ROLE COMBINATIONS AND VERB STEM CLASSES
IN KALAMIAN TAGBANWA[1]

EDWARD RUCH

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0.   INTRODUCTION

In Philippine languages the diversity of behaviour among verb stems
calls for classification. Attempts have been made to classify verb
stems by affixation potential (Wolff 1970), affix meaning (Ballard
1973), clause structure (Reid 1966), and participant roles encoded by
nonpredicate tagmemes (Forster and Barnard 1968; Chandler 1974).

It seems that none of these criteria alone yields a satisfactory
generative classification. Yet, to combine all of them in a systematic
way would be a massive research project. Nevertheless, a first step
has been made toward such a classification for the Kalamian Tagbanwa
language, and what follows is a description of that step.

First, the method of classifying according to affixation potential
is discussed briefly. Then, the method of arriving at classes based on

correlation of affixation with role combinations, or arguments, to use
Langendoen's (1970) term, is explained, and the classes discovered are
presented. Finally, some of the methods and problems of the second
classification are discussed.

1. STEM CLASSES BASED ON AFFIXATION POTENTIAL

Sixty action[2] verbs are classified according to their co-occurrence
possibilities with the following six affixes: ag-, aN-,[3] -um-, -en, -an,
and i-. The first three signal subject focus; -en signals object focus;
-an, referent focus; and i-, accessory focus. This operation yields
eleven classes, as listed below.

CLASS A1 stems take: ag-, aN-, -um-, -en, -an, and i-.

laksu?	'run'
ulik	'return, repair'
deep	'catch, apprehend'
sagep	'catch with the hands'
bitbit	'carry by the fingers'
ali?	'dig up'
liway	'clear off'
upak	'remove bark'
kanit	'remove hide'
keget	'bite'
ilamun	'weed'
takwal	'climb up'
digu?	'bathe'
geret	'cut up transversely'
laglag	'butcher'
seyak	'split up wood'
sarab	'singe'
pelad	'cut down'
pukis	'cut in two'
barik	'break'
kalaw	'snatch away'

CLASS A2 stems take: ag-, aN-, -um-, -an, and i-.

tukuk	'duck, bow head down'
taluk	'hide'
luak	'plant'
lampasu?	'scrub with water'
bunak	'wash clothes'

ugas	*'wash dishes, hands'*
damus	*'wash face'*
bukbuk	*'dump out, pour out'*

CLASS B1 stems take: ag-, aN-, -en, -an, and i-.

wasak	*'spread out'*
pangan	*'eat'*
ganut	*'dig up camote by rolling up leaves'*
pesek	*'smash'*

CLASS B2 stems take: ag-, aN-, -an, and i-.

pelek	*'throw, throw away'*
pakdul	*'give'*
wislik	*'shake off'*
tagtag	*'distribute'*

CLASS C1 stems take: ag-, -um-, -en, -an, and i-.

layug	*'fly'*
angay	*'go'*

CLASS C2 stems take: ag-, -um-, -an, and i-.

karung	*'sit'*
kereng	*'stand'*
lubug	*'lie down'*
bayuktut	*'curl up'*
layas	*'run far away'*
tulud	*'push'*

CLASS D1 stems take: aN-, -um-, -en, -an, and i-.

tungul	*'ascend a mountain'*
danek	*'descend'*
pisik	*'pick up'*
dawat	*'request, extend to'*
panak	*'spear'*
karus	*'scratch'*
alang	*'buy'*
gawad	*'redeem'*

CLASS D2 stems take: aN-, -um-, -an, and i-.

bula?	*'spit out'*

CLASS E stems take: ag-, -en, -an, and i-.

papaan	*'feed a person'*

CLASS F1 stems take: aN-, -en, -an, and i-.

ayeg	*'harvest rice'*
inem	*'drink'*
dulung	*'fetch'*

CLASS F2 stems take: ag-, -an, and i-.

ated	*'take, deliver'*
buug	*'feed animals'*

2. STEM CLASSES BASED ON PARTICIPANT ROLES

The verbs are also classified according to participant roles. For reasons discussed in section 5, only affixes -en, -an, and i- are considered in this classification. Also, for the most part, only those roles that can be mapped onto a surface topic tagmeme are taken into account. These roles,[4] along with their abbreviations and definitions, are the following:

A	Agent, the animate participant who performs the action denoted by the verb.
P	Patient, the participant, animate or inanimate, that is affected or changed by the action.
G-P	Goal-Patient, a Patient that is simultaneously the participant toward which the Agent moves.
L	Location, the place where the action takes place.
G	Goal, the participant or place that is the target, or destination, towards which the action is directed.
S	Source, the participant or place away from which the action moves. Often it is the original location of the Patient.
G-S	Goal-Source, a Source that is simultaneously the participant toward which the Agent moves in carrying out the action.
B	Beneficiary, the participant for whose benefit the action is performed.
I	Instrument, the inanimate entity utilised in some way by the Agent to accomplish the action.
Q	Quantity, the inanimate entity that is gathered into a measurable state. Lexically, it is normally the same entity as the Patient, but it is encoded by a different

surface tagmeme.

C   Concomitant, the entity, animate or inanimate, that the Agent involves, or implicates, in performing the action; it accompanies the Agent during the action, but in a passive or inert manner.

A-S   Agent-Source, the participant who not only performs the action, but also is the original location of the Patient.

X-POSR   Possessor, the role, most often encoded on the phrase level, that specifies that role X has an obligatory possessor.

Other conventions employed in this paper are:

V   An action encoded by a verb stem plus affixation.

X_t indicates that role X is encoded by a topicalised tagmeme.

~   indicates a mutually exclusive relationship. When, for example, it is used between two affix-role correlations, it means that certain verbs in the class involved take one correlation, while other verbs take the other; but no verbs take both. If there is no notation with a verb, it is to be understood that it takes the first of the two correlations.

Two other roles were investigated: Stimulus-Reason (S-R) and Time (T). As far as can be determined, these roles can occur with any verb. For this reason, they are used in this paper neither in setting up role combinations nor in classification. Both are topicalised with the verbal prefix i- and encoded by the Accessory tagmeme.

Stimulus-Reason is the entity to which the Agent responds by performing the action denoted by the verb. Speaking in another way, one may say that this role expresses the motivation or reason for the action. It appears to be similar to Beneficiary. The latter, however, is usually animate, while Stimulus-Reason has to do with emotions or perceptions.

2.1 yang linawa na (yay idinawat na tung yeen ta anen).[5]
     $S\text{-}R_t$: *breath his that requested he from me   rice*
     'His hunger, that is what made him request food from me.'

2.2 (ilimbuŋ u) yang siit yang kulu u.
    lie down I S-R$_t$: *pain of* *head my*
    'My headache is what made me lie down.'

Stimulus-Reason may also occur unfocused in a subject focus clause. In this case, however, phonologically there is a slight pause (symbolised by a comma) preceding the tagmeme, which is always encoded by a yang phrase.

2.3 (nagtukaw ra tung yamen ang minulik,) yang kapupungawen na.
    preceded now to us-ex. *returned* S-R: *homesickness his*
    'He returned home ahead of us due to his homesickness.'

Time is the period, or the moment, when the action of the verb is carried out. The affix combinations i-pag- and i-paN- are typically used to signal that the role of Time is in focus.

2.4 (aŋ)ipam(anak na ta ian) yang alas sais ang timpranu.
    spear *he* *fish* T$_t$: *six* *morning*
    'He spears fish at six o'clock in the morning.'

2.5 (aŋ)ipag(panaw ta lain ang tau) yang panabi u.
    walk *bad* *person* T$_t$: *pain signal my*
    'When I get a pain signal is the time when a bad person is coming.'
    (A certain pain in the body is said to predict a future event.)

Time may also be encoded by an unfocused tagmeme in a clause other than accessory focus. It can be encoded by either a ta phrase (indefinite) or a tung phrase (definite).

2.6 (purki aŋatakaw) ta labii (yang ukban).
    because get stolen T: *night* *oranges*
    'Because the oranges get stolen at night.'

2.7 (yay pagpaiwaniwan) tung labiig kaldaw.
    that is who cares for T: *night and day*
    'She is the one who cares for (me) night and day.'

