

# Word-class-changing derivations in Takivatan Bunun

## A selection

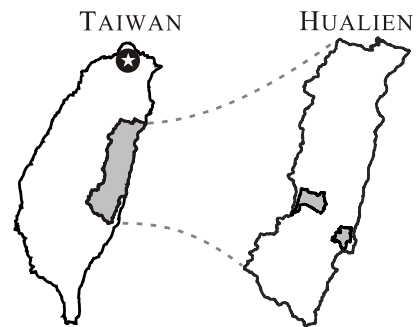
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### 1. Introduction

**Bunun:** One of the thirteen recognized Austronesian minority groups in Taiwan. About 40,000 ethnic members, which can be roughly subdivided in five clans. Originally hunter-gatherers, living in semi-nomadic small family groups high up in the Central Mountain Range. During the Japanese occupation, most Bunun were resettled in lowland villages. At present, most have adapted to modern life and live either in mono-ethnic villages or in one of the big cities. The younger generations are educated in Mandarin and have no fluent knowledge of their mother tongue.



**Takivatan:** The Takivatan Bunun are the third-largest clan and have settlements in Nantou (NW Taiwan) and in Hualien (Central E Taiwan, see map). My research focuses on the group in Hualien, because it is more isolated and therefore less affected by other dialects and languages. There are three settlements in two administrative villages (see map right) with approximately 4000 inhabitants.

**Takivatan Bunun:** Austronesian, Formosan. Has a fairly typical Austronesian phonology with 3 vowels and 16 consonants. Mix of head and dependent marking. Verb-initial with a Philippine-style focus system. Focussed participant is cross-referenced on the verb. Fixed word order (V – focussed – non-focussed). Bound and free personal pronouns. Arguments and affixes are frequently ellipsed when they are retrievable from the context.

### 2. Word classes

Bunun has two major word classes, nouns and verbs. There are sufficient criteria that help us to establish a solid noun-verb distinction, but many are non-discrete. This means that in

general, the distinction between nouns and verbs cannot be established by a binary contrast between the presence and absence of features, but is only observable as statistical distributions of a set of features.

	Noun	Verb
1 Can be head of a predicate	+	+++
2 Can be modifier in a predicate	O	+++
3 Can have arguments	O	+++
4 Can occur in serial verb constructions	O	++
5 Can be head of an argument	+++	O
6 Can be modifier in an argument	+	+
7 Can have focus affixes	++	+++
8 Can have aspectual affixes	+	+++
9 Can have bound pronouns	O	++
10 Can have DEF markers -ti/-tun/-ta	++	+
11 Can have DEF markers -ki/-kun/-ka	+	++
12 Can have -i/-a	+	++
13 Can have Aktionsart (type II)	+	++
14 Can have action type prefixes (type III)	+	+++
15 Can be stem-reduplicated	O	+
16 Typical function of stem-RED		lexical aspect, generic
17 Can be CV-reduplicated	++	++
18 Typical function of CV-RED	plurality, recursivity, HABIT	lexical aspect (HABIT, DUR, ITER, DISTR), generic/indefinite
22 Refers to a referent	+++	+
24 Refers to an event	+	+++

(+++ = typically; ++ = often; +=: rarely; O = never)

**Table 1 – Properties of nouns and verbs**

Most other word classes can roughly be defined by stating how noun-like or verb-like they behave in a syntactic context (see green supplement A.) The result can be represented on a cline:

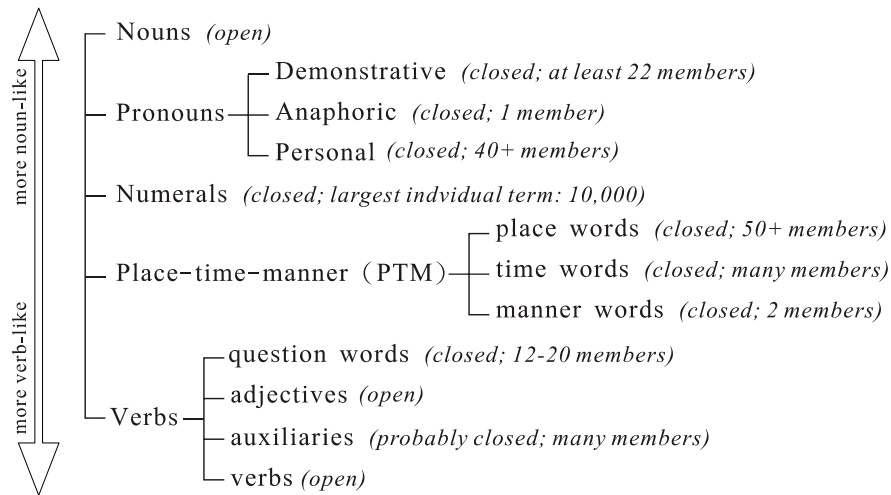


Figure 1 – Word classes

Adjectives are best analysed as a distinct subclass of stative verb. Often, it is more useful to make a distinction between stative and dynamic verbs. All Takivatan question words, also those referring to persons or things, are verb-like.

- (1) {Simaq}<sub>v</sub> aipi?  
 who DEM.S.PROX.VIS  
 ‘Whose is he?’
- (2) {Mun-ʔisaq}<sub>v</sub> aipi?  
 ALL.VOL-where DEM.S.PROX.VIS  
 ‘Where does he go to?’

Bunun has no adverbs. ‘Adverbial’ concepts are expressed either by adjectives or by auxiliary verb constructions (or they are simply not expressed).

- (3) daukdauk-ʔas mu-⟨da⟩dan!  
 slowly-2S.AG ALL.NVOL-⟨REP⟩-go  
 ‘You have to go slowly.’ (i.e. ‘you have to drive slowly on the road and take your time.’)

Some word classes, such as conjunctions or interjections, fall outside this noun-verb continuum.

### 3. Derivational processes – an overview

Derivational process in Takivatan can be subdivided in: (1) nominalizations; (2) verbalizations; (3) auxiliarizations; (4) adjectivalizations; and (5) time word derivations.

source → ↓ result	N	DEM	ANAPH	PERS	NUM	PTM	Q	ADJ	AUX	V
1. NOUN	Y							Y	Y	Y
2. VERB	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3. AUXILIARY	Y	Y	Y	Y	Y	Y	Y	(Y)		
4. ADJECTIVE	Y							Y		
5. TIME WORD	Y		Y			Y	Y	Y		

Table 2 – Types of derivation in Takivatan

Note that the boundaries between (2), (3) and (4) are not so strict: verbs and some adjectives can sometimes function as auxiliaries, and both auxiliaries and adjectives are a verbal subclass (with distinct morphosyntactic properties).

Affixation is the main morphological mechanism for derivation. Occasionally, zero-derivation or reduplication are used. As Table 2 shows, especially verbalizations and auxiliarizations can be formed from a wide variety of stems (for an example, see *min-* in the next section). The primary use of many of these prefixes is in verb-to-verb derivation, and for some prefixes, making a distinction between word-class-changing and word-class-retaining uses seems somewhat irrelevant: they just combine with everything that is semantically compatible (see also De Busser 2007).

In Takivatan, verbalization is more common than nominalization. Table 2 showed that, whereas nominalizations mainly derive from verbs, adjectives and auxiliaries, verbalizing derivations can take almost all word classes as their sources. Table 3 shows the approximate number of strategies found in the corpus for each type of derivation. The token frequency of the five strategies in the corpus follows the same order: verbalization is more common than nominalization, which in turn is more common than all other strategies.

Verbalization	Nominalization	Auxiliarization	Adjectivization	Time word
75+	9+	2	2+	1

Table 3 – Approximate number of derivational strategies in the corpus<sup>1</sup>

Note that Bunun dialects have more than 180 phonemically distinct derivational affixes. That means that up to two-thirds are not word-class changing. Word-class-preserving

<sup>1</sup> A strategy here is a phonemically distinct affix (disregarding polysemy), a type of reduplication (stem, CV or Ca), or zero-derivation (again disregarding polysemy). Affix counts were based on an (incomplete) affix list. Results are only indicative.

derivations are mainly of three types (in order of frequency): (1) verbal; (2) nominal; and (3) numeral.

#### 4. Verbalizations

Verbalizations are the most common type of word-class-changing derivation. The majority is created by prefixation and is also used for verb-to-verb derivations or for expressing some semantic-syntactic function (see again De Busser 2007). Supplement B gives an overview.

