1. Introduction

Case-marking variation in some Formosan languages:

(1) Katripulr Puyuma NOM ACC/OBL (Teng 2018: 43)
   Personal.SG i kani
   Personal.PL na kana
   Common+[SPEC] na za (Da in Nanwang)
   Common[-SPEC] a za (Da in Nanwang)

Nanwang Puyuma (Teng 2008)

(2) a. tr<em>akaw</em> Da paisu i isaw
   <INTR>steal OBL money SG.NOM.PN Isaw
   ‘Isaw stole money.’
   b. tu=trakaw-aw na paisu kan isaw
   3.GEN=steal-TR1 NOM.SPEC money SG.OBL.PN Isaw
   ‘Isaw stole the money.’
   c. Dua me-nau-a a mia-Dua a Tau i, …
   come INTR-see-PJ NOM.NSPEC PRS-2 NOM.NSPEC person TOP
   ‘Two people came to see ….’

(3) Tanan Rukai NOM ACC/OBL
   Personal ku ki
   Common+[VIS] ka ini-a/na
   Common[-VIS] ka iDa-a/sa

Tanan Rukai

(4) a. luòa ay-kila ku tina=li
   tomorrow FUT-come NOM.PN mother=1SG.GEN
   ‘My mom will come tomorrow.’
   b. aw-ciil-aku iDa-a tau’ung
   PAST-see-1SG.NOM DEF.INVIS-ACC dog
   ‘I saw the dog.’
   c. aw-ciil-aku ki tama-li
   PAST-see-1SG.NOM DAT.PN father-1SG.GEN
   ‘I saw my father.’
   d. kaDua ka anewa
   not.exist NOM.CN who
   ‘Noone is there.’

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Based on author’s fieldnotes, but heavily informed by Li (1973).
(5) Amis NOM ACC/OBL (Wu 2000: 64)

Personal.SG  ci  ci...an
Personal.PL  ca  ca...an
Common  ku  tu

Amis (Wu 2006)

(6) a. Mi-palu  ci  sawmah  ci  mayaw-an.   (p. 166)
   AV-beat NOM.PN Sawmah PN Mayaw-ACC
   ‘Sawmah is going to beat Mayaw.’
   ‘Sawmah is beating Mayaw.’

b. R<um>akat  ku  mitiliday.   (p. 81)
   <NEUT>walk NOM.CN student
   ‘The student is walking.’

c. Ccay  tu  tatukian  mi-tepoc  ci-ngra
   one  ASP  hour  AV-chop.down.at.once  3SG.NOM
   tu-ra  ‘aol.
   ACC.CN-that bamboo
   ‘He has been chopping down those bamboos for an hour.’

(7) Key points
1. Different marking for personal (PN) and common nouns (CN)
2. Variation in PN NOM: i (Puyuma), ku (Rukai), ci (Amis)
3. Variation in CN NOM: a (Puyuma), ka (Tanan), ku (Amis)
4. PN ACC tends to be k- or –a(n)

Proposed Proto-Austronesian (PAn) reconstruction:
=> Subjects are bare DPs.
=> CN ACC markers are demonstratives.
=> PN ACC marker is a nominalizer.
=> PN vs CN is a consequence of semantic type/syntactic category (DP vs NP).

(8) PAN DET NOM ACC TOP

Personal  *i  *i  *-an  *k-
Common[+SPEC]  *u  *u  *DEM-an  *k-
Common[-SPEC]  *a  *a

(9) Austronesian (Accusative alignment) (Aldridge 2015, 2016)

Rukai Ergative An (Irrealis > ergative)
Tsou Puyuma Nuclear An (Nominalization > ergative)
2. Previous approaches

2.2. Ross (2006)

(10) PAn  DET  NOM  ACC
Personal  *i  *k-  *C^2-
Common  *a  *k-  *C-  (But *C- CN.ACC reflected only in NucAn)

Evidence
Full *k- NOM marking: Only in Rukai (Tanan ku PN.NOM & ka CN.NOM)
CN.NOM *k widely reflected in Formosan languages
*C- ACC: Nuclear An subgroup (e.g. Amis CN.ACC tu)