The encoding of each role cited above, as one or more surface structure tagmemes, is shown in table 1, on next page. Roles are shown on the left and topicalised tagmemes on the right; and the relevant verbal affix in each case is indicated on the line joining role and tagmeme.

ROLES   TAGMEMES

AGENT ————————— ag-, aN-, -um-

                                                                SUBJECT

                         ag-, aN-, -um-
AGENT-SOURCE ——————

CONCOMITANT ————   ¡-

INSTRUMENT ————   ¡-

                                                                ACCESSORY
BENEFICIARY ————   ¡-

                         ¡-

PATIENT ————

                                            -en
                               en-   OBJECT

GOAL ————   -an   -an   -an

LOCATION ————   -an

                               -an
SOURCE ————

                        -an

QUANTITY ————   RE ERENT
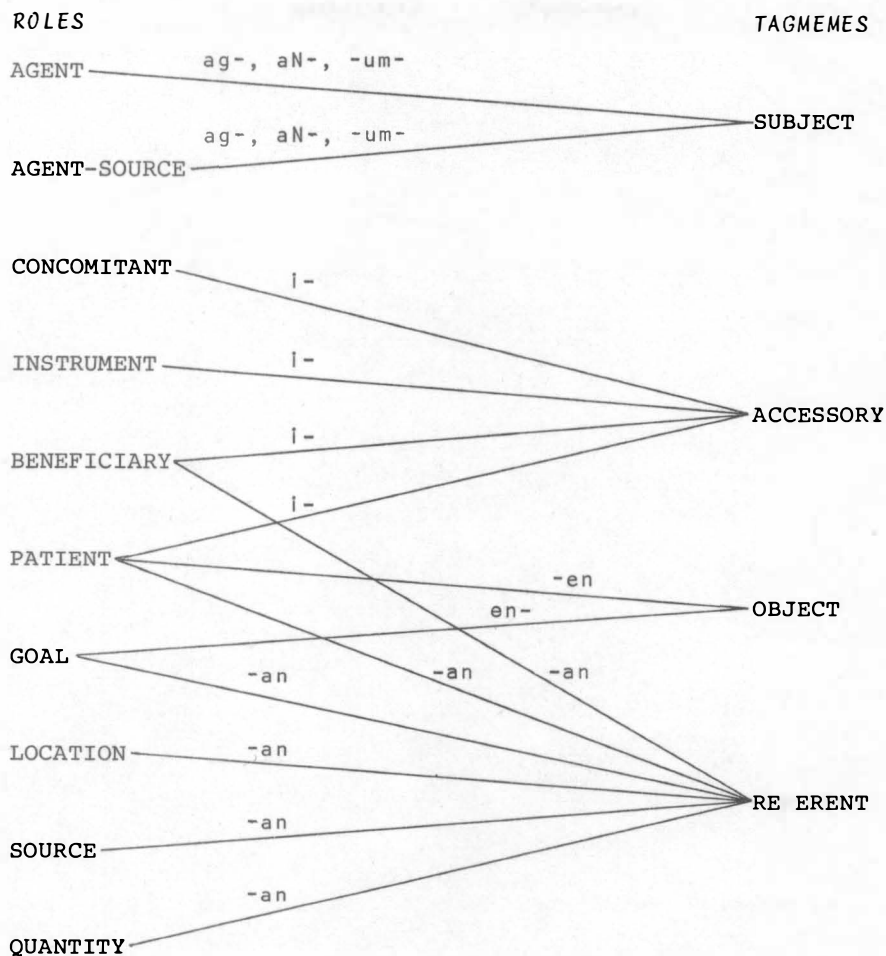
Table 1. Participant roles and their clause
          level tagmeme encodings.

A total of 32 role combinations are posited for these verbs. When
these role combinations are counted in their occurrences with the three
affixes stated above, 37 affix-role correlations are found to be useful.
Each of these correlations is weighted equally in the classification.

The 37 correlations of affix with role combination are displayed in
table 2 overleaf. The order of the symbols in the representation of
any given combination of roles is arbitrary and does not represent the
linear ordering of the tagmemes that encode the roles. An example of
how the symbolisations are to be read is as follows: $/APS_t/$-an repre-
sents a clause whose predicate is affixed by -an and which may express

the roles of Agent, Patient, and Source, the latter being topicalised.

-en	-an	i-
AP_t	AL_t	ALC_t
AP_t-POSR	AL_t-POSR	ALI_t
AG_t	AG_t	AGC_t
AP_tL	APL_t	
AP_tS	APS_t	
AP_tG		
AP_tI	AP_tI	API_t
	APB_t	$AG\text{-}PB_t$
	AB_tC	ABC_t
	AS_t	ASC_t
	ASB_t	$AG\text{-}SB_t$
	AS_tI	ASI_t
	AQ_t	
	AP_t	
	AP_tL	
	$A\text{-}SGL_t$	
$A\text{-}SPG_t$	$A\text{-}SPG_t$	$A\text{-}SP_tG$
	$A\text{-}SPB_t$	$A\text{-}SG\text{-}PB_t$
	$A\text{-}SPS_t$	

Table 2. Role combinations with co-occurring affix.

3. STEM CLASSES IN DETAIL

Each stem class is defined by which of these 37 affix-role correlations the members of the class share. Because verb stems may occur with more than one role combination, often stems that are placed in the same class differ from one another by role combinations they do not share. As a consequence of multiple role combinations, 17 of the 60 verb stems were found to belong simultaneously to two or more stem classes each.

Such multiple class membership is indicated by cross-reference at the end of the entry following the verb stem. Also, immediately following each stem its classification by affix potential is indicated (see section 1). An example of how entries are made and how they are to be understood follows.

Class 1.1:

    taluk   (A2)   *'hide'*   (cf. *class 15*)

This is to be read thus: In the role combination classification, taluk *'hide'* belongs not only to *class 1.1* but also to *class 15*; in the affixation potential classification taluk belongs to *class A2.*

3.1 CLASS 1 STEM CLASSES

Class 1.1: /A-SPG$_t$/-an ∿ /A-SPG$_t$/-en,
          /A-SP$_t$G/i-, /A-SPB$_t$/-an, and /A-SG-PB$_t$/i-.

    tagtag   (B2)   *'distribute'*
    taluk   (A2)   *'hide'*   (cf. *class 15*)
    bukbuk   (A2)   *'dump out'*

Class 1.2: All the above except /A-SPB$_t$/-an.

    luak   (A2)   *'plant'*
    tulud   (C2)   *'push'*

Class 1.3: All except /A-SPB$_t$/-an and /A-SG-PB$_t$/i-.

    pelek   (B2)   *'throw, throw away'*   (cf. *class 15*)
    ulik   (A1)   *'return (something)'*   (cf. *classes 6, 11*)
    pakdul   (B2)   *'give'*
    ated   (F2)   *'deliver'*
    buug   (F2)   *'feed animals'*   (cf. *class 16*)
    bula?   (D2)   *'spit out'*
    wislik   (B2)   *'shake off'*
    papaan   (E)   *'feed a person'* /A-SPG$_t$/-en (cf. *class 16*)

Class 1.4: /A-SP$_t$G/i- only.

    dawat   (D1)   *'extend to'*   (cf. *class 2*)
    wasak   (B1)   *'spread out'*   (cf. *class 3*)

ILLUSTRATIONS, CLASS 1:

3.1.1   /A-SPG$_t$/-an
akd(an)   mu   ti paulu ta anen na.
V:*deliver* A-S:*you* G$_t$: *Paulo* P: *rice his*
'Deliver to Paulo his rice.'

3.1.2   /A-SP$_t$G/i-

(i)ated   mu   tung ni paulu yang anen na.
V:*deliver*   A-S:*you* G:*to*   Paulo P$_t$: *rice his*
'*Deliver his rice to Paulo.*'

3.1.3   /A-SPG$_t$/-en

papaan(en) mu   (kanay) ti amey mu   ta beteng.
V:*feed*   A-S:*you* *please* G$_t$:*uncle*   *your* P: *young coconut*
'*Please feed your uncle some young coconut.*'

3.1.4   /A-SPB$_t$/-an

t(in)aluk(an) aw   anya   yang geer u.
V:*hid*   B$_t$:*for me* A-S:*he* P: *bolo my*
'*He hid my bolo for me.*' (Cf. 3.15.2.)

