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Kyoto University
A sketch on the morphosyntax of Kadorih
(Dohoi: Austronesian) *

Kazuya INAGAKI

0 Overview

This paper describes Kadorih morphology and morphosyntax, which have never before been sufficiently documented or analyzed.

Starting with the phonological identification of affix forms and affixation processes (§ 2.1), some complex affixes will be analyzed from a morpho-phonological perspective, resulting in the division of Kadorih morphosyntactic affixes into 4 types (§ 2.2), **1st slot prefix** (bV-, hV-), **infix** (-Vn-), **2nd slot prefix** (kV-) and **plain prefix** (N-, pV-, tV-).

At the end of the preliminary section § 2.3, syntactic transitivity and three clause types in Kadorih will be discussed in order to explore each affixed form morphosyntactically (§ 3).

This paper’s summary in § 4 includes a concise table of the affixes, focusing on each affix type, affix form, transitivity, volition and possible clause type.

1 Introduction

1.1 Background

Kadorih (‘Dohoi’ or ‘Ot Danum’) is spoken in the upper areas of Central Kalimantan, Republic of Indonesia by about 25,000 people according to Gordon (2005).

It is unclear where Kadorih is spoken, however Inagaki (2005b, p. 16) provided some possible areas of Kadorih speakers by summarizing the previous studies of a wordlist (Stokhof, 1986), a comparative study (Hudson, 1967), sociolinguistic reports (Meyers et al. 2003 and Riwut 1993) and language documentation (Santoso et al. 1984 and Taib et al. 1990). (1) shows the village names that have been referred to in these

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previous studies.

The genetic affiliation of Kadorih language is assumed to be that in (2).

(1) Central Kalimantan, Indonesia

(2) A provisional mapping of Kadorih (and Ngaju) in Austronesian languages

Austronesian
Malayo-Polynesian
Barito
West Barito
Northwest Barito
Kadorih (Dohoi)

Kadorih people speak Ngaju, a prestige language in the upriver regions of Central Kalimantan as their second language (for the genetic affiliation of Ngaju, see (2) ). Furthermore, some Kadorih people speak Indonesian as another second language. Therefore, all members of the Kadorih community have acquired more than one language (all of which are Austronesian languages). On the contrary, almost no non-Kadorih people in the region speak Kadorih.

Native speakers of Kadorih use the Kadorih language for communication only among themselves. When Kadorih people speak with non-Kadorih people, they employ Ngaju or Indonesian for communicative purpose. In a religious context (Hindu- Kaharingan [traditional religion] or Christianity), Ngaju or Indonesian are predominant and Kadorih is not used in rituals.

Most loanwords are borrowed from Ngaju (*bahandang* `red`; cf. Kad. *marjan* `red (red
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pepper)' [archaic]). Recently, however, many words have come from Indonesian via TV.

The morphological/morphosyntactic descriptions in this paper are based on wordlists (about 2500 words), texts (about 1200 sentences) and elicited sentences (about 300 sentences) which were collected by the author in T[umbang] Marikoi (Kahayan: see map in (1) ) during 2005–2006.

1.2 Phonetic and phonological sketches

According to Inagaki (2005b), the phonetics and phonology of Kadorih can be summarized as follows.

PHONETICS
There are three allophonic rules in Kadorih, fronting rule (/C/ → [C]/C]: [t, d, n, r, f, f, d, j, c, n / k, g, y]), prenasalization rule (/D/ → [ND]: [mb, nd, d, g]), and nonrelease rule (/T/ → [T']: [p, f, k']). Word-final /s/ ([s]) can be approximantized as [z]. Each vowel quality is stable ([i, e, o, u]), and each acoustic space is independently distributed in F1–F2 coordinate. Suprasegmental cues, such as loudness, pitch, etc., serve only as boundary markers of words, phrases, etc.

PHONOLOGY
The Kadorih phonemic inventory includes vocalic /i, e, a, o, u/ and consonantal /p, t, k; b, d, g; c, j; β, s, h; m, n, n, r, r, (y)/. The distribution of /y; β; d, n; e/ in words is restricted in terms of phoneme frequency. Phonetic diphthongs are predictable from their characteristics: (i) the second element must be a high vowel (i/u), (ii) they must occur in word-final position and (iii) they cannot compose a word by themselves. Inagaki (2005a) recognizes (C)V(C).(C)V(C/V) as the basic well-formed phonological word.

2 Preliminaries

In § 2.1, the forms of the affixes and some affixation processes in Kadorih will be examined phonologically. In § 2.2, affix sequences will be analyzed morpho-phonologically, after which Kadorih affixes (N-, bV-, hV-, pV-, tV-, kV-, -Vn-) will be classified in terms of their distribution within affixal slots. § 2.3 describes information about transitivity phenomena, three clause types, and a note on volitionality.

2.1 Affixes
This paper will deal mainly with the Kadorih prefixes N-, bV-, hV-, pV-, tV-, kV- and the infix -Vn-. There are other affixes, for example, inflectional suffixes -n ‘(linker)’, -k ‘1st person singular’, -m ‘2nd person singular’, -i/-u ‘3rd person singular’, but these affixes will not be discussed.