Problems:
No evidence for *ki PN.NOM
No evidence for *C- PN.ACC
No evidence for *C- CN.ACC in non-NucAn languages

2.2. Blust (2015)

(11) PAn  NOM  ACC
Personal.SG  *si  *ki  (But *s- PN.NOM reflected only in NucAn)
Personal.PL  *sa  *ka
Common  *su  *ku

Evidence
Full *s- NOM paradigm: Old Bikol & Subanen (Philippine languages)
*s- PN.NOM: Nuclear An subgroup (Ross 2009)
=> Tagalog si PN.NOM (a CN.NOM); Amis ci PN.NOM.SG & ca PN.NOM.PL (ku CN.NOM)
*ki PN.ACC: Rukai, Mayrinax Atayal, Saisisyat, various MP languages

Problems:
Dearth of evidence for *s- CN.NOM (none outside MP)
No evidence for *s- PN.NOM in non-NucAn languages
No evidence for *k- CN.ACC

Possible conclusions:

(12) PAn  NOM  ACC
Personal  ?  *ki
Common  *k-  ?

(13) PNucAn  NOM  ACC
Personal  *s-  *ki
Common  *k-  *C-

2 Ross (1992) reconstructs *C as a dental affricate.
3. Reconstruction and development of TOP *k-

3.1. PAN NOM & TOP marking

(14) PAN DET/NOM ACC TOP
    Personal    *i   *-an   *k-
    Common[+SPEC]    *u   *DEM-an   *k-
    Common[-SPEC]    *a

PAn as a differential object marking (DOM) accusative language:
    => Common cross linguistic pattern

    Turkish (Cagri 2005: 78)
        ‘Ali read a book.’
        ‘Ali read the book.’

Contemporary NOM markers: Puyuma    Tanan Rukai  Amis
PN:    i (SG), na (PL)    k-u    c-i (SG), c-a (PL)
CN:    na (SPEC), a (NSPEC)    k-a    k-u

Determiners *i, *u, *a:
1. *i D/NOM PN reflected in Puyuma, Atayalic, Kavalan pronouns
2. *a D/NOM CN: Puyuma, Paiwan, some MP languages
3. Pervasive opposition of –i PN vs. –a or –u (–o) CN
    e.g. GEN PN ni vs. GEN CN na (Paiwan, Kavalan); GEN PN ni vs. GEN CN no (Amis)
4. Amis neutral CN marker u (Wu 2006, Ross 2006)

D[SPEC] *u & D[-SPEC] *a:
1. Puyuma a (NOM CN NonSpec)
2. Tanan Rukai ku (NOM PN) vs. ka (NOM CN)
3. Tona Rukai ko (CN DEF) vs. na (CN INDEF)

*k- as TOP
Pronouns in Rukai dialects have a reflex of *k- only when topicalized.

(16) Tanan  TOP NOM ACC GEN  (Li 1996: 210-211)
    1SG  ku-n-aku -nak-  n-aku-a -li
        -(a)ku
        -naw
    2SG  ku-su  -su  musu-a  -su
    1PLINC  ku-ta  -ta  mita-a  -ta
    1PLEXCL  ku-nai  -nai  nai-a  -nai
    2PL  ku-numi  -numi  numi-a  -numi
Tanan Rukai

(17) a. ku-su ka tina-li i-wa=su luwiga l<uw>angay?
   NOM-2SG TOP mother=1SG.GEN FUT-go=2SG when <NONFIN>buy
   ‘You, my mother, when are you going shopping?’

b. ku-naku ka aw-ciil=aku musu-a
   NOM-1SG TOP PAST-see=1SG 2SG-ACC
   ‘As for me, I saw you.’

*k- [TOP] > [NOM] with CN

PAn: Top *k selected topicalized constituents. Because of the extraction restriction, a DP topic could only be the subject.

(18) *TopP (=DP) (PAn)
    Top
    k
    DP
    D
    NP
    u

Reanalysis in Rukai and Proto-NucAn:
Topic marking on DPs was reanalyzed as [NOM].