3.1.5   /A-SG-PB$_t$/i-

(i)t(in)agtag aw   (ra) ni wan ta   sabur   u.
V:*distributed* B$_t$:*for me* *now* A-S:*John* G-P: *seedling my*
'*John went over to the seedlings and distributed them for me.*'

3.2 CLASS 2 STEM CLASSES

Class 2.1: /AP$_t$S/-en, /APS$_t$/-an, /AQ$_t$/-an, /APB$_t$/-an,
        /AG-PB$_t$/i-, and /API$_t$/i-.

pisik	(D1)	'*pick up*'	
ali?	(A1)	'*dig up*'	
ganut	(B1)	'*dig up camote by rolling up leaves*'	
upak	(A1)	'*remove bark*'	(cf. *class 9*)
seyak	(A1)	'*split up wood*'	(cf. *class 3*)
pelad	(A1)	'*cut down*'	(cf. *class 3*)
pukis	(A1)	'*cut in two*'	
panak	(D1)	'*spear*'	

Class 2.2: All except /AQ$_t$/-an.

kanit	(A1)	'*remove hide*'	(cf. *class 9*)

Class 2.3: /AP$_t$-POSR/-en or /AP$_t$/-en instead of /AP$_t$S/-en;
        /AS$_t$I/-an instead of /APS$_t$/-an; all the rest are the same.

sarab	(A1)	'*singe*'
kalaw	(A1)	'*snatch away*'

Class 2.4: shares only /AP$_t$S/-en, /APS$_t$/-an, and /AG-PB$_t$/i-.

  dawat   (*D1*)   *'request, extend to'*   (cf. *class 1*)

Class 2.5: shares only /AP$_t$S/-en and /APS$_t$/-an.

  dulung   (*F1*)   *'fetch'*   (cf. *class 3*)

ILLUSTRATIONS, CLASS 2:

3.2.1   /AP$_t$S/-en
(pinag)ali ni nulay yang kapari   tung   kaluakan ta.
V:*dug up*   A: *Nulay* P$_t$: kapari *root* S:*from garden*   our
'Nulay dug up the kapari *root from our garden.'*

3.2.2   /APS$_t$/-an
(pinang)ali(an) ni nulay yang kaluakan ta ta kapari.
V:*dug up*   A: *Nulay* S$_t$: *garden*   *our* P: kapari *root*
'Nulay dug up some kapari *root from our garden.'*

3.2.3   /AQ$_t$/-an
(in)ali(an) ni nulay yang kaparing   atia.
V:*dug up*   A: *Nulay* Q$_t$: kapari *root that*
'Nulay dug up that much kapari *root.'*

3.2.4   /APB$_t$/-an
(in)ali(an) aw   ni nulay ta kapari.
V:*dug up*   B$_t$:*for me* A: *Nulay* P: kapari *root*
'Nulay dug up some kapari *root for me.'*

3.2.5   /AG-PB$_t$/i-
(in)ali aw   ni nulay ta kapari.
V:*dug up* B$_t$:*for me* A: *Nulay* P: kapari *root*
'Nulay went out and dug up some kapari *root for me.'*

3.2.6   /API$_t$/i-
(ipinang)ali ni nulay ta kapari   yang sukan   u.
V:*dug up*   A: *Nulay* P: kapari *root* I$_t$: *digging tool my*
'Nulay dug up some kapari *root with my digging tool.'*

3.2.7   /AP$_t$-POSR/-en
s(in)arab na   yang bulbul na.
V:*singed* A:*he* P$_t$: *feathers-*POSR:*its*
'He singed its feathers.'

3.2.8   /AP$_t$/-en
s(in)arab   na   yang paray.
V:*singed*   A:*he* P$_t$: *unhusked rice*
'*He singed the rice.*'

3.2.9   /AS$_t$I/-an
s(in)arab(an)   na   yang babuy ta lukay.
V:*singed*   A:*he* S$_t$: *pig*   I: *torch*
'*He singed the pig with a torch.*'

3.3 *CLASS 3 STEM CLASSES*

Class 3.1: /AP$_t$L/-en, /APL$_t$/-an, /AQ$_t$/-an, /APB$_t$/-an,
          /AG-PB$_t$/i-, and /API$_t$/i-.

ayeg	(F1)	'harvest rice'	
geret	(A1)	'cut up transversely'	
laglag	(A1)	'butcher'	
pelad	(A1)	'cut down'	(cf. *class 2*)
pesek	(B1)	'smash'	

Class 3.2: lacks /AQ$_t$/-an.

wasak	(B1)	'spread out'	(cf. *class 1*)

Class 3.3: lacks /APL$_t$/-an.

seyak	(A1)	'split up wood'	(cf. *class 2*)
barik	(A1)	'break'	

Class 3.4: lacks /AP$_t$L/-en and /AQ$_t$/-an.

bitbit	(A1)	'carry by the fingers'

Class 3.5: shares only /APL$_t$/-an.

dulung	(F1)	'fetch'	(cf. *class 2*)

ILLUSTRATIONS, CLASS 3:

3.3.1   /AP$_t$L/-en
(in)ayeg   na   yang wagwag   tung taraneman ang atii.
V:*harvested* A:*he* P$_t$: *variety of rice* L:*in paddy*   *that*
'*He harvested the* wagwag *rice in that paddy over there.*'

3.3.2 /APL$_t$/-an

(pinang)ayeg(an)   na   ta wagwag   yang taraneman ang atii.

V:*harvested*   A:*he* P: *variety of rice* L$_t$: *paddy*   *that*

'He harvested the wagwag *rice in that paddy over there.*'

3.3.3 /AQ$_t$/-an

(in)ayeg(an)   na   yang duruang sakung paray.

V:*harvested*   A:*he* Q$_t$: *two   sack   rice*

'He harvested the amount of two sacks of rice.'

3.3.4 /APB$_t$/-an

(in)ayeg(an)   na   ti nanay   na   ta ebas.

V:*harvested*   A:*he* B$_t$:*mother his* P: *immature rice*

'He harvested some immature rice for his mother.'

3.3.5 /AG-PB$_t$/i-

(in)ayeg   aw   anya ta ebas.

V:*harvested*   B$_t$: *for me* A:*he* P: *immature rice*

'He went out and harvested some immature rice for me.'

3.3.6 /API$_t$/i-

(ipinang)ayeg na   ta paray yang kaayeg   u.

V:*harvested*   A:*he* P: *rice* I$_t$: *harvesting instrument my*

'He harvested some rice with my harvesting instrument.'

3.4 CLASS 4 STEMS

Class 4: /AL$_t$/-an and /ALC$_t$/i-.

karung	(C2)	'sit'	
kereng	(C2)	'stand'	
lubug	(C2)	'lie down'	
bayuktut	(C2)	'curl up'	
takwal	(A1)	'climb up'	(cf. class 5)
digu?	(A1)	'bathe'	(cf. class 10)

ILLUSTRATIONS, CLASS 4:

3.4.1 /AL$_t$/-an

t(in)akwal(an)   na   yang balagen.

V:*climbed up*   A:*he* L$_t$: *vine*

'He climbed up on the vine.'

3.4.2   /ALC$_t$/i-

(i)t(in)akwal   aw   ni paulu tung ayu?.
V:*climbed up*   C$_t$:*with me* A: *Paulo* L: *tree*
'*Paulo climbed up into the tree with me (on his back).*'

3.5 CLASS 5 STEM CLASSES

Class 5.1: /AP$_t$G/-en, /AG$_t$/-en, /AL$_t$/-an, /APB$_t$/-an,
           /AB$_t$C/-an, /ABC$_t$/i-, and /AG-PB$_t$/i-.

    tungul   (D1)   '*ascend a mountain*'
    danek   (D1)   '*descend*'

Class 5.2: shares all of the above except /AG$_t$/-en and /APB$_t$/-an.

    takwal   (A1)   '*climb up*'   (cf. *class 4*)

Class 5.3: shares only /AB$_t$C/-an, /ABC$_t$/i-, and /AG$_t$/-en.

    laksu?   (A1)   '*run*'   (cf. *class 6*)

ILLUSTRATIONS, CLASS 5:

3.5.1   /AP$_t$G/-en
tungul(un)   mu   (kanay) yang saleng tung ni tatay mu.
V:*ascend mountain* A:*you please* P$_t$: *pitch* G: *father your*
'*Please ascend the mountain (to get) the pitch at your father's.*'

3.5.2   /AG$_t$/-en
tungul(un)   mu   yang bukid   yang dibulalu?.
V:*ascend mountain* A:*you* G$_t$: *mountain of   Dibulalu*
'*Climb up Dibulalu Mountain.*' (Punctiliar action, i.e. the agent climbs
just for the sake of climbing and then comes down again.)