Affix forms, base forms and example words derived by combining them are listed in (3). The symbol ‘~’ indicates that the forms on both sides are in free variation.
A sketch on the morphosyntax of Kadorih (Dohoi: Austronesian)

(3)

<table>
<thead>
<tr>
<th>affix</th>
<th>base</th>
<th>word</th>
<th>‘word meaning’</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. N-</td>
<td>konih</td>
<td>yonih</td>
<td>‘to listen to’</td>
</tr>
<tr>
<td>b. bV-</td>
<td>ruhpak</td>
<td>baruhpak</td>
<td>‘to blister’</td>
</tr>
<tr>
<td>c. hV-</td>
<td>sombaj</td>
<td>hasombaj</td>
<td>‘to meet’</td>
</tr>
<tr>
<td>d. pV-</td>
<td>kosak</td>
<td>pakosak</td>
<td>‘to ripen’</td>
</tr>
<tr>
<td>e. tV-</td>
<td>tiruh</td>
<td>tatiruh</td>
<td>‘to fall asleep’</td>
</tr>
<tr>
<td>f. kV-</td>
<td>duon</td>
<td>kaduon</td>
<td>‘ability’</td>
</tr>
<tr>
<td>g. -Vn-</td>
<td>sororj</td>
<td>sanororj</td>
<td>‘to be intruded’</td>
</tr>
<tr>
<td>h. —</td>
<td>turak</td>
<td>turak</td>
<td>‘to depart’</td>
</tr>
</tbody>
</table>

In (3a), the prefix ‘N-’ is attached to the base ‘konih’, yielding the word yonih ‘to listen to’. Similarly, every affix is attached to the respective base in (3a—g).

Two types of bases should be distinguished in Kadorih with respect to whether or not the relevant base form can occur independently, i.e. there exist *free* bases and *bound* bases. For instance, ‘turak’ is a *free* base since ‘turak’ in (3h) can occur as the independent word turak ‘to depart’ (cf. nurak ‘to push’, {N-}+{turak}). On the other hand, ‘konih’ is a *bound* base since ‘konih’ in (3a) cannot occur independently.

The derived words in (3b—g) show that the affixes have morphophonemic variants with different vowel quality, a ~ o (represented by ‘V’), and never i/u/e. Using binary features, the phonological specification of ‘V’ would be marked as \[-high, -front, x low\], where the value x of the feature [low] is a variable. *1

(4) The feature value x must be specified in V

\[
\begin{align*}
\text{IF } x = + , \text{ THEN } V & \rightarrow a \\
\text{IF } x = - , \text{ THEN } V & \rightarrow o
\end{align*}
\]

In (3a), the onset of the base /k/ changes to /ŋ/ through the process of ‘N’-affixation. What is involved in this process is the shift of feature values from \[-sonorant, -voice, -nasal\] to \[+sonorant, +voice, +nasal\]. The feature \[+nasal\] in Kadorih phonology entails \[+sonorant, +voice\]. Thus it is enough for ‘N’ to be specified as \[+nasal\]. Notice that ‘V’ in (4) is considered to have a skeletal slot (‘X’ in Goldsmith 1976) because it is a full-fledged segment, while ‘N’ in (3a) is not. In short, ‘V’ consists of skeletal slots and features, while ‘N’ consists only of the feature \[+nasal\]. *2

(5) N: \[+nasal\]  (associated to the feature geometry of the leftmost C within a base)

In (3g), the base sororj can be divided into s- and ororj since the affix ‘-Vn-’ is placed between the first part and the second part (s-Vn-ororj), hence the process is one of infixation. Here ‘-Vn-’ requires an ‘anchoring point’, that is, a point where it can break

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*1 If the ‘V’ in (3, 4) is assumed to be an epenthetic vowel employed for the sake of avoiding word-initial CC sequences, then the required lexical information for V-including affixes in (3) will only be consonantal ones (i.e. b-, h-, p-, t-, k-, -n-).

*2 The autosegmental morpheme N- ([+nasal]-) is similar to the so-called tonal morphemes (“tone may be a morpheme in its own right” Yip, 2002, p. 105).
into a base. The segment which is most likely to yield an anchoring point is the one bearing the features leftmost [−cons] within the base.

\[
(6) \quad \text{Vn-} + \left[ \begin{array}{c}
X_1 \quad \text{N} \quad X_2 \quad \ldots \\
[+\text{cons}] \quad [-\text{cons}]
\end{array} \right]_{\text{BASE}} \rightarrow \left[ \begin{array}{c}
X_1 \quad X \quad X \quad \ldots \\
[+\text{cons}] \quad [-\text{cons}]
\end{array} \right]_{\text{WORD}}
\]

First, the association line between the skeletal slot \(X_1\) which links to the leftmost \([+\text{cons}]\) within a base and the \(X_2\) which links to the leftmost \([-\text{cons}]\) is delinked (=6i). Second, the infix ‘-Vn-’ locates its skeletal slots (‘X-X’) at this delinked point (=6ii), after which ‘-V’ associates with \(X_1\) (=6iii), and ‘n-’ with \(X_2\) (=6iv).