As the ‘Sources’ column in Supplement B shows, many of these prefixes can take roots from many word classes. An extreme example is inchoative *min-* ‘reach a state of’, which can combine with almost every type of root:

***Noun as source:***

mintalaban ‘become winter’ < min- + talaban ‘winter’

mintantaŋ ‘turn into powder, become powder’ < min- + taŋtaŋ ‘powder’

***Anaphoric pronoun as source:***

minsia ‘succeed’ < min- + sia ‘ANAPH’

***Manner word as source:***

minmaupata ‘become like that’ < min- + maupa ‘thus’ + -ta ‘DEF.DIST’

***Auxiliary source:***

minhamu ‘select together’ < min- + hamu ‘select’

minmantuk ‘learn the truth about’ < min- + mantuk ‘true, genuine’

***Adjectival source:***

minpuhuq ‘become rotten’ < min- + puhuq ‘rotten’

mindikla?in ‘broken, out of order’ < min- + dikla ‘bad’ + -in ‘PRV’

***Verbal source:***

minhaiða ‘become prosperous’ < min- + haiða ‘have’

minqansiap ‘gain understanding of’ < min- + qansiap ‘understand’

The readiness with which different prefixes select different word classes as roots varies considerably. *Min-* is extremely tolerant in this respect. Locative prefixes, on the other hand, tend to be quite restrictive and inconstant in their choice of root, although most can at least select for nouns and verbs. The volitional allative *mun-* can be combined with a small number of verbs indicating movement, with place words, and with nouns indicating a geographical location (including proper nouns).

**Verbal source:**

munhan ‘go to a certain location’ < mun- + han ‘go’

**Place word source:**

munbaʔav ‘go into the mountains, go to work on the field’ < mun- + baʔav ‘high location

**Nominal source:**

mundalaq ‘go to a certain plot of land’ < mun- + dalaq ‘land, ground’

mun-Taihuku ‘go to Taipei’ < mun- + Taihuku ‘Taipei’

\* muntama ‘go to father’ < mun- + tama ‘father’

Many, but not all, locative prefixes can select for these three sources. Directional *tan-* ‘in the direction of’ only combines with place and time words.

**Place word source:**

tanhuluŋ ‘be at a high location’ < tan- + huluŋ ‘back; back of’

**Time word source:**

tantakna ‘the day before a reference day’ < tan- + takna ‘yesterday’

(In some rare cases, *mun-* can combine with time words, but I am only aware of one form: *mundip* ‘till that moment in time.’)

## 5. Auxiliarization

The action type prefix (ACT) *ma-* indicates that the root with which it combines expresses a dynamic event. Many verbs in Takivatan typically occur with a prefix *ma-* in their actor focus form, and this form is also used as a citation form for these verbs.

mabaliv ‘buy’ < ma- + baliv ‘buy / sell’

matasʔi ‘produce’ < ma- + tasʔi ‘build’

maqaisqais ‘wipe using a wet mob’ < ma- + qaisqais ‘to mob’

In these cases, *ma-* behaves very ‘inflectionally,’ does not alter the meaning of the (verbal) root in any way and can be easily omitted. This use of *ma-* is fully productive.

Occasionally, *ma-* also functions as a real verbalizer. In those cases, it combines with a nominal root and forms a verbalization in which the root functions as an undergoer or location of the derived verb.

makusu ‘tickle’ / ‘laugh because being tickled below the armpits’

< ma- + kusu ‘armpit’

maqaisu ‘wipe one’s behind’ < qaisu ‘excrements sticking on one’s behind’

Here, *ma-* clearly is a derivational morpheme: it creates a new item in the lexicon, which is always used as the main verb in a verb phrase and it has all the properties of a full verb. This use of *ma-* is restricted to a small number of nominal roots.

There are situations where *ma-* combines with common nouns, pronouns or PTM words and where it is not immediately clear whether we are dealing with lexical derivation or with a syntactic process of some sort. These derivations do not really change the basic meaning of the root with which they combine and tend to be used as auxiliaries. In (4), in which a demonstrative is auxiliariized.

- (4) ma-[a]lipun                      mun-iti                      (normally: *mun?iti aipun*)  
 ACT-DEM.HUM      DIR.VOL-here  
 ‘He came here.’ (008-001)

It is possible for such forms to be used as the main verb in a predicate, but only if a semantic head is implied. In (5), *mamaŋun namabusuli* ‘it was no problem to carry a gun’ is actually *mamaŋun namabusuli tumvasu* ‘it is no problem to board a train while carrying a gun.’ Without an ellipted main verb, *mabusul* would not make sense.