3.5.3   /AL$_t$/-an
t(in)ungul(an)   ni tinuy yang bukid   yang dibulalu?.
V:*ascended mountain* A: *Tinuy* L$_t$: *mountain of   Dibulalu*
'*Tinuy climbed Dibulalu Mountain.*' (Durative action, i.e. the agent
stayed on the mountain a while.)

3.5.4   /APB$_t$/-an
t(in)ungul(an)   aw   ni tinuy ta saleng.
V:*ascended mountain* B$_t$:*for me* A: *Tinuy* P: *pitch*
'*Tinuy ascended the mountain (to get) the pitch for me.*'

3.5.5 /AB$_t$C/-an

tungul(an)   mu   ti   tatay mung gesye ta kalabasa?.

V:*ascend mountain* A:*you* B$_t$: *father your small* C: *squash*

'*Take some squash up the mountain for your little father (a particular uncle).*'

3.5.6 /ABC$_t$/i-

(i)t(in)ungul   na   yang kalabasa tung ni tatay nang gesye?.

V:*ascended mountain* A:*he* C$_t$: *squash* B: *father his small*

'*He took some squash up the mountain for his little father (a particular uncle).*'

3.5.7 /AG-PB$_t$/i-

(i)t(in)ungul   aw   ni tinuy ta   kasuy.

V:*ascended mountain* B$_t$:*for me* A: *Tinuy* G-P: *cashew nuts*

'*Tinuy ascended the mountain (to get) some cashew nuts for me.*'

3.6 CLASS 6 STEM CLASSES

Class 6.1: /AG$_t$/-en, /AG$_t$/-an, /AS$_t$/-an, /AGC$_t$/i-, and /ASC$_t$/i-.

laksu?	(A1)	'*run*'		(cf. *class 5*)
layug	(C1)	'*fly*'		/AG$_t$/-an
layas	(C2)	'*run away*'		/AG$_t$/-an

Class 6.2: /AG$_t$/-en only.

ulik	(A1)	'*return to (someone)*'	(cf. *classes 1, 11*)

ILLUSTRATIONS, CLASS 6:

3.6.1 /AG$_t$/-en

l(in)aksu   na   yang kasawa na.

V:*ran* A:*she* G$_t$: *spouse her*

'*She ran towards her husband.*'

3.6.2 /AG$_t$/-an

(pinan)layas(an) ni tampulanu yang mindanaw.

V:*ran far away* A: *Tampulanu* G$_t$: *Mindanao*

'*Tampulanu ran far away to Mindanao.*'

3.6.3 /AS$_t$/-an

l(in)ayas(an)   ni tampulanu yang mga   putul   na.

V:*ran far away* A: *Tampulanu* S$_t$: *plural sibling his*

'*Tampulanu ran far away from his siblings.*'

3.6.4 /AS$_t$/-an

(pinan)laksu(an)   na   yang kasawa na.

V:*ran*   A:*she* S$_t$: *spouse her*

'She ran from her husband.'

3.6.5 /AGC$_t$/i-

(i)l(in)aksu   na   yang kasawa na tung balay.

V:*ran*   A:*he* C$_t$: *spouse his* G: *house*

'He ran with his wife over to the house (to get her out of danger).'

3.6.6 /ASC$_t$/i-

(i)l(in)ayug yang kanug yang ana   na tung   bayay.

V:*flew*   A: *eagle* C$_t$: *child its* S:*from nest*

'The eagle flew with its child from the nest.'

3.7 CLASS 7 STEMS

Class 7: /AP$_t$L/-an, /AP$_t$/-an, /AG-PB$_t$/i-, and /API$_t$/i-.

lampasu?	(A2)	'scrub with water'	/AP$_t$/-an
bunak	(A2)	'wash clothes'	
ugas	(A2)	'wash dishes'	

ILLUSTRATIONS, CLASS 7:

3.7.1 /AP$_t$L/-an

(in)ugas(an)   ni angi yang mga   pinggan tung palanggana?

V:*washed*   A: *Angi* P$_t$: *plural dish*   L:*in basin*

'Angi washed the dishes in the basin.'

3.7.2 /AG-PB$_t$/i-

(in)ugas aw   anya yang pinggan ang atia.

V:*washed* B$_t$:*for me* A:*she* G-P: *dish*   *that*

'She went and washed that dish for me.'

3.7.3 /API$_t$/i-

(ipinang)ugas ni angi yang waing malabab tung mga   pinggan.

V:*washed*   A: *Angi* I$_t$: *water lukewarm* P: *plural dish*

'Angi washed the dishes with lukewarm water.'

3.7.4 /AP$_t$/-an

(pinag)lampasu(an)   na   yang balay.

V:*scrubbed with water* A:*he* P$_t$: *house*

'*He scrubbed the whole house with water.*'

3.8 CLASS 8 STEMS

Class 8: /AP$_t$L/-en, /APS$_t$/-an, and /AG-PB$_t$/i-.

    pangan   *(B1)*   *'eat'*
    inem   *(F1)*   *'drink'*

ILLUSTRATIONS, CLASS 8:

3.8.1 /AP$_t$L/-en
(in)inem na   yang teba   tung balay ang atii.
V:*drank*   A:*he* P$_t$: *kind of fermented drink* L:*in house*   *that*
'*He drank the tuba in that house over there.*'

3.8.2 /APS$_t$/-an
(pinang)inem(an) na   yang ungut   ang dakulu ta teba?.
V:*drank*   A:*he* S$_t$: *coconut shell*   *big*   P:*kind of fermented drink*
'*He drank tuba from the large coconut shell.*'

3.8.3 /AG-PB$_t$/i-
(in)inem na   yang tian   na ta   teba?.
V:*drank* A:*he* B$_t$: *stomach his* G-P: *kind of fermented drink*
'*He drank some tuba for his stomach's sake.*'

3.9 CLASS 9 STEMS

Class 9: /AP$_t$-POSR/-en, /ASB$_t$/-an, /AG-SB$_t$/i-, and /ASI$_t$/i-.

    upak   *(A1)*   *'remove bark'*   (cf. *class 2*)
    kanit   *(A1)*   *'remove hide'*   (cf. *class 2*)

ILLUSTRATIONS, CLASS 9:

3.9.1 /AP$_t$-POSR/-en
(in)upak   na   yang ulit yang ayu?.
V:*removed* A:*he* P$_t$: *bark*-POSR: *tree*
'*He removed the bark of the tree.*'

3.9.2 /ASB$_t$/-an
(in)upak(an) aw   anya yang mga   ayung atia.
V:*removed*   B$_t$:*for me* A:*he* S: *plural tree that*
'*He removed the bark from those trees for me.*'

3.9.3   /AG-SB_t/i-

(in)upak   aw   anya yang mga   ayung atia.
V:*removed*   B_t:*for me* A:*he* G-S: *plural tree   that*
'*He went and removed the bark from those trees for me.*'

3.9.4   /ASI_t/i-

(ipinag)upak   na   yang geer u tung mga   ayung atia.
V:*removed*   A:*he* I_t: *bolo my* S: *plural tree that*
'*He removed the bark from those trees with my bolo.*'

3.10   CLASS 10 STEMS

Class 10: /AP_t/-an, /AP_tL/-en, /APL_t/-an, /API_t/i-, and /AL_t/-an.

   digu?   (A1)   '*bathe*'   /AP_tL/-en   (cf. *class 4*)
   damus   (A2)   '*wash face*'

ILLUSTRATIONS, CLASS 10:

3.10.1   /AP_t/-an
d(in)amus(an) aw   ni marki.
V:*wash face*   P_t:*I* A: *Mark*
'*Mark washed my face.*'

3.10.2   /AL_t/-an
(pinan)damus(an) na   yang ungut   ang dakulu?.
V:*washed face*   A:*he* L_t: *coconut shell   large*
'*He washed his face in the large coconut shell.*'

3.10.3   /AP_tL/-en
d(in)igu na   yang ana   na tung bawang.
V:*bathed* A:*he* P_t: *child her* L:*in river*
'*She bathed her child in the river.*'

3.10.4   /APL_t/-an
(pinag)digu(an) na   yang bawang ang atia tung ana   na.
V:*bathed*   A:*she* L_t: *river   that* P: *child her*
'*She bathed her child in that river over there.*'

3.10.5   /API_t/i-
(ipinan)digu na   yang waing malabab tung ana   na.
V:*bathed*   A:*she* I_t: *water lukewarm* P: *child her*
'*She used the lukewarm water to bathe her child.*'

3.11 CLASS 11 STEM CLASSES

Class 11.1: /AP$_t$/-en ∿ /AP$_t$L/-en, /AP$_t$/-an ∿ /APL$_t$/-an,
          /API$_t$/i-, and /AG-PB$_t$/i-.

deep	(A1)	'catch, apprehend'	/AP$_t$L/-en, /APL$_t$/-an
sagep	(A1)	'catch with hands'	

Class 11.2: /AP$_t$/-en only.

ulik	(A1)	'repair'	(cf. classes 1, 6)

ILLUSTRATIONS, CLASS 11:

3.11.1   /AP$_t$/-en
s(in)agep na   yang bula?.
V:*caught* A:*he* P$_t$: *ball*
'*He caught the ball.*'

3.11.2   /AP$_t$L/-en
(pinan)deep na   yang mga   bakes ang atia tung bukatud ang atii.
V:*caught*   A:*he* P$_t$: *plural monkey   that* L: *hillock   that*
'*He caught those monkeys on that hillock over there.*'

3.11.3   /AP$_t$/-an
s(in)agep(an) na   yang bula?.
V:*caught*   A:*he* P$_t$: *ball*
'*He caught the ball.*'

3.11.4   /APL$_t$/-an
(pinag)deep(an) na   ta bakes yang bukatud ang atii.
V:*caught*   A:*he* P: *monkey* L$_t$: *hillock   that*
'*He caught the monkey on that hillock.*'

3.11.5   /API$_t$/i-
(i)s(in)agep na   yang kalima nang wala tung bula?.
V:*caught*   A:*he* I$_t$: *hand   his left* P: *ball*
'*He caught the ball with his left hand.*'

3.11.6   /AG-PB$_t$/i-
(ipinan)deep na   yang mga   putul na ta   bakes.
V:*caught*   A:*he* B$_t$: *plural sibling his* G-P: *monkey*
'*He went out and caught monkeys for his siblings.*'

3.12 CLASS 12 STEMS

Class 12: /AP$_t$-POSR/-en, /AL$_t$-POSR/-an, /API$_t$/i-, /ALI$_t$/i-, and
         /AP$_t$L/-en.

   karus   (*D1*)   '*scratch*'
   keget   (*A1*)   '*bite*'

ILLUSTRATIONS, CLASS 12:

3.12.1 /AP$_t$L/-en
k(in)eget ni dulu yang mula u tung kakay na.
V:*bit*   A: *Dulu* P$_t$: *child my* L: *foot his*
'*Dulu (a dog) bit my child on his foot.*'

3.12.2 /AP$_t$-POSR/-en
k(in)eget ni dulu yang kakay yang mula u.
V:*bit*   A: *Dulu* P$_t$: *foot-*POSR: *child my*
'*Dulu bit the foot of my child.*'

3.12.3 /AL$_t$-POSR/-an
k(in)eget(an) ni dulu yang kakay yang mula u.
V:*bit*   A: *Dulu* L$_t$: *foot-*POSR: *child my*
'*Dulu bit my child's foot.*'

3.12.4 /API$_t$/i-
(ipinang)eget na   yang belkang na tung tubu?.
V:*bit*   A:*he* I$_t$: *molar   his* P: *sugarcane*
'*He used his molars to bite the sugarcane.*'

3.12.5 /ALI$_t$/i-
(ipinang)arus na   yang ukub   nang abwat tung kabala u.
V:*scratched*   A:*he* I$_t$: *fingernail his   long* L: *arm   my*
'*He scratched my arm with his long fingernail.*'

3.13 CLASS 13 STEMS

Class 13: /AP$_t$S/-en, /AS$_t$/-an, /ASB$_t$/-an ∿ /AG-SB$_t$/i-, and /ASI$_t$/i-.

   liway   (*A1*)   '*clear off*'   /AG-SB$_t$/i-
   ilamun   (*A1*)   '*weed*'

ILLUSTRATIONS, CLASS 13:

3.13.1 /AP$_t$S/-en

l(in)iway   na   yang linget tung   dalan.
V:*cleared* A:*he* P$_t$: *weeds* S:*from path*
'He cleared the weeds from the path.'

3.13.2   /AS$_t$/-an
l(in)iway(an)   na   yang dalan.
V:*cleared*   A:*he* S: *path*
'He cleared the path.'

3.13.3   /ASB$_t$/-an
(in)ilamun(an)   ami   (ka) nira   yang balay yamen.
V:*weeded*   B$_t$:*for us too* A:*they* S: *house our*
'They also weeded around our house for us.'

3.13.4   /AG-SB$_t$/i-
(i)l(in)iway   aw   ni tampulanu yang dalan.
V:*cleared*   B$_t$:*for me* A: *Tampulanu* G-S: *path*
'Tampulanu went off and cleared the path for me.'

3.13.5   /ASI$_t$/i-
(ipinag)liway   na   yang geer u tung dalan.
V:*cleared*   A:*he* I$_t$: *bolo my* S: *path*
'He cleared the path with my bolo.'

3.14 *CLASS 14 STEMS*
Class 14: /AP$_t$S/-en, /APS$_t$/-an, /AP$_t$I/-en ∿ /AP$_t$I/-an, /API$_t$/i-.

   alang   (D1)   *'buy'*
   gawad   (D1)   *'redeem'*   /AP$_t$I/-an

ILLUSTRATIONS, CLASS 14:

3.14.1   /AP$_t$S/-en
alang(en)   na   yang bila   na tung   tindaan.
V:*purchase* A:*he* P$_t$: *fishhooks his* S:*from store*
'He will purchase his fishhooks from the store.'

3.14.2   /APS$_t$/-an
(pinang)gawar(an)   na   yang sastri yang tarual na.
V:*redeemed*   A:*he* S$_t$: *tailor* P: *pants   his*
'He redeemed his pants from the tailor.'

3.14.3 /AP$_t$I/-en

alang(en)   u   (ilem) ta bainti yang abel   ang atia.
V:*will buy* A:*I   only* I: *twenty* P$_t$: *clothing   that*
'*I'll just purchase that piece of clothing for twenty pesos.*'

3.14.4 /AP$_t$I/-an

gawar(an)   na   yang tarual na ta kuatru.
V:*redeem*   A:*he* P$_t$: *pants   his* I: *four*
'*He'll redeem his pants for four pesos.*' (Cf. 3.14.5.)

3.14.5 /AP$_t$S/-en

gawar(en)   na   yang tarual na tung   sastri.
V:*redeem*   A:*he* P$_t$: *pants   his* S:*from tailor*
'*He will redeem his pants from the tailor.*' (Cf. 3.14.4.)

3.14.6 /API$_t$/i-

(ipinang)gawad   na   yang kuatru pisus tung tarual na.
V:*redeemed*   A:*he* I$_t$: *four   pesos* P: *pants   his*
'*He redeemed his pants with the four pesos.*'

3.15 CLASS 15 STEMS

Class 15: /A-SPS$_t$/-an

   taluk   (A2)   '*hide*'   (cf. *class 1*)
   pelek   (B2)   '*throw, throw away*'   (cf. *class 1*)

ILLUSTRATIONS, CLASS 15:

3.15.1 /A-SPS$_t$/-an

p(in)lek(an)   ti tampulanu ni   kasawa na   ta bila?.
V:*threw away* S$_t$: *Tampulanu* A-S: *spouse his* P: *fishhooks*
'*Tampulanu's wife threw away his fishhooks.*'

3.15.2 /A-SPS$_t$/-an

t(in)aluk(an)   aw   anya   yang geed na.
V:*hid*   S$_t$:*I* A-S:*he* P: *bolo his*
'*He hid his bolo from me.*' (Cf. 3.1.4.)