Along with the process (6), the prosodic structure changes, in other words, the segments are resyllabified as in (7).

\[(7) \quad \text{Resyllabification following infixing (e.g. so.roj \rightarrow sV.no.roj)}
\]

\[
\sigma \quad \sigma \\
X_1 \ X_2 \ X \ X \ X \\
\sigma \quad \sigma \quad \sigma \\
\text{s o r o j} \quad \text{s V n o r o j}
\]

2.2 Affix sequences

There are more complex affixes which consist of two syllables as in (8), different from the one-syllable affixes introduced in (3). Only complex prefixes are examined in the following examples.

\[(8) \quad \text{affix} \quad + \quad \text{base} = \text{word} \quad \text{‘word meaning’}
\]

<table>
<thead>
<tr>
<th>a. (bVtV) + sahpou = batasahpou</th>
<th>b. (hVkV) + satuk = hakatasuk</th>
<th>c. (pVkV) + kisuj = pakakisuj</th>
<th>d. (tVpV) + kosak = tapakosak</th>
<th>e. (tVkV) + tonih = takatonih</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘to have a roof’</td>
<td>‘to collide e.o.’</td>
<td>‘higher/highest’</td>
<td>‘to be cooked unexpectedly’</td>
<td>‘more/most silent’</td>
</tr>
</tbody>
</table>

All bases in (8) are free base forms, as can be seen from (9a–e).

\[(9) \quad \text{a. sahpou ‘roof’} \quad \text{b. satuk ‘hit’} \quad \text{c. kisuj ‘upper’} \quad \text{d. kosak ‘fruitage’} \quad \text{e. tonih ‘to be silent’}
\]

The affixes in (8a–e) can also be used for derivation of other words as in (10a–e).

\[(10) \quad \text{a. \(bVtV\): bata-konih ‘to fall on one’s ear’} \quad \text{b. \(hVkV\): haka-poros ‘to harm e.o.’} \quad \text{c. \(pVkV\): paka-doni ‘nearer/nearest’} \quad \text{d. \(tVpV\): tapa-diaj ‘to be elevated’} \quad \text{e. \(tVkV\): taka-poros ‘more/most painful’}
\]

<table>
<thead>
<tr>
<th>a. (bVtV): bata-konih ‘to fall on one’s ear’</th>
<th>b. (hVkV): haka-poros ‘to harm e.o.’</th>
<th>c. (pVkV): paka-doni ‘nearer/nearest’</th>
<th>d. (tVpV): tapa-diaj ‘to be elevated’</th>
<th>e. (tVkV): taka-poros ‘more/most painful’</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘to smile’</td>
<td>‘to hug’</td>
<td>‘stronger/strongest’</td>
<td>‘to be overdone’</td>
<td>‘more/most fruitful’</td>
</tr>
</tbody>
</table>
Complex prefixes show some phonological characteristics of their own: (i) they include two syllables at the most, i.e. there are no CVCVCV(...)-type prefixes, (ii) they include only open syllables (CV), and (iii) the vowels must be identical in their quality, i.e. there is no CaCo- or CoCa-. These characterizations are true even if N- and -Vn- are taken into account. Thus, the general shape of complex affixes can be formalized as (CV)CV.

Possible combinations of first and second syllables (\( \sigma_1 \)-\( \sigma_2 \)) for complex affixes are summarized as (11: \( \checkmark \) = exists; * = unacceptable; (\( \checkmark \)) = very few, but exists).

\[
\begin{array}{c|ccccc}
\sigma_1 & bV & hV & pV & tV & kV \\
\hline
bV & * & & & & \\
hV & * & \checkmark & & \checkmark & \\
pV & * & & & & \\
tV & & & \checkmark & * & \checkmark \\
kV & & & & * & \\
\end{array}
\]

(boko-renay ‘(eyes) to be opened wide’) (hata-rihkut ‘to be back to back’)

It should be noted that kVCV/CVbV/CVhV syllable sequences in complex prefixes are not permitted. In other words, no kV syllables are possible for \( \sigma_1 \) position, and no bV/hV are possible for \( \sigma_2 \).

It appears that the complex affixes in (8), (10) bear certain semantic similarities to the simple ones in (3). Both the bV- prefixed words and the bVtV-/bVkV- prefixed words refer to some kinds of static events, hV- and hVkV-/hVtV- to reciprocal ones, and tV- and tVpV- to non-volitional ones. These similarities suggest that the complex affixes bVkV-, hVtV- and tVpV- can be analyzed as consisting of two affixes, bV-kV-, hV-tV- and tV-pV-. Therefore, these complex affixes may not be just syllable sequences but affix sequences. This would justify the representation of \( \sigma_1 \) and \( \sigma_2 \) as affix slots (1st and 2nd one respectively).