(19) *KP
    K
    DP
    k
    [NOM] D
    NP
    u

But: *k- marking for NOM is generally only on common nouns, especially NucAn languages, e.g. Amis.

(20) Puyuma Tanan Rukai Amis
    PN:  i (SG), na (PL)  k-u  c-i (SG), c-a (PL)
    CN:  na (SPEC), a (NSPEC)  k-a  k-u

3.2. What about ACC/OBL *ki?

*ki is never reflected as NOM.

(21) Tana Rukai NOM ACC/OBL (Based on Li 1973)
    Personal  ku  ki
    Common   ka  ini-a/iDa-a/sa

Tanan Rukai

(22) aw-ciil-aku  ki tama-li
    PAST-see-1SG.NOM DAT.PN father-1SG.GEN
    ‘I saw my father.’

The answer begins with tracing the origin of D.PN *i. D *i traces its origin to the locative P *i.
(23) a. pilang-\textit{u} \textit{i} temuu
    take-TR1.IMP SG.NOM.PN your.grandmother
    m-\textit{uka} \textit{i} \textit{Dena-Denan}
    INTR-go LOC RED-mountain
    \textit{‘Take your grandmother to the mountains.’} \hspace{1em} \text{(Puyuma; Teng 2008: 216)}

b. na-t<em>alem azua tsaotsao tua velevel \textit{i} \textit{gadu}
    PRV-<INTR>plant NOM.DEM person OBL banana in mountain
    \textit{‘That person plants bananas in the mountains.’} \hspace{1em} \text{(Northern Paiwan)}

\text{PAn had *i P and *i D. *i P underwent a split:}
\Rightarrow *i P > P
\Rightarrow *i P > D

\text{DPs with a [PERSON] feature could only be topicalized in a PP in PAn. [PERSON] features require case licensing, whereas nominals projected by common nouns do not necessarily (Béjar and Rezac 2003, Preminger 2011, Kalin 2018, and others).} \text{P *i could license [PERSON] on D.}

\begin{center}
(24) \hspace{1em} \text{\textbf{*PP}} \hspace{1em} \text{(PAn)}
\begin{center}
P \hspace{1em} \text{\textit{i}} \hspace{1em} \text{DP}
\end{center}
\begin{center}
\textit{D} \hspace{1em} \text{nP}
\end{center}
\begin{center}
[PERSON]
\end{center}
\end{center}
\end{center}
\begin{center}
D *i reflected as NOM PN in Puyuma and Atayalic languages
\Rightarrow P *i > D (facilitated by NULL D)
\end{center}

\begin{center}
(25) \hspace{1em} \text{\textbf{*DP}} \hspace{1em} \text{(PAn)}
\begin{center}
D \hspace{1em} \text{nP}
\end{center}
\begin{center}
\textit{i}
\end{center}
\begin{center}
[PERSON]
\end{center}
\end{center}

\begin{center}
(26) \hspace{1em} \text{Puyuma} \hspace{1em} \text{Tanan Rukai} \hspace{1em} \text{Amis}
\begin{center}
PN: \textit{i} (SG), \textit{na} (PL) \hspace{1em} \textit{k-u} \hspace{1em} \textit{c-i} (SG), \textit{c-a} (PL)
\end{center}
\begin{center}
CN: \textit{na} (SPEC), \textit{a} (NSPEC) \hspace{1em} \textit{k-a} \hspace{1em} \textit{k-u}
\end{center}
\end{center}

\text{D *i also reflected as marker for free (non-clitic) pronouns:}
\Rightarrow \text{Kanakanavu, Sa’aroa, Puyuma, Bunun, and Atayalic languages}

\text{Topic marker *k- was not capable of case licensing a nominal, so it could only attach directly to arguments headed by common nouns.}

\footnote{This is particularly true of nominals that do not project a full DP structure (Massam 2001, Déchaine and Wiltshko 2002, Cagri 2005, Danon 2006, and others).}
If DP had a [PERSON] feature:
=> Top *k- could only attach to a PP, so P *i could license [PERSON] on D.

Thus, P *i is retained in PN.ACC/OBL ki.