3.16 CLASS 16 STEMS

Class 16: /A-SGL$_t$/-an

   buug   (F2)   '*feed animals*'   (cf. *class 1*)

papaan   (E)   *'feed a person'*   (cf. *class 1*)

ILLUSTRATIONS, CLASS 16:

3.16.1   /A-SGL$_t$/-an
(pinag)buug(an)   na   yang pasungan tung mga   manu   u.
V:*fed*   A-S:*he* L$_t$: *trough*   G: *plural chicken my*
'The trough was where he fed my chickens.'

3.16.2   /A-SGL$_t$/-an
(pinag)papaan(an) na   yang linu   tung aka   u.
V:*fed*   A-S:*he* L$_t$: *winnowing tray* G: *elder sibling my*
'The winnowing tray was the place where he fed my elder sibling.'

Two verbs were difficult to classify. These are tukuk *'duck, bow head down'* and angay *'go'*. Their affix-role correlations are given below with illustrations.

tukuk   (A2)   *'duck, bow head down'*: /APG$_t$/paN--an, /AP$_t$G/i-paN-,
                                      /APS$_t$/-an, and /AP$_t$S/i-.

1.   /APG$_t$/paN--an
(pina)nukuk(an)   na   yang ayu yang kulu na.
V:*bowed down*   A:*he* G$_t$: *tree* P: *head his*
'He laid his head down upon the tree branch.'

2.   /AP$_t$G/i-paN-
(ipina)nukuk na   yang kulu na tung ayu?.
V:*bowed down* A:*he* P$_t$: *head his* G: *tree*
'He laid his head down upon the tree branch.'

3.   /APS$_t$/-an
t(in)ukuk(an)   na   yang ayu yang kulu na.
V:*duck*   A:*he* S$_t$: *tree* P: *head his*
'He ducked his head away from the tree branch.'

4.   /AP$_t$S/i-
(i)t(in)ukuk na   yang kulu na tung ayu?.
V:*ducked*   A:*he* P$_t$: *head his* S: *tree*
'He ducked his head away from the tree branch.'

angay (C1)   *'go'*: /AG-P$_t$/-en, /APG$_t$/-an, /AG$_t$/-an, and
                    /AGC$_t$/i-.

1.   /AG-P$_t$/-en

angay(en) mu   (unu)   yang adi?.
V:*go*   A:*you   he says* G-P$_t$:*king*
'*The king says you are to go to him.*' (Implies that the Agent will do
something when he gets there, namely, obey the king's command.)

2.   /AG$_t$/-an
angay(an) mu   (ra) yang adi?.
V:*go*   A:*you   now* G$_t$: *king*
'*You are to go to the king now.*' (Nothing is implied about any other
action.)

3.   /APG$_t$/-an
angay(an) u   ti rikardu yang geer u.
V:*go*   A:*I* G$_t$: *Ricardo* P: *bolo my*
'*I'll go to Ricardo (and get) my bolo.*' (Implies that the bolo may or
may not be ready.)

4.   /AGC$_t$/i-
(i)angay u   taang   tabaku tung ni ungkuy.
V:*go*   A:*I* C$_t$:*here tobacco* G: *friend*
'*I'll go to (my) friend with this tobacco here.*'

4. MEANINGS OF AFFIXES

    In this study, detailed investigation of hundreds of clauses brought
to light many new facets of the meanings of various affixes.

4.1 i-   This affix signals that the Agent moves away from his original
position in order to carry out the action of the verb. In a real-life
situation the existing relationship between the Agent and the Patient
is the determining factor, as can be seen in the examples cited below.

4.1.1 i(geret)ay   (kanay ta kalamunding.)
       cut up (you for me) please   kalamansi *fruit*
       '*Please go and cut up some* kalamansi *for me.*'

The situation reflected in this utterance is that the Patient (the
kalamansi fruit) is some distance away from the Agent (the hearer,
understood). So, in order to carry out the action of the verb (cutting
up), the Agent must leave his original position and go to where the
kalamansi are.

4.1.2 (geret)ay   (kanay ta kalamunding.)
       cut up (you for me) please   kalamansi *fruit*
       '*Please cut up some* kalamansi *for me.*'

The situation reflected in this utterance is that the Patient is within easy reach of the Agent, and it will not be necessary for him to move from his original position in order to carry out the action of the verb. Note also that the -ay suffix in both instances signals obligative mode, which is used when making a polite request. In 4.1.2, -ay may be said to have replaced the -an suffix, which would be used in a statement describing the same situation.[6]

4.2   The combination of the subject focus affixes ag- + paN- signals intense distribution of the action of the verb either with respect to multiple Patients or sometimes directed to multiple Goals.

4.2.1   (yay n)ag(tagtag   yang sabud   tung kaun.)
        that is who distributed   seedlings   rice paddy
        'That is who distributed the seedlings in the rice paddy.'

4.2.2   (yay n)agpan(agtay   yang sabud   tung kaun.)
        that is who distributed   seedlings   rice paddy
        'That is who distributed the seedlings in all the rice paddies.'

4.2.3   (n)ang(alang aw ra ta abel.)
        bought   I now   clothing
        'I bought some clothing.'

4.2.4   (n)agpang(alang da   ta abel.)
        bought   now   clothing
        'He went around buying clothing.'

4.3   The subject focus affixes ag- and aN- contrast in the following ways:

   ag- = thoroughgoing, intense, long-term, durative action;
        also in certain contexts it implies that all possible
        Patients actually receive the action.

   aN- = diffuse, rather short-term punctiliar action; in
        certain contexts it implies the selection of one or a
        few Patients from a group of many.

4.3.1   (n)ag(takwal ti duduy ta niuy.)
        climbed up   laddie   coconut
        'Laddie climbed up and got coconuts (implies several).'

4.3.2   (n)an(akwal ti duduy ta niuy.)
        climbed up   laddie   coconut
        'Laddie climbed up and got some (a few) coconuts.'

4.3.3 (ti tampulanu yay n)ag(lampasu yang pasungan.)
      Tampulanu that scrubbed   feed trough
      'It was Tampulanu who thoroughly scrubbed the feed trough.'

4.3.4 (ti tampulanu yay n)an(lampasu yang pasungan.)
      Tampulanu that scrubbed   feed trough
      'It was Tampulanu who scrubbed the feed trough a bit.'

Also, there is some evidence that p-ag- contrasts with p-aN- in the same way in nonsubject focus clauses.

4.3.5 p(in)ag(barik na yang kakay yang karabaw.)
      broke   he   foot of   carabao
      'He broke all the feet of the carabao.'

4.3.6 p(in)am(arik na yang kakay yang karabaw.)
      broke   he   foot of   carabao
      'He broke the carabao's foot.'

4.3.7 p(in)ag(pelaran na yang bakayan.)
      felled   he the beach
      'The beach was where he felled the trees (a thorough job).'

4.3.8 p(in)am(elaran na yang bakayan.)
      felled   he the beach
      'The beach was where he felled (a few) trees.'

Clearly, more analysis of the meanings of ag- and aN- is necessary. For this, verbs should be tried in clauses of the following kinds, with careful attention being given to meaning differences.

Subject focus:	ag-	versus	aN-	versus	ag-p-aN-
Object focus:	p-ag--en	versus	p-aN--en	versus	-en
Referent focus:	p-ag--an	versus	p-aN--an	versus	-an
Associate focus:	i-p-ag-	versus	i-p-aN-	versus	-i

4.4 With certain verbs the presence or absence of aN- signals the occurrence of certain participant roles.

4.4.1 With some verbs this affix signals the occurrence of Goal.

4.4.1.1 (n)an(ukuk ti tampulanu yang kulu na) tung ayu?.
      bowed   Tampulanu   head his G: tree
      'Tampulanu bowed his head down upon the tree branch.'