- (5) Han    dan    vasu    {tum-vasu-⟨?⟩in},    {⟨ma⟩maŋun                      na-ma-busul-i}  
 at    road    train    drive-train-PRF    ⟨INTENS⟩-be.no.problem    IRR-ACT-gun-DEF  
 ‘When we arrived at the railroad, we took the train, and it was no problem to carry a gun.’  
 (008-002)

One might wonder why constructions like this exist. It is good to keep in mind that Takivatan has no class of adverbs, and only a very limited number of adverbial clauses (i.e. only place-time-manner clauses). Most concepts that in other languages would be expressed by an adverb or an adverbial phrase are in Takivatan expressed by auxiliary constructions. If one wanted to express that an action involving a gun was part of a larger unitary event, it wouldn’t be so crazy in Takivatan to turn the gun into an auxiliary to slot it into the predicate. The resulting predicate can be literally translated as ‘It was no problem to gun-ningly board a train.’ (Note that ‘carry a gun’ is my translation; when I asked what *mabusul* really meant, my consultant just made a gun-sign with his hands and said ‘gun’ in Mandarin.)

In some situations, these constructions might be used to reduce the complexity of the argument complex belonging to a predicate. Takivatan clauses dislike crowdedness: it is unusual to explicitly express more than one argument in the post-verbal argument slots of a single verb. By auxiliariizing arguments, one of these can be moved before the main verb.

This use of *ma-* appears to be fully productive, but it is used sparingly. Below are the only two instances in my corpus with common noun roots.

mabusul ‘carry a gun’ < ma- + busul ‘gun’  
 maqanvaŋ ‘be a sambar’ < ma- + qanvaŋ ‘sambar (small deer)’

Pronouns of all subtypes can also be used as auxiliaries when prefixed with *ma-* (see (4)). Specific subclasses of time words alternate between clause-final PTM phrases and auxiliary constructions, which can – but do not have to – be prefixed by *ma-*.

- (6) Mun-baʔav                      tiŋmut  
 ALL.VOL-up.in.mountains morning
- (7) Ma-tiŋmut                      mun-baʔav  
 ACT-morning                      ALL.VOL-up.in.mountains

*Both:* ‘In the morning, I (you/he/...) go up into the mountains (to work).’

When numerals function as auxiliaries, they normally do not take *ma-*.

## 6. Adjectivalization

There are a small number of roots in Takivatan that can be interpreted both as nouns and as adjectives.

saŋlav    ‘green, blue’ ~ ‘vegetable’  
 buqul    ‘round’ ~ ‘grain, granule; testicle’  
 samu    ‘forbidden’ ~ ‘(a) taboo’  
 ŋava    ‘toothless’ ~ ‘toothless person; demented person’

As an adjective, most can take the general adjectivizing prefix *ma-* (not to be confused with action-type *ma-*): *masaŋlav*, *mabuqul*, *masamu* (but *taŋava*; *\*maŋava* is not attested).

It is not clear to me which meaning is original and which derived. Option one is that they are polyfunctional roots that can be both nouns and adjectives. Second, they originally be adjectival roots, to which *ma-* is optionally added and from which the nouns were then derived. Third, all roots could originally have been nominal. the adjectival variants would then be derived by adding *ma-*. (Later, these adjectivizing prefixes would then be occasionally ellipted, something that regularly happens with other adjectives.)



## 7. Derivation of time words

Most time words that are derived from locative prefixes can function as full verbs. This is not the case for ablative time words formed with *maisi-* ‘from ... on’. Ablative *maisi-* can select all roots that are capable of expressing a moment in time.