Tanan Rukai
(29) aw-ciil-aku ki tama-li
   PAST-see-1SG.NOM ACC father-1SG.GEN
   ‘I saw my father.’

*k- nominative pronominal forms are marked by k- in several Formosan languages, e.g. Kanakanavu, Amis, Bunun, and most dialects of Rukai. Note further that that NOM forms show attachment of k- and not ki-.

(30) **Amis**   NOM   GEN   (Wu 2018)
1.SG   k-ako =ako
2.SG   k-iso =iso
1.PL.INCL k-ita =ita
1.PL.EXCL k-ami =niy-am
2.PL   k-amo =n-amo

These reflect topicalized pronouns that were resumed by clitic (agreement) pronouns on the verb, so they did not need to be licensed by a preposition.

4. New DET/NOM-marking in Proto-Nuc-An

PAn P *i > DET/NOM (Puyuma, Atayalic)

NucAn languages reflect *i uniformly as D[PERSON].
=> DET/NOM *i > D[PERSON] *i (Proto-Nuclear An)

Evidence for –i as [PERSON]:
=> Spans case-markers in NucAn languages, e.g. ni GEN, ti/ci/si D/NOM, ki ACC/OBL
So *i by itself could no longer express NOM in Proto-NucAn.

=> NucAn languages have PN.NOM ɨ/i/ɨ

(31)  

<table>
<thead>
<tr>
<th>Language</th>
<th>Nom</th>
<th>Acc/Obl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amis</td>
<td>ɨ</td>
<td>ɨ...an</td>
</tr>
<tr>
<td>Personal.SG</td>
<td>ɨ</td>
<td>ɨ...an</td>
</tr>
<tr>
<td>Personal.PL</td>
<td>ɨ</td>
<td>ɨ...an</td>
</tr>
<tr>
<td>Common</td>
<td>ɨ</td>
<td>ɨ</td>
</tr>
</tbody>
</table>

Paiwan ɨ, Amis ɨ, Tagalog ɨ < PAn ɨs (Ross 1992, Blust 1995, and others)

Proto-NucAn P ɨs-:

=> DAT/LOC ɨ in Tagalog

=> Motion verb in Seediq mu-ɨ, sa-ɨn, sa-ɨn

Topicalized DP selected by P ɨs in Proto-Nuclear An

(32)  

\[
\begin{array}{c}
\ast PP \\
P \\
\downarrow \\
D \\
\downarrow \\
\text{[PERSON] name/pronoun} \\
\downarrow \\
i
\end{array}
\]

P ɨs- > K[NOM]

(33)  

\[
\begin{array}{c}
\text{KP} \\
\downarrow \\
\text{K[NOM]} \\
\downarrow \\
P \\
\downarrow \\
\text{[PERSON] name/pronoun} \\
\downarrow \\
i
\end{array}
\]

New innovation defining NucAn subgroup:

(34)  

\[
\begin{array}{c}
\text{Austronesian (Accusative alignment)} \\
\downarrow \\
\text{Rukai} \\
\downarrow \\
\text{Ergative An (Irrealis > ergative)} \\
\downarrow \\
\text{Tsou} \\
\downarrow \\
\text{Puyuma} \\
\downarrow \\
\text{Nuclear An (NMLZ > ERG & P ɨs- > K[NOM])}
\end{array}
\]

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4 Ross (2006) reconstructs OBL ɨs-.
5. Conclusion

Personal *i *i *-an *k-
Common[+SPEC] *u *u *DEM-an *k-
Common[-SPEC]  *a  *a

Prepositions *i & *s-

Contemporary NOM markers: Puyuma Tanan Rukai Amis
PN: i (SG), na (PL) k-u c-i (SG), c-a (PL)
CN: na (SPEC), a (NSPEC) k-a k-u

Diachronic source for consonantal NOM markers < TOP or P
Top *k- > K[NOM] for common nouns

References
Blust, Robert A. 1999. Subgrouping, circularity and extinction: Some issues in Austronesian comparative linguistics. In Elizabeth Zeitoun and Paul Jen-kuei Li (eds.), *Selected Papers*