Considering the respective distributions of syllables in (11) and the analysis of bV-(CV-) and hV-(CV-), it can be assumed that Kadorih morphology imposes certain restrictions on the occurrence of bV-/hV-/kV-, which are described in (12).

\[
\begin{array}{c|c|c|c}
\text{1st slot} & \text{2nd slot} & \text{base} \\
\hline
\text{a. } bV \text{ and } hV: \text{ cannot occur at the 2nd slot position} & \text{b. } kV: \text{ cannot occur at the 1st slot position} \\
\end{array}
\]

---

*3 Complex affixes also have morphophonemic variants CaCa- ~ CoCo- as examples showed in (3b–g). For instance, boto-konih ‘to fall on one’s ear’ is attested as well as bata-konih in (10a).

*4 kaha-nduo ‘the second time’, kaha-toru ‘the third time’ (duo ‘two’, toru ‘three’) have been attested and seem to act as two counterexamples. However, the syllable sequences kVCV and CVhV have not been attested in any other examples.
The notion of ‘slot’ in (12) is defined in phonological terms as a syllable. Two affixes can occur simultaneously in the same slot (syllable), for example, the verb *ya-ruha* ‘to spit on’ has two affixes (*N- + kV-*) in one slot (base: *ruha* ‘saliva’).

Thus, *bV- and hV-* can be called *1st slot prefix* and *kV- 2nd slot prefix*. Morphologically, the *1st slot prefixes* (*bV-/hV-*) and the infix (*-Vn-*) cannot have a base as their output.

It is generally accepted that derivational affixes are in positions closer to bases than inflectional affixes. In that respect, *kV- is derivational*. In addition, it mainly has bases as output (see § 3.3).

### 2.3 Transitivity of verbs and three types of clauses

In this section, the anaphoric marker *ah*5 and three types of clauses will be introduced. This paper presupposes the primitive relations *S* (intransitive subject), *A* (transitive subject), and *O* (transitive object) as discussed in Dixon (1994).

The syntactic transitivity and the core argument of verbs can be confirmed by using *ah*.

(13) a. *ihito mahku tařaŋ tuh =rih*
    1+2 to nail to boat baseplate this ANPH
    ‘You and I nail to that boat baseplate’

b. *tařaŋ tuh=rih, ihito mahku=ah*
    ‘That boat baseplate, you and I nail to it’

In (13a), *ihito ‘you and I’ functions as *A*, *mahku ‘to nail to’ is the transitive verb, and *tařaŋ tuh=rih ‘that boat baseplate’ functions as *O*, i.e. the clause is an [AVO] construction. If the *O* argument is placed in the initial position of the clause (=13b: [O, AV] construction), *V* must be immediately followed by *ah* which refers to the *O* argument (*tařaŋ tuh=rih*).

(14) a. *Sagumaj mondui anan ‘Sagumang took a bath there’*
    PSN to take a bath there

b. *anan, Sagumaj mondui=ah (OK. anan, Sagumaj mondui)*

In (14a), *Sagumaj functions as *S*, *mondui ‘to take a bath’ is the intransitive verb and anan ‘there’ is an adverb, i.e. the clause is an [SV ADV] construction. If the adverb is placed in the initial position of the clause (=14b: ADV, SV), *V* cannot be followed by *ah*.

(15) a. *Racahaci mohcon aan rohpou atuh ‘Racahaci lives in that house’*
    PSN to live PREP house that

b. *aan rohpou atuh, Racahaci mohcon=ah ‘In that house, Racahaci lives’*

---

5 *ah* also functions as a possessive marker.

a. *tahtu=ah ‘his/her grandfather’ b. *buβu=ah ‘his/her fish trap’

c. *husuk=ah ‘its surface’ d. *uhpah=ah ‘its reward’

*ah* is a kind of an inflectional enclitic whose hosts are words or phrases.

e. *ihito [ mahku negah ]=ah ‘You and I nail to it and strengthen it’
    1+2 to nail to to strengthen AH
In (15a), *mohcon* 'to live' is a semi-transitive verb, *Racahaci* is the subject and *(aaj) rohpou atuh* '(in) that house' is a prepositionally marked (i.e. oblique) core argument. The base of this semi-transitive verb can be used in passive form when the oblique core argument undergoes relativization (see § 3.2). When the oblique core argument is placed in the initial position of the clause (=14b), *V* can be immediately followed by *ah* which refers to the location expressed by *rohpou atuh*.

If the undergoer or the location is implied in the preceding context, the (semi-) transitive verb (e.g. *mahku, mohcon*) can be followed by *ah*, in which case the relevant argument is elided in the clause (*ihto mahku=ah* 'You and I nail to it', *Racahaci mohcon=ah* 'Racahaci lives there'). On the other hand, intransitive verbs like *mondui* can never be followed by *ah* (*Sapumay mondui=ah*).

