA (happy) | poss! | *saya-hin | s<um>aya | ma-saya | *na-sa-saya | *saya |
√TUWAʔ (happy) | EFCTR, EXP | *tuwa-in | *t<um>uwa | *ma-tuwa | na-tu-tuwa | tuwa |
√GÁLITʔ (anger) | EFCTR, EXP | galit-in | g<um>álit | *ma-gálit | na-ga-gálit | galit |
√PÚTOL (break) | AGT, PAT | putúl-in | p<um>útol | #ma-pútol | na-pu-pútol | putol |

Table 6: Four root types

Q: Why is *tumuwa bad?

A: The experiencer has to be introduced by the higher head have’ and the effector, while semantically licensed by the root, is introduced as a high adjunct. This means that if <um> attaches directly to a “pure” psych predicate like tuwa, no arguments are visible yet and the experiencer role remains unlicensed.
Q: A more difficult question: Why is s<um>aya ‘to become happy’ good?

A: This tells us a lot about what <um> does. It doesn’t only choose the highest argument in its scope. It can seemingly add an argument as well, <um>ulan ‘to rain’, b<um>áhay ‘to house’, l<um>úpa ‘to ground’. Because relational nouns require Have_Poss, they cannot take ka- and then go on to attach to aspect. But they can take <um> directly because they got nothin’ (thematic) to lose.

- **Historical note**: The use of <um> to form inchoatives has been argued by Blust (2003) to be innovation that characterizes PMP.

- Relatedly, we have a solution for why ganda type predicates can never take objects in their “verbal” incarnation.

(63) g<um>-anda siya (*ng kwarto)
    <AV>beauty 3s.NOM GEN room
    (For, she beautified the room)

- This is unexpected if they are plain “unergatives” (ala Sabbagh 2011):

(64) t<um>-akbo ako ng marathon
    <AV>run 1sg.NOM GEN marathon
    ‘I ran a marathon’

- But if they differ precisely in not projecting an External Argument, the behavior in (63) is predicted trivially by Burzio’s generalization (no external argument → no object).

Q: Why can experiencer predicates, e.g. √GÁLIT above, take PV and AV morphology?
Examples Roles PV AV have′-AV have′-AV-ASP RESULT
√TUWAʔ (happy) EFCTR, EXP *tuwa-in *tuwa-in *ma-tuwa na-tu-tuwa tuwa
√GÁLIT (anger) EFCTR, EXP galit-in g<um>álit *ma-gálit na-ga-gálit galit

Table 7: √TUWAʔ versus √GÁLIT

A: Exceptional affectedness or volition with experiencer predicates allows for the following transformation on thematic roles:

\[
\begin{align*}
\text{EFFECTOR,} & \quad \downarrow \quad \downarrow \\
\text{EXPERIENCER} & \quad \downarrow \\
\text{AGENT,} & \quad \text{PATIENT} \\
\end{align*}
\]

(67) Transposition

(68) Transposition

• It should be noted that this operation does not exist in all Phil. languages and its very unclear what happened in PAn or PMP when <um> attached to experiencer predicates.

(69) Tagalog

(70) Pangasinan

(71) Paiwan (Hsieh, 2011, p.84)
a. na-d<em>udu timadju aravac. PFV-<AF>angry 3SG.NOM very

26
‘He is very vexatious.’
b.  r<em>ekutj timadju.
<AF>fear 3SG.NOM
‘He is formidable.’ ‘He is dreadful.’

- If the root itself is an object of have’, we expect that the root cannot take any direct complements. This seems to be overwhelmingly the case and accounts for why we don’t have *ka- -in have’ -pv. The behavior is thus identical to the lack of pv with incorporation in Tagalog (NB: rare!).