***Nominal source:***

maisi?uvað?að ‘from childhood on’ < maisi- + uvað?að ‘child’

***Anaphoric pronoun as source:***

maisia ‘from that point on’ < maisi- + sia ‘ANAPH’

***Time word as source:***

maisiqabas ‘from previous times on’ < maisi- + qabas ‘past time’

***Manner word as source:***

maisi?aupā ‘from such moment on’ < maisi- + aupā ‘thus’

***Auxiliary as source:***

maisaŋan ‘from a moment ago onward’ < maisi- + saŋan ‘just, a moment ago’

***Adjective as source:***

maisi?atikis ‘from a young age on’ < maisi- + a- ‘ADJR’ + tikis ‘small’

## 8. Nominalizations

Takivatan ‘only’ has two handfuls of nominalization strategies. An overview is given in Supplement C. So far, I have only found one dedicated (i.e. non-polysemous) nominalization strategy, which uses a suffix *-?að* and derives a person with a certain property expressed by the adjectival root. Some examples:

maindudu?að ‘young, unmarried man’ < <RED>du ‘INTENS’ + maindu ‘handsome’ + -að

ðaðaðað ‘He who lives up in heaven’ < ðaðað ‘top’ + -að

istamasað?að ‘strong or powerful person; person that is very good at something’

< is- ‘transfer’ + tamasað ‘powerful’ + -að

madaŋ?að ‘elder, old person’ < ma- ‘ADJR’ + daiŋ ‘big, old’ + að

The majority of nominalizations involve focus markers (verbal cross-reference markers: AF *-ø*, UF *-un*, LF *-an*) and have verbs as a source. Focus marker derivations encode many complex concepts and are at present often used for creating new words for objects and locations that did not exist in traditional Bunun society. The locative focus marker *-an* is most productive and can encode at least three distinct meanings (see Suppl. C). The most common derivations with *-an* refer to a location or time where the action expressed by the root takes place.

**Place:**

aisabaqan ‘temporary resting spot in the forest’ < ai- ‘???’ + sabaq ‘sleep’ + -an

katluqaiʔan ‘uterus’ < kat- ‘grab, hold’ + luqai ‘baby, small child’ + -an

padaŋiʔan ‘container’ < pa- ‘ACT’ + daŋi ‘put, hold’ + -an

**Time:**

ailuʔan ‘spare time’ < ai- ‘???’ + lu- ‘spare time’ (cf. malʔu ‘to rest’) + -an

bahiʔan ‘dream’ < bahi ‘dream’ + -an

Sometimes, nominalizations with *-an* can also refer to persons. In these cases, they normally have verbs as a root that do not express actions and they encode persons that somehow participate in an event without being the main agent. (You could explain the use of LF *-an* here by saying that these derivations refer to a person as an abstract ‘locus’ of action.) The most common form is:

uskunan ‘person with whom one does something together’ (i.e. ‘class mate’, ‘work colleague’, ‘sexual partner’, ‘fellow criminal’, etc.) < uskun ‘(AUX) together’ + -an

Other derivations of this type:

isnavaan ‘student’ < is- ‘transfer’ + RED⟨na⟩ ‘HABIT’ + nav ‘teach’ + -an

kinijnaʔan ‘successor’ < ⟨in⟩ ‘RES’ + kiŋna ‘successive’ + -an

adiŋalan ‘neighbour; person sitting next to you’ < a- ‘ADJR’ + diŋal ‘side; next to’ + -an

LF *-an* can also be used in combination with a CV-reduplicated verbal root. The Bunun traditionally had no stores or prisons and the modern Bunun words for these two concepts are derived from the verbs ‘buy/sell’ and ‘lock up’ respectively.

babalivan ‘shop’ < RED⟨ba⟩ ‘HABIT’ + baliv ‘buy; sell’ + -an

luluman ‘jail’ < RED⟨lu⟩ ‘HABIT’ + lum- ‘catch, lock up’ + -an

(Note that *babalivan* literally means ‘a place that is habitually used to buy and sell things’ and has a more general meaning than English ‘shop.’ It can for instance also be used for stalls on a market.)

Nominalizations with the undergoer focus *-un* are less common. They derive the instrument or patient of the action expressed by the verbal root.<sup>2</sup>

butiqun ‘object just for wrapping; bag, wrapping paper, ...’ < butiq ‘wrap’ + -un

isqaisqaisun ‘object to mob the floor’ < is- ‘transfer’ + qaisqais ‘to mob’ + -un

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<sup>2</sup> In the Takivatan focus system both patient and instrument are encoded by the undergoer voice. The undergoer also includes the beneficiary, but so far I have found no derivations of this kind with *-un*.

kaununkaunun ‘edible things, esp. fruits’ < RED<kaunun> ‘HABIT’ + kaun ‘eat.UF’ + -un  
kuðkuðau ‘work, things that need to be done’ < RED<kuð> ‘HABIT’ + kuða ‘work’ + -un