In addition to transitivity, verb properties can also be analyzed in terms of volition. Generally, a verb with an agentive subject is a volitional verb, and, inversely, a verb which cannot take an agentive subject is a non-volitional verb. Volitional verbs can be used in the imperative mood. However, if non-volitional verbs are used in the imperative mood, that usage would be unnatural or, alternatively, would be construed to express the peripheral optative mood. This paper assumes that when a verb can be used in the imperative mood, the verb in question is a volitional one.

The constructions introduced in (13b) and (15b) should be distinguished from undergoer-first constructions like (16b).

(16)  

(a) *pinjan*, *Afo muhi* =ah  
    dish PSN to wash AH  
    'The dishes, Awo washed them'  

(b) *pinjan* *panahi* *Afo kai*  
    dish to be washed PSN POST  
    'The dishes were washed by Awo'

*pinnjan* 'dish' in (16a) is moved to the clause-initial position as the O argument, but in (16b) *pinjan* is the S argument. Additionally, a pause can be placed after the O argument, but there is no such pause in the case of (16b).

In this paper, three types of clauses are defined depending on the semantic properties of the clause-initial constituents as follows.

(17)  

(a) **ActoR-Initial (ARI):** a clause is **ARI** iff the clause-initial constituent refers to the ACTOR of the event  
(b) **ActioN-Initial (ANI):** a clause is **ANI** iff the clause-initial constituent refers to the ACTION of the event  
(c) **UndergoeR-Initial (URI):** a clause is **URI** iff the clause-initial constituent refers to the UNDERGOER of the event

Examples of **ARI** clauses are given in (13a), (14a) and (15a). A **URI** clause is shown in (16b).
The clause illustrated by (18) is an ANI clause.

(18) panuhi Año kai "pinjan

‘Washed by Awo, the dishes were’

3 Descriptions

In this section, each affixed form will be described according to the types introduced in § 2.2, i.e. 1st slot prefix/infix/2nd slot prefix/plain prefix. Each of the affixes is analyzed in terms of transitivity, volition, possible clause type, etc.

3.1 1st slot prefix

bV-forms (§ 3.1.1) and hV-forms (§ 3.1.2) are the forms with 1st slot prefixes.

3.1.1 bV-forms

bV-forms are used as non-volitional intransitive verbs. "Anticausative constructions can be made from the bV-forms. In such constructions, bV-forms can be used as predicates in URI clauses with the constituent order [SV].

■ NON-VOLITIONAL INTRANSITIVE bV-forms

All the bases in (19c) are free bases, while those in (19a, 19b) can only be bound bases.

(19) a. ba-porok ‘to be broken’ (porok ‘broken’)
    ba-posak ‘to be cracked’ (posak ‘crack’)
    ba-tutus ‘to be pierced’ (nutus ‘to pierce’)
    b. ba-dohon ‘to be strong’ (dohon ‘strong’)
    ba-rasut ‘to be hot’ (rasut ‘hotness’)
    ba-romu ‘to be weak’ (ko-romu ‘tolerance’)

Kadorih mainly uses prepositions, but the postposition kai may be used for the purpose of marking the actor in ANI/URI clauses.

Taba (Austronesian: VO language) mainly uses prepositions, but the postposition li ‘LOCATIVE’ exists. This postposition is regarded as a byproduct of a genitive noun phrase (GEN-lalo ‘in the X’) (Bowden, 2001, p. 145). Dom (Papuan: OV language) mainly uses postpositions, but the prepositional particle fere ‘DIRECTION’ exists. This particle is considered to be the first part of a fossilized idiomatic serial verb construction (where the second part is ‘go’ or ‘come’) (Tida, 2006, pp. 66–68).

In addition to these ‘special’ adpositions, kai might be a secondary diachronic product of a certain construction. However, this is an unresolved problem and needs further research.

Following Dixon (1999), the terms ‘unaccusative’ and ‘unergative’ are not used in the present paper.

[T]he labels ‘unaccusative’ and ‘unergative’ are used for quite different things in languages of opposite types — type A, with non-strict transitivity and consistent S marking, and type B, with strict transitivity and split-S-marking. (Dixon, 1999, p. 326)
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c. ba-ahtoi 'to have heart' (ahtoi 'heart')
    ba-baras 'to be sandy' (baras 'sand')
    ba-doroi 'to get scalded' (doroi 'blister')
    ba-duhi 'to be prickly' (duhi 'thorn')
    ba-henda 'to be yellow' (henda 'turmeric')
    ba-horan 'to be divided' (horan 'boundary')
    ba-kirap 'to be lightning' (kirap 'lightning')
    ba-ruhpak 'to get blistered' (ruhpak 'blister')
    ba-pahkat 'with friends' (pahkat 'friend')
    ba-sahpou 'to be roofed' (sahpou 'roof')

Sentences with non-volitional intransitive verbs are given in (20).