(72)  i-p<in>ag-dalang-tao ni Rhea sina Romulus at Remus
    CV<BEG>-carry:LNK-person P.GEN Rhea P.NOM.PL Romulus and Remus
    ‘Rhea was pregnant with (lit. person-carried) Romulus and Remus.’
    (http://tl.wikipedia.org/wiki/Romulus_at_Remus)

- There is one more important morphological combination which we have not accounted for yet here: ma- -an

(73) na-ganda-han ako sa iyo
    AV.BEG:have’-beauty-LV 1SG.NOM OBL 2SG
    ‘I felt that you’re beautiful.’
    (Lit. there was beauty to me with you)

(74) *na-galit-an ako sa iyo
    AV.BEG:have’-anger-LV 1SG.NOM OBL 2SG

- A fully compositional analysis of this remains to be worked out in detail but we can preliminarily posit the following ingredients:
  1. attachment of -an introduces a recipient
  2. attachment of ka-: recipient → experiencer
  3. crucially, the introduction of a recipient yields a dynamic interpretation which requires Have_{Exp} instead of Have_{Poss}.

### 3.3 Hidden treats

#### 3.3.1 Binding

- Two AFLAs ago, I presented arguments against a structural account of binding in Tagalog on the basis of data similar to that first discussed by Dell (1983-84) and Kroeger (1993):
(75) a.  t<in>alo ni Tyson ang sarili niya
    <BEG>defeat:PV P.GEN Tyson NOM self 3S.GEN
    ‘Tyson defeated himself.’

    b. *?t<in>alo si Tyson ng sarili niya
    <BEG>defeat:PV P.NOM Tyson GEN self 3S.GEN
    (‘Himself defeated Tyson.’)

(76) a.  na-talo ni Tyson ang sarili niya
    AV.BEG:have‘-defeat P.GEN Tyson NOM self 3S.GEN
    ‘Tyson defeated himself.’

    b. na-talo si Tyson ng sarili niya
    AV.BEG:have‘-defeat P.NOM Tyson GEN self 3S.GEN
    (‘Himself defeated Tyson.’)

• There is further evidence in the control facts.

(77) a.  ayaw ko=ng halik-an PRO<sub>Gen/Erg</sub>
    not.like 1S.GEN=LNK kiss-LV
    ‘I don’t want to kiss X.’

    b. ayaw ko=ng ma-halik-an PRO<sub>Nom/Abs</sub>
    not.like 1S.GEN=LNK AV:have‘-kiss-LV
    ‘I don’t want to be kissed.’

• But the above facts make perfect sense even on a strict syntactic analysis if mahalikan is an ACTOR
  VOICE/ANTIPASSIVE predicate.

• Having said that, ma- forms appear to allow both possibilities given the right context:

(78) a.  ayaw ni Maria<sub>1</sub>=ng ma-pansin ni Jojo PRO<sub>i</sub>
    not.want P.GEN Maria=LNK AV:have‘-notice P.GEN Jojo
    ‘Maria doesn’t want to be noticed by Jojo.’

    b. ayaw ni Maria<sub>1</sub>=ng ma-pansin PRO<sub>i</sub> si Jojo
    not.want P.GEN Maria=LNK AV:have‘-notice P.NOM Jojo
    ‘Maria doesn’t want to notice Jojo.’

• Of course, experiencers have posed notorious and well-discussed problems for binding theory:

(79) a.  Pictures of himself always make John uncomfortable

    b. Pictures of John always make him uncomfortable
3.3.2 Historical morphology

• If ‘*ka-’ was have’ it starts to look very similar to ‘*ki-’, shown by Zeitoun and Teng (2009) to function as a genuine get-passive in several Formosan languages.

• Blust (2003) discusses a PAn morphological trichotomy:
  - pu- causative of motion
  - pi- causative of location
  - pa- general causative

• ACTOR VOICE counterparts seem to have existed for all of them:
  - mu- motion verb
  - mi- location verb??
  - ma- active

• This open up the intriguing possibility that Zeitoun & Teng’s get-passive ki- is actually:

\[(80) \quad \text{k(a)-i} \]
\[
\text{have'-loc} \quad \text{get}
\]

An almost perfectly compositional derivation!

References


Marantz, Alec. 1998. *No escape from syntax: don’t try morphological analysis in the privacy of your own lexicon.*