4.4.1.2 (pin)an(ukukan na) yang ayu (yang kulu na.)
       bowed   he G: tree   head his
       'He bowed his head down upon the tree branch.' (Cf. 4.4.3.)

4.4.2 With other verbs this same affix signals the occurrence of Source.

4.4.2.1 (n)an(laksu yang babay) tung ni kasawa na.
       ran   woman S: spouse her
       'The woman ran away from her husband.'

4.4.2.2 (pin)an(layugan yang kanug) yang bayay na.
       flew   eagle S: nest its
       'The eagle flew away from its nest.' (Cf. 4.4.4.)

4.4.2.3 (pin)ang(egetan na) yang tabaku u.
       bit   he S: tobacco my
       'He bit some off from my plug of tobacco.' (Cf. 4.4.5.)

4.4.3 By contrast, with some verbs the absence of aN- signals the occurrence of Source.
       (tinukukan na) yang ayu (yang kulu na.)
       ducked   he S: tree   head his
       'He ducked his head away from the tree branch.' (Cf. 4.4.1.2.)

4.4.4 With other verbs the absence of this affix signals the occurrence of Goal.

       (linayugan) aw (yang kutung.)
       flew   G:me rice bird
       'The rice bird flew over to me.' (Cf. 4.4.2.2.)

4.4.5 With still other verbs the absence of this affix signals the occurrence of Location.

       (kinegetan na) yang kakay (yang mula u.)
       bit   he L: foot of child my
       'He bit the foot of my child.' (Cf. 4.4.2.3.)

4.5 The infix -um-, in addition to signalling subject focus, also has the following meanings: unplanned, unintentional, unexpected, casual action. It can be a spur-of-the-moment action, a mere happenstance, something short-lived, lackadaisical, or a mere token type of action.

4.5.1 (ti tampulanu yay s)um(inagep yang bula?.)
       Tampulanu that caught   ball
       'Tampulanu was the one who caught the ball.'
       (He had not really planned to, but because he hated to see the
       ball hit the ground without being caught, he caught it.)

4.5.2 m(inisik taang anen u.)
       picked up this rice my
       'He picked up some of my rice in his hand.'
       (He was walking by, hungry, and, on the spur of the moment, he
       found himself scooping up a handful of cooked rice from my pile.)

4.5.3 m(initbit   ti tampulanu ta sang bilug ang niuy.)
       carry by fingers   Tampulanu   one unit   coconut
       'Tampulanu carried one coconut by his fingers.'
       (He just happened to come by and pick one up.)

4.5.4 (yay tukaw ang) m(inali ti tampulanu.)
       that first   dug up   Tampulanu
       'Tampulanu was the first one to dig up (the ground).'
       (He dug the first few shovelfuls for his child's grave.)

5. METHODOLOGY

When there are a large number of stem features to be examined, how
can one know ahead of time which of the features will be most useful
for purposes of classification? Some notes on the methodology used
during the research for this paper follow, and they may suggest some
answers to that question.

5.1 It has been the experience of students of Philippine languages that
infrequent affixes and affixes whose occurrence and meaning are highly
predictable have little value for classificatory purposes. Because it
falls in the latter category, most investigators have given little
consideration to the causative prefix pa- in classifying verb stems.

5.2 In this classification study the three subject focus affixes ag-,
aN-, and -um- were the first ones chosen. The two reasons for this are
that (1) this is where most students have started, and (2) the differ-
ences in the meanings of these affixes were not clearly understood.
Next, the object focus suffix -en, the referent focus suffix -an, and
the accessory focus prefix i- were chosen because most previous

investigators have taken these into account also, and they have found much complexity in both their surface and deep structures.

5.3   The first classification was made on the basis of which of these six affixes could occur with a given stem.   The affixes i- and -an, however, were found to occur with all the stems examined, which means that the classification was really based on only the other four.

5.4   The second classification was made on the basis of the roles expressible in clauses whose verbs are affixed by -en, -an, and i- and by affix combinations including these three affixes.   Subject focus affixes were disregarded, because in many Philippine languages subject focus clauses tend to have one tagmeme fewer than nonsubject focus clauses, and it was presumed, therefore, that this would limit what these clauses could reveal about role structures.

   The choice of these three affixes was a happy one, for when they were compared, new role structures that had never before been noticed were quickly recognised.   This, in turn, stimulated further elicitation to see if the newly discovered roles and structures occurred also with other verbs.

   Often there was difficulty in identifying roles.   There were several instances of indeterminacy between pairs of roles, such as between Goal and Patient, Goal and Beneficiary, Patient and Concomitant, and Goal and Location.   To cope with this problem, I found it necessary to refine the initial, tentative definitions with which I had started.   For instance, it was not until Goal was defined as the target toward which the action is directed that it could be clearly distinguished from Patient and Location.

   Also as work progressed, by trial and error I learned how to recognise and evaluate clues given by my language helper, which facilitated differentiation of roles.   One such hint, that Concomitant, even though animate, is an inert, passive participant during the action, helped to contrast Concomitant with Patient.   This does not mean, however, that all ambiguities have been resolved.   For instance, Goal is still difficult to distinguish from Beneficiary in some cases.

   Another aid in identifying roles was to transform clauses from one focus to another.   This was valuable, because only certain roles can be encoded as topic in clauses of a given focus.

5.5   After the affixes to be considered were decided, the verbs were studied to see what combinations of roles and affixes they could take.   Then the stems were grouped into classes.   Each class was posited on the

basis of the correlations of role combination with affix that are possible with its member verbs. Where a verb was found to share some, or even one, of the affix-role correlations that define a class, it was added to that class as a subclass.

In order for more verbs to be included in a class than would otherwise be possible, a mutually exclusive relationship between two affix-role correlations was sometimes posited. In such cases, some verbs in a class take one correlation; other verbs take the other correlation; but no verbs take both. Often the only difference is the affix that co-occurs with the role combination.

5.6 Eventually it became evident that numerous role combinations were involved in the distinguishing of the different verb stem classes. An effort was made to reduce this complexity to a small set of diagnostic features for distinguishing all sixteen stem classes; however, no consistent way was found to do so.

6. MULTIPLE ROLE COMBINATIONS

Aside from methodology, this research paid dividends in other respects as well. For instance, I became impressed during elicitation sessions with my language helper with what might be called the "elasticity" of verb stems. It is this property, it seems, that allows a native speaker to use verb stems in new situations as needed. Such a new situation might elicit from a speaker a role that perhaps had never before occurred with that particular stem in that speaker's idiolect. I received the impression that, if one were to elicit more and more situations describable by a particular verb stem, he would find that more roles could occur with that verb stem than he at first had thought possible.

A case in point may be helpful. There is a verb upak *'remove bark'* and also a verb kanit *'remove hide'*. That the role of Quantity may occur with upak reflects a cultural reality: the bark of certain trees has commercial value and, therefore, has to be measured. This same role, however, may not occur with kanit, because the hides of animals have little or no commercial value for the Tagbanwa. Therefore, to measure, or count, them is meaningless.

Consequently, by the end of this study it had become clear that more verbs than generally realised have several expressible role combinations, rather than just one. This appears to be more frequent than has been implied in general case grammar writings or reported heretofore for Philippine languages. For the Kalamian Tagbanwa verbs studied,

disregarding affixes that correlate with role combinations, one can obtain the following statistics showing the correlation of number of role combinations with verb stems. For example, it is found that the number of verb stems that may occur with three role combinations is thirteen.

No. of role combinations: 1 2 3 4 5 6 7 8 9
No. of verb stems: 3 10 13 8 11 9 2 3 1

One stem was found to occur with as many as ten role combinations. That stem is takwal *'climb up'*,[7] and these ten role combinations are the following:

6.1   /AG-P$_t$/
takwal(en) mu   (ra kanay) yang niuy.
V:*climb up* A:*you now please* G-P$_t$: *coconut*
'Please climb up (and get) the coconut.'

6.2   /AP$_t$G/
t(in)akwal   ni paulu yang baul   yamen   tung budiga.
V:*climbed up* A: *Paulo* P$_t$: *trunk our-ex.* G: *storage*
'Paulo climbed up to the storage place (and got) our trunk.'