(20) a. tohkon=ku baporok 'My bamboo stick is broken'
    bamboo stick=1SG to be broken
b. kambay-kambay orih baromu 'The flowers are weak'
    flower-flower DEM to be weak
c. rohpou=ku basahpou =ndai 'My house has already been roofed'
    house=1SG to be roofed already

- ANTICAUSATIVE bV-forms

bV-forms can also have the meaning of anticausative verbs. Both mosak 'to crack (tr.)' in (21a) and baposak 'to crack (intr.)' in (21b) are derived from the same base 'posak'. While the former is an N-form (N-posak), the latter is a bV-form (bV-posak). The undergoer argument arut Yahudi 'Yahudi’s boat' functions as O in (21a), and the corresponding argument functions as S in the anticausative construction (21b).

(21) a. Kasuya mosak arut Yahudi [AVO]
    PSN to crack boat PSN
    'Kazuya cracked Yahudi’s boat'
b. arut Yahudi baposak [SV]_{ANTC}
    boat PSN to crack
    'Yahudi’s boat cracked'

bV-forms in (19a) are anticausative verbs whose bases are used to derive transitive N-forms (morok 'to break s.t.', nutus 'to pierce s.t.'). Anticausative bV-forms probably share their bases with transitive N-forms.

3.1.2 hV-forms

hV-forms are used mainly as volitional intransitive verbs which refer to reciprocal (or cooperative) actions. They can be used as predicates of ARI clauses with the constituent order [S V (OBL)]. In addition, hV-forms may also be used as non-volitional intransitive verbs.
RECIProCAL \( hV \)-forms

Some bases in (22a) are *bound bases*, while all bases in (22b) are *free bases*.

\[(22)\]

Volitional intransitive \( hV \)-forms (reciprocal/cooperative)

a.  
   - **ha-konih** ‘to listen to e.o.’
   - **ho-kosono** ‘to get acquainted with’
   - **ha-posak** ‘to crack s.t. e.o.’
   - **ha-punu** ‘to kill e.o.’
   - **ha-sombarl** ‘to meet’
   - **ha-suduk** ‘to fight with knife’
   - **ha-tapar** ‘to fight by slapping’
   - **ha-tuhui** ‘to quarrel’
   - **ha-turak** ‘to push e.o.’

b.  
   - **ha-barai** ‘to stay (together)’
   - **ha-pahkat** ‘to go together’
   - **ho-pupuy** ‘to gather’
   - **ha-tikos** ‘to ask a riddle’

A reciprocal or cooperative participant argument is obligatorily marked by one of the prepositions *doro* and *umba*, i.e. the participants of the event can be marked in different ways. *doro* is used to make a pair of arguments as NP (23a: \([\text{NP N doro N}]\)). *umba* is used to mark an argument as in (23b: oblique PP \([\text{PP umba N}]\)). Reciprocal \( hV \)-forms are used as predicates of *ARI* clauses with the constituent order \([S V (OBL)]\).

\[(23)\]

a.  
   - \([\text{Ikiy doro Ij3an}] \ haporos\]
   \(\text{PSN PREP PSN to harm e.o.}\)
   ‘Iking, with Iwan, harmed each other’

b.  
   - \([\text{ahku} \ hokosono [umba pageran koik]}\]
   \(\text{1 SG to get acquainted PREP prince small}\)
   ‘I met a little prince’

In the following example, *arut* ‘boat’ in (24a) and *rogo* ‘arm’ in (24b) seem to be the O arguments of the respective clauses.

\[(24)\]

a.  
   - \([\text{Kusma3an doro Tarisman haposak arut}\]
   \(\text{PSN PREP PSN to crack s.t. e.o. boat}\)
   ‘Kusmawan, with Tarisman, cracked the opponent’s boat e.o.’

b.  
   - \(\text{Herman haturak rogo umba Kasuya}\]
   \(\text{PSN to push s.t. e.o. arm PREP PSN}\)
   ‘Herman pushed e.o.’s arm with Kazuya’

However, *arut* and *rogo* show different properties from those of regular O arguments. Consider the following elicited ungrammatical examples.

\[(25)\]

a.  
   - \(*\text{arut, Kusma3an doro Tarisman haposak =ah}\)
b.  *Kusma\j3an doro Tarisman haposak arut. *arut =rih ...

c.  *Herman haturak rojo=ah umba Kasuya

d.  *Herman haturak rogo tuh umba Kasuya

(25a) shows that O-like nouns after an hV-form (here, arut) cannot move to clause-initial position. This fact contradicts the mobility of O arguments in other clauses (cf. 13b).

In (25b), there are two sentences, namely [Kusma\j3an ... arut.] and the succeeding [arut=rih ...]. arut=rih ‘that boat’ in the second sentence is ungrammatical because its intended usage is as a reference to ‘the boat’ in the reciprocal event. Nevertheless, this kind of reference is possible for O arguments in other clauses (for example, 13a: ihto mahku ta\b3ar3 tuh=rih. ta\b3ar3=rih ...).

(25c) and (25d) show that O-like nouns after an hV-form (here, rogo) cannot be modified by either the possessive marker ah (see f.n. *5) or the demonstrative tuh. O arguments in other clauses can be freely modified by ah (cf. 40b) or tuh (cf. 13a), if necessary.