With some verbal roots, *-un* derives the abstract result of a process expressed by the root of the derivation.

iklalivaun ‘things that have been misunderstood’ < iklaliva ‘make a mistake’ + -un  
iqdi?un ‘problem’ < iqdi ‘undergo hardship’ + -un  
qansaipun ‘things one knows’ < qansiap ‘understand’ + -un

There are very few agent nominalizations in Takivatan. This might be because the agent focus is unmarked (or zero-marked). At the moment, I can only think of one example, with an inanimate agent and a CV-reduplicated verbal root.

kusabai ‘airplane’ < <RED>ba ‘HABIT’ + kusbai ‘fly’

There are almost no activity, state or property nominalizations. The only good example I can think of is the combination *in-* ... *-an*, as in:

ininqaiban ‘course of events’ < in- + in- ‘PRV’ + qaiban ‘trajectory’  
inliskinan ‘thoughts’ < in- + liskin ‘think’ + -an ‘LF’  
inuskunan ‘common experiences, things one went through together’  
< in- + uskun ‘together’ + -an ‘LF’

A possible explanation for this absence is that Takivatan has a very productive verbal morphology and an extensive system of auxiliary verb constructions and therefore has no expressive need for event nominalizations.

## 9. Conclusion

There is a lot of word-class-changing derivation in Takivatan, the majority of which are verbalizations. A remarkable aspect of these derivational processes is that, except for auxiliarizations, all have a lexical rather than a syntactic function (that is, they are used to generate new lexical items and not to adapt words so that they can be put into otherwise incompatible syntactic slots; compare this, for instance, with nominalization in Tibeto-Burman languages discussed before.)

Aikhenvald (2007:60, IV) posits that “derived members of all classes, except verbs, tend to be grammatically and semantically somewhat ‘impoverished’ compared to the underived members.” As far as I can see, this is not the case in Takivatan.

Another hypothesis in Aikhenvald (2007:60), that if languages have nominalizations, these tend to be agentive nominalizations, also does not hold for Takivatan, as Supplement C shows. Takivatan has very few (if any) agentive nominalizations, but quite a lot locative and undergoer nominalizations.

## Bibliography

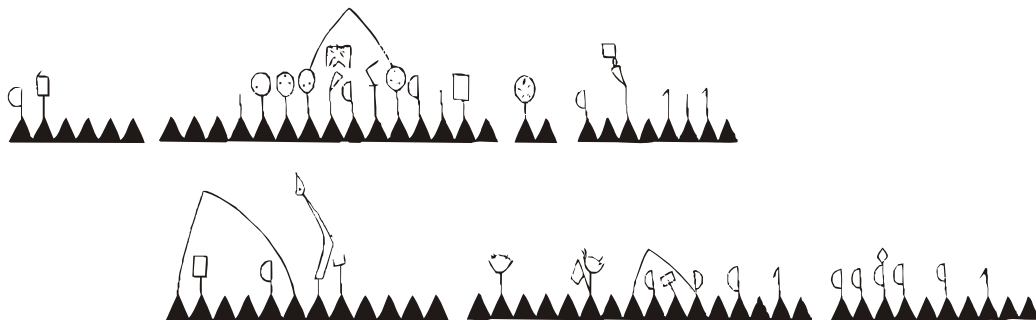
**Aikhenvald, A.Y. 2007.** *Word-class-changing derivations in typological perspective*. Position paper for RCLT Local Workshop, March 2007. Melbourne, La Trobe University.

**De Busser, R. 2007.** Verb-defining prefixes in Takivatan Bunun. RCLT seminar, 21 February 2007. To be published sometime somewhere.

**De Busser, R. to appear.** *A Reference Grammar of Takivatan Bunun*. Future PhD dissertation La Trobe University, hopefully to be published someday somewhere.