6.3   /AG-PB$_t$/
(i)t(in)akwal aw   anya ta   niuy.
V:*climbed up*   B$_t$:*for me* A:*he* G-P: *coconut*
'He climbed up (and got) a coconut for me.'

6.4   /AQ$_t$/
t(in)akwal(an) na   yang mga   niuy   ang atia.
V:*climbed up*   A:*he* Q$_t$: *plural coconut   that*
'He climbed up (and got) that many coconuts.'

6.5   /AB$_t$C/
t(in)akwal(an) aw   (ra)   anya ta pinli?
V:*climbed up*   B$_t$:*for me   now* A:*he* C: *rope*
'He climbed up with a rope for me.'

6.6   /ALC$_t$/
(i)t(in)akwal aw   ni paulu tung ayu?
V:*climbed up*   C$_t$:*with me* A: *Paulo* L: *tree*
'Paulo climbed up into the tree with me (on his back).'

6.7   /AL$_t$/

t(in)akwal(an) ni runsilyu yang balagen.
V:*climbed up*   A: *Ronsillo* L$_t$: *vine*
'Ronsillo climbed up on the vine.'

6.8   /AL$_t$G/

t(in)akwal(an) ni paulu yang aldan ang atia tung budiga.
V:*climbed up*   A: *Paulo* L$_t$: *ladder*   *that* G: *storage place*
'Paulo climbed up on that ladder to the storage place.'

6.9   /AGB$_t$/

(i)t(in)akwal aw   anya tung tumbung yang ayung atia.
V:*climbed up* B$_t$:*for me* A:*he* G: *tip*   *of*   *tree*   *that*
'He climbed up to the tip of that tree for me (so he could look out
over the ocean for my launch).'

6.10   /ALB$_t$/

(i)t(in)akwal aw   anya tung balagen.
V:*climbed up* B$_t$:*for me* A:*he* L: *vine*
'He climbed up on the vine for me.'

It may be noted that only five affix-role correlations were used in
classifying takwal as simultaneously a member of both classes 4 and 5.

On the basis of the foregoing illustrations, it may be instructive
to posit for takwal what Langendoen (1970:79-80) calls "role structure".
That is the set of roles inherent in this stem, which reflects a dis-
tinct real-life situation.[8] From this set of roles a speaker may select
what he wants to encode in speech. It is seen that takwal requires more
than one role structure to account for all the role combinations that
may be used with it in talking.

[ALGP ∿ G-P(B)] can be posited as one of the role structures in-
herent in the verb takwal, and this role structure is actualised in
Kalamian Tagbanwa clauses as the following role combinations: /AG-P/
(6.1), /APG/ (6.2), and /AG-PB/ (6.3). /AQ/ (6.4) could also be gen-
erated from this case frame, since Q is a kind of Patient. The real-
life situation reflected in this case frame is that of an Agent climbing
up a certain Location (tree) toward a Goal where there is a Patient that
he wishes to acquire, optionally for a Beneficiary.

[ALGC(B)] can be posited as another role structure inherent in the
verb takwal. It is actualised as these role combinations: /ABC/ (6.5)
and /ALC/ (6.6). The real-life situation reflected is that of an

Agent, conveying some kind of a Concomitant, climbing up a certain
Location (tree) toward a Goal, optionally for a Beneficiary.

[ALG(B)] may be posited as the third role structure inherent in the
verb takwal, which is actualised in clauses as the following role
combinations: /AL/ (6.7), /ALG/ (6.8), /AGB/ (6.9), and /ALB/ (6.10).
The real-life situation reflected here is that of an Agent climbing up a
Location (tree) to a Goal, optionally for a Beneficiary. The purpose of
this action is neither conveying a Concomitant nor acquiring a Patient,
but some other type of action.

It may be noted that the three role structures posited above differ
from each other by one role each: P $\sim$ G-P versus C versus neither.
Further, we find that they can be combined into one overall formula:

$$
\left[\text{ALG} \left(\left\{ \begin{array}{c} \text{C} \\ \\ \text{P} \sim \text{G-P} \end{array} \right\} \right) \text{(B)} \right]
$$

Finally, in order to be explicit about the methodology used in de-
termining these role structures, the following steps are given.

(1) Gather in a set all the role combinations that seem to describe
the same real-life situation.

(2) List all the individual roles that are found in these combina-
tions.

(3) Take each combination in turn and ask which role is, or may op-
tionally be, in the situation verbalised by that particular combination.

(4) Hopefully, step (3) will show what situation(s) lie behind each
combination and which of the combinations really belong together be-
cause they describe the same situation. (Conceivably, a given role
combination can belong simultaneously to two sets of combinations. That
is, a role combination can be used ambiguously to verbalise either of
two quite distinct real-life situations.)

(5) If one finds several such ambiguous sets of role combinations,
each set having a different underlying real-life situation, then these
underlying situations can be compared by the same method (steps 1-4
above) to see if they are all indeed different, or whether some of them
can be combined.

(6) The goal is to describe as many role combinations as possible as
being verbalisations of a single situation type.

(7) Once role structures have been posited for a sufficient number
and variety of verbs, the final step is to try to draw up encoding and
deletion rules that will specify which wole combinations may be used to

actualise a particular role structure when a given real-life situation
is talked about.

7. CONCLUSION

To summarise, it seems to be evident that classifying verbs by affix
potential is quicker and easier than classifying them by role combina-
tions. The latter way, however, even though more difficult, reveals
much more about how verbs are used.

For example, an understanding of role combinations makes it easy for
one to disambiguate homophonous utterances. Note the following:

7.1   /APS$_t$/-an
t(in)aluk(an) aw   anya yang geed.
V:*hid*   S$_t$:*from me* A:*he* P: *bolo*
'He hid the bolo from me (so I would not use it to hurt anyone).'

7.2   /APB$_t$/-an
t(in)aluk(an) aw   anya yang geed.
V:*hid*   B$_t$:*for me* A:*he* P: *bolo*
'He hid the bolo for me (so that a third party could not borrow it).'

7.3   /APG$_t$/-an
p(in)lek(an) ti tampulanu ni kasawa na ta bila?
V:*threw*   G$_t$: *Tampulanu* A: *spouse his* P: *fishhook*
'Tampulanu's wife threw him a fishhook.' (The one he had been using
had broken.)

7.4   /APS$_t$/-an
p(in)lek(an) ti tampulanu ni kasawa na ta bila?
V:*threw*   S$_t$: *Tampulanu* A: *spouse his* P: *fishhook*
'Tampulanu's wife threw away his fishhooks.' (She wanted to put a stop
to his fishing.)

Identifying, cataloging, and describing role combinations associated
with verb stems is admittedly difficult, and at the beginning it seems
even to be subjective. The results, however, are well worth the effort
for those who wish to generate semantically acceptable utterances in
appropriate situational contexts.

ng, and ɨ as e, and initial ʔ is not written.

2.   Process and state verbs have not been examined; therefore, the classes discussed in this paper cannot be taken as a complete classification of Kalamian Tagbanwa verb stems.

3.   N is a morphophoneme, which is actualised as a nasal at the position of articulation of the following stem-initial consonant. In the case of aN-, the following rules apply: (1) stem-initial p and b > m; (2) stem-initial k > ŋ; (3) with certain stems, initial t and s > n; and (4) resultant geminate nasal sequences are reduced to a single nasal. Other relevant morphophonemic information is as follows: -um- has an allomorph m- and past tense forms -umin- ~ min-. Also, -en has the past tense form -in-; -an has -in--an; i- has i--in- ~ in-; and ag- and aN- occur in the past tense as n-ag- and n-aN- and in the nonpast tense as m-ag- and m-aN-. Further details are given in Ruch 1964.

4.   Most of the names used for participant roles are taken from Chafe 1970.

5.   Parts of an example not directly illustrating the feature(s) under discussion are enclosed in parentheses.

6.   In a seminar, David Zorc suggested that with -an the Agent's motion is optional; whereas with i- his motion away from his original position is obligatory.

7.   Subsequent to the analysis and classification discussed in this paper, two additional role combinations were discovered for takwal *'climb up'*: /AGB$_t$/ and /ALB$_t$/.

8.   "Real-life situation" here means not one specific situation, but a large set of similar situations.

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