This paper assumes that an O-like element is incorporated into the co-occurring hV-form, and that they together constitute one verb. *8 This assumption means that all hV-forms are used as intransitive verbs and therefore ha-posak and ha-turak in (24a, 24b) are intransitive verbs as ha-poros and ho-kosono in (23a, 23b).

**NON-VOLITIONAL INTRANSITIVE hV-forms**

Like bV-forms, hV-forms can be used as non-volitional intransitive verbs. Notice that hV-forms can never be interpreted as anticausative verbs (cf. bV-form: 21b).

(26) Non-volitional intransitive hV-forms: ha-baras ‘to be sandy’ (baras ‘sand’)  
ha-duhi ‘to be prickly’ (duhi ‘thorn’)

(27) Non-volitional intransitive bV-forms: ba-baras ‘to be sandy’ (baras ‘sand’)  
bau-duhi ‘to be prickly’ (duhi ‘thorn’)

Some speakers view habaras, haduhi in (26) as native words, and babaras, baduhi in (27) as analogical (or calque) forms of words in Ngaju (bapasir ‘to be sandy’).  

**3.2 Infix -Vn-forms**

-Vn-forms are used as non-volitional intransitive verbs, and more specifically as passive verbs. They can be used as predicates of URI clauses with the constituent order [SV OBL] or of an ANI clause with the constituent order [V OBL S].

*8 ‘There is an idiomatic expression, haturak rihkut ‘to start e.o.’s journey from one departure point simultaneously for different destinations’, whose meaning cannot be derived from its constituents (haturak ‘to push e.o.’ and rihkut ‘back’).
PASSIVE -Vn-forms

All the bases in (28a) are free bases while some bases in (28c) are bound bases. *9
Some complex -Vn-forms as seen in (28d) have been found. *10

(28) a. p-an-ahkat ‘(s.o.) to be taken’ (pahkat ‘friend’)
   s-an-ahpou ‘(s.t.) to be roofed’ (sahpou ‘roof’)
b. p-an-ohcon ‘to be inhabited’ (pohcon ‘something left behind’)
c. k-an-itot ‘to be delivered’ (jitot ‘to deliver’)
p-an-uhi ‘to be washed’ (puhi ‘used (water)’)
s-an-oror3 ‘to be intruded’ (noror3 ‘to intrude into’)
d. k-on-oruhca ‘to be spat on’ (ko-ruhca ‘spitting’)
p-an-akosak ‘to be cooked/ripen’ (pa-kosak ‘to cook/ripen’)

Both muhi ‘to wash’ in (29a) and panuhi ‘to be washed’ in (29b, 29c) are derived from the same base puhi. *11
While the former is a N-form (N-puhi), the latter is a -Vn-form (p-Vn-uhi). The undergoer argument pinjan functions as O in (29a),
and the corresponding argument functions as S in the passive construction (29b). In addition, the actor argument Aβo functions as A in (29a),
while the corresponding argument functions as OBL that is expressed by a postpositional phrase in (29b).

(29) a. Aβo muhi pinjan
   PSN to wash dish
   ‘Awo washed the dishes’

b. pinjan panuhi Aβo kai
   ‘The dishes were washed by Awo’

c. panuhi Aβo kai pinjan
   ‘Washed by Awo, were the dishes’

(29b) shows a URI clause with the constituent order [S V OBL], while (29c) shows an ANI clause with the constituent order [V OBL S].

Postpositionally marked actor arguments (e.g. 29b: Aβo kai) cannot be used in anticausative constructions due to the fact that anticausative constructions, by definition,
cannot imply the existence of an actor.

Possible constituent orders within passive constructions are [S V OBL] and [V OBL S].
Any other options are unacceptable, as is seen from the following elicited ungrammatical examples.

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*9 sororj ‘(person) possessed by an evil spirit’ is a possible base of sanororj in (28c). The free base sororj is used as a word with this specific meaning.

*10 In (28), -Vn-forms with a /t/-initial base are not given since the formal contrast between -Vn- and tV-N-forms is lost when they are attached to /t/-initial bases (see § 3.4.3: tV-N-forms).

*11 puhi ‘used (water) for washing hands’ is a possible base of panuhi in (28c, 29b) and of muhi in (29a). The free base puhi is used as a word with this specific meaning.
It is clear from these observations that only the order \[V-OBL\] is permitted. The examples (30a), (30b) and (30c) reveal that the order \[OBL-V\] is unacceptable, and (30d) shows that \[V-OBL\] cannot be separated by the S argument. Thus, actor arguments in -Vn-form clauses are restricted to postverbal positions. This description holds true not only for passive constructions, but also for non-ARI clauses of other prefixed forms, namely ANI clauses of pV-forms (§ 3.4.2: 42b) and of tV-forms (§ 3.4.3: 49b, 51c), and URI clause of tV-forms (§ 3.4.3: 51b).