## List of abbreviations

⟨RED⟩	reduplication	DIST	distal	PROX	proximal
2S	2 <sup>nd</sup> singular	DISTR	distributive	PRV	perfective
ABL	ablative	DUR	durative	PTM	place-time-manner word
ACT	action marker	GENER	generic	Q	question word
ADJ	adjective	HABIT	habitual	R	root
ADJR	adjectivizing prefix	HUM	human	REC	recursive plural
AF	agent focus	INTENS	intensifying	RED	reduplication
AG	agent	ITER	iterative	REP	repetitive
ALL	allative	LAsp	lexical aspect	S	singular
ANAPH	anaphoric pronoun	LF	locative focus	STAT	stationary (locative)
AUX	auxiliary	N	noun	UF	undergoer focus
CAUS	causative	NUM	numeral	V	verb (excluding AUX and
DEF	definiteness marker	NVOL	non-volitional	ADJ)	
DEM	demonstrative	n-WCC	non-word-class-changing	VIS	visual
DEM	demonstrative pronoun	PERS	personal pronoun	VOL	volitional
DIR	directional	PL	plural	WCC	word-class-changing



## SUPPLEMENT A – WORDCLASSES

+++ : typically; ++ : often;  
 + : rarely; O : never;  
 (+) : only specific members in specific situations

	Noun	PRONOUNS				Numeral	PMT WORDS			Question	VERB-LIKE WORDS		
		Demonstr.	Anaphoric	Personal			Place	Time	Manner		Auxiliary	Adjective	Verb
1 Can be head of predicate	+	O	O	+	+	O	+	+	++	+	+++	+++	
2 Can be modifier of predicate	O	O	O	+	+	O	++	O	+++	+++	++	++	
3 Can take arguments	O	O	O	+	+	O	++	+	++	+++	+++	+++	
4 Can occur in serial verb construction	O	O	O	O	O	O	++	O	++	++	++	++	
5 Can be head of an argument	+++	+++	+++	+++	++	+	+	O	O	O	O	O	
6 Can be modifier in an argument	+	++	++	++	+++	++	+	+	+	O	++	++	
7 Can take focus affixes	+	O	O	O	O	O	O	O	O	++	O	+++	
8 Can take aspectual affixes	+	+	O	O	+	+	++	+	++	+++	+++	+++	
9 Can take bound pronouns	O	O	O	O	++	O	++	+	++	+++	+++	++	
13 Can take adjectivizer ma-	O	O	O	O	O	O	O	O	O	O	+++	O	
14 Can take Aktionsart prefixes (type II)	+	+	+	O	+	+	+	+	O	+	++	++	
15 Can take action type prefixes (type III)	+	+	+	+	???	O	++	O	(+)	++	O	++	
16 Can be stem-reduplicated	O	O	O	O	O	O	O	+	+	+	+	+	
17 Typical function of stem-RED								GENER	GENER	LAsp	INTENS	LAsp, GENER	
18 Can be CV-reduplicated	++	O	O	O	O	O	O	O	O	+	++	++	
19 Typical function of CV-RED	HABIT, PL, REC									LAsp	INTENS	LAsp, GENER	
20 Can be Ca-reduplicated	+	O	O	O	++	O	O	O	+	O	O	O	
21 Typical function of Ca-RED	???				HUM				HUM				
22 Refers to an event	+	+	++	O	O		+++	++	O	+	+	+++	
23 Refers to a property	+	O	O	O	O	O	O	++	++	+++	+++	++	
24 Refers to a referent	+++	+++	+++	+++	+++	+++	O	O	++	O	O	+	

## SUPPLEMENT B – Verb-defining prefixes and word-class-changing derivations

Prefix type	No.	Typical n-WCC semantics	WCC?	Semantics WCC	Sources
1. locative	20+	indicate location or motion	some; often	<i>idem n-WCC</i> : locative, directional or temporal (IX)	N, ANAPH, PERS, NUM, PTM, Q, ADJ, AUX
2. state type	4-7	indicate states / adjectives	one; rarely	similative ('be like R'); adjectivizes root (VIII) ( <i>but: see section 6</i> )	N
3. type-shifting	10+	change actions to states or vice versa	few; sometimes	mainly inchoative and causative (I, IV)	N, ADJ
4. action type	7-10	indicate action / dynamicity	most; sometimes	existential/similative ('be R') or instrumental ('use / apply / hold / ... R') (III, V, VIII) ( <i>see also auxiliarization</i> )	N, DEM, ANAPH, PERS, NUM, PTM
5. classificatory	10+	classify actions in semantic subtype	some; sometimes	specific action involving R; instrumental, causative, ... (IV, V)	N
6. noun-attaching	25+	—	all; always	indicate a meaning involving R (IV, V, VII, X)	N, (AUX)

Prefix type	Productivity when WCC	Example
1. locative	productive	ilumaq 'be at home' < i- 'STAT' + lumaq 'house, home'; maina?isaq 'where from?' < maisna- 'ABL' + isaq 'where?'
2. state type	not productive	( <i>see sec. 6</i> )
3. type-shifting	productive	pisihal 'make something good' < pi- 'CAUS' + sihal 'good'
4. action type	productive, but not common	( <i>see sec. 5 on auxiliarization</i> )
5. classificatory	limited set of nominal roots	mutaki 'have a shit' < mu- '(cause to) fall down like a fluid' + taki 'excrement'; kalumaq 'build a house' < ka- 'build' + lumaq 'house'
6. noun-attaching	limited set of nominal roots	maquhima 'use one's hands' < maqu- 'use' + hima 'hands'

WCC = word-class-changing / n-WCC = non-word-class-changing / R = root / roman numerals indicate semantic types in Aikhenvald (2007:13-19) / WCC column indicates how many prefixes in the category are used as a n-WCC derivation and how often they do so.

**Note:** The following types of verbalizations from Aikhenvald (2007) are certainly present: I. inchoative; III. existential; IV. causative; V. manipulative (incl. instrumental); VII. delocutive; VIII. similarity; IX. (a) temporal, (b) locative, (c) directional; X. ingestive; maybe XI.

## SUPPLEMENT C – Nominalizing strategies

	Original n-WCC meaning	Nominalizing meaning	Sources	Productive	Freq.	Example
1.	-ʔað —	person with property R (II)	ADJ, V, (place, N)	not very	9+	madainjʔað ‘elder, old person’ < ma- ‘ADJR’ + daij ‘old’ + <u>-að</u>
2.	-an locative focus marker / locative case marker	a. location of an action R or an action in which R participates (C2)	V	yes	many	aisabaqan ‘temporary resting spot in the forest’ < ai- ‘???’ + sabaq ‘sleep’ + <u>-an</u>
		b. time or event R (C6)	V	yes	many	lusʔanan ‘holiday period, period of celebration’ < lusʔan ‘celebrate’ + <u>-an</u>
		c. person as the locus of an event (usually not action) (???)	AUX, (V)	maybe	4-5	uskunan ‘person with whom one does sth together’ < uskun ‘together’ + <u>-an</u>
3.	⟨RED⟩ habituality ...-an	location habitually used for action R (C2)	V	yes, but selective	8+	babalivan ‘shop’ < RED⟨ba⟩ ‘HABIT’ + baliv ‘buy; sell’ + <u>-an</u>
4.	-un undergoer focus marker	a. instrument of action R, object of action R (B3, C1)	V	probably	6+	isqaisqaisun ‘object to mob the floor’ < is- ‘transfer’ + qaisqais ‘to mob’ + -un
		b. result of process R (B4)	V	no	3	qansaipun ‘things one knows’ < qansiap ‘understand’ + -un
5.	∅ ?	something or something with property R (???)	ADJ	no	3+	<i>see adjectivization (sect. 6)</i>
6.	⟨RED⟩ habituality	object (or person) habitually performing action R (B1)	V	yes	???	kus⟨ba⟩bai ‘airplane’ < kusbai ‘fly’
7.	sin- expresses action involving transfer	object that is result of deliberate action R (B3 or B4)	V	probably not	3	siniquimis ‘life’ < sin- + iqumis ‘live’; sinkuðakuða ‘work (to be done)’ < sin- + kuðakuða ‘work’
8.	in-...-an <i>in-</i> : movement across a concrete or abstract trajectory	abstract units of which process R consists (±A1)	V	no	2	inliskinan ‘train of thought’ < in- + liskin ‘think, ponder’ + -an
9.	pis-...-an <i>pis-</i> : ‘re-’, (cause to) regain a state	object used for re-R-ing something (C1 or C2)	ADJ	no (yes as verbalizer)	1	piskaðhavan ‘refrigerator’ < pis- + kaðhav ‘cold’ + -an

**Note:** The following types of verbalizations from Aikhenvald (2007: 27-32) are present: de-verbal: A1. process nmz; B1. agentive nmz; B3. patientive nmz; B4. result nmz; C1. instrument nmz; C2. location nmz; C6. time nmz; de-adjectival: II. person characterized by property. In addition, two other nominalization patterns exist: *-an* a. nominalization of person involved in mutual or cooperative action; ∅. (could be IIb) object characterized by property.