As shown in (28b), *pohcon*, the base of the semi-transitive verb *mohcon* ‘to live’, can be passivized as *panohcon* ‘to be inhabited’. In (31a), there is an oblique core argument *aan pranet* ‘on the planet’ with *mohcon*. This oblique argument is relativized in (31b).

(31) a. karunon mohcon aan pranet
    human to live PREP planet
    ‘Human beings live on the planet’

b. pranet ijo panohcon karunon
    planet REL to be inhabited human
    ‘The planet which is inhabited by human beings’

### 3.3 2nd slot prefix  \(kV\)-forms

\(kV\)-forms are the forms with 2nd slot prefixes. They form abstract nouns or function as bases for further affixation. Most \(kV\)-forms are non-predicative.

(32) lists examples of abstract nouns. The bases of these nouns are all free bases. \(kV\)-forms in (32a) and (32b) are derived by attaching \(kV\)- and \(k\)- respectively. *12

(32) a. ka-bahat ‘weight’ (bahat ‘heavy’)
    ka-biou ‘youth’ (biou ‘young’)
    ka-koik ‘smallness’ (koik ‘small’)
    ka-hajo ‘size’ (hajo ‘big’)
    ka-kahpan ‘slenderness’ (kahpan ‘thick’)
    ka-satah ‘tilt’ (satah ‘tilted’)
    ka-tahi ‘length (time)’ (tahi ‘long (time)’)

b. k-aro ‘abundance’ (aro ‘many/much’)
    k-isuq ‘height’ (isuq ‘high’)
    k-ombu ‘length (space)’ (ombu ‘long (space)’)
kV-forms and k-forms in (33) function as bases to which the prefix N- is attached. (33a) and (33b) show kV-forms and k-forms respectively.

(33) a. i. [N]-ka-pios → gapios ‘to improve’ (pios ‘good’) [N]-ka-rasut → garasut ‘to warm up’ (rasut ‘hotness’) 
ii. [N]-ko-roļoŋ → goroloŋ ‘to bury’ (roļoŋ ‘grave’) [N]-ka-ruhca → garuhca ‘to spit on’ (ruhca ‘saliva’) 

b. [N]-k-anak → yanak ‘to have a child’ (anak ‘child’) 
[N]-k-ihaŋ → ihiŋ ‘to dry in the sun’ (ihaŋ ‘sun-dried thing’) 
[N]-k-okcin → ohićin ‘to fish’ (ohćin ‘fish’) 
[N]-k-oruh → oruh ‘to take a wife’ (oruh ‘wife’) 
[N]-k-uḥpak → uhpak ‘to peel’ (uhpak ‘skin’) 
[N]-k-umo → rulmo ‘to farm’ (umo ‘rice field’) 

In (34), there are kV-forms derived from free bases with voiced stop onsets. When these kV-forms function as bases for the derivation of N-forms, their onsets can be replaced or preceded by nasal consonants.

(34) [N]-ka-beseu → yameseu ~ yambeseu ‘to paddle’ (beseu ‘oar’)  
[N]-ka-bušu → yambušu ~ yambušu ‘to use a fish trap’ (bušu ‘fish trap’) 
[N]-ka-duhi → yänduhi ‘to smooth away thorns’ (duhi ‘thorn’) 
[N]-ka-bohkongohkon ‘to differentiate’ (bohkong ‘different’) 

Notice that, for example, kabahat and kabiou in (32a) also have voiced stop onsets within their bases, but they cannot become *kamahat/*kahbahat or *kamiou/*kambiou. This fact suggests that the alternations in question are triggered by N-affixation as in (34), that is, the voiced stop onsets of the bases can be replaced or preceded nasal consonants only when the prefix N- is attached to the relevant derived kV-forms. Thus, N- is considered to be a kind of floating feature morpheme ‘[+nasal]’ which can affect non-adjacent segments beyond the syllable kV.

3.4 Plain prefix

N-forms (§ 3.4.1), pV-forms (§ 3.4.2) and tV-forms (§ 3.4.3) are the forms with plain prefixes.

3.4.1 N-forms

N-forms can be intransitive or transitive verbs. They can be used as predicates of ARI clauses with the constituent order [SV] or [AVO].
INTRANSITIVE N-forms

N-forms can be volitional or non-volitional intransitive verbs. The examples in (35a) are volitional verbs, while those in (35b) are non-volitional ones.

(35) a. mondui ‘to take a bath’ (pondui ‘bathing’)
     naag ‘to fly’ (taaq ‘fly(ing)’)
     Ṽaran ‘to walk’ (jalan ‘road’)

b. mahtoi ‘to die’ (pahtoi ‘death’)
    mondu ‘to crow (cock)’ (tondu ‘crowing voice’)
    gotut ‘to fart’ (kotut ‘fart’)

Example sentences including some of the above (non-)volitional intransitive verbs are given in (36).

(36) a. Sagumag monduianan
     PSN to take a bath there
    ‘Sangumang took a bath there’

b. io mahtoi aar3 rohpou amai Busun
     3sG to die PREP house father PSN
    ‘He died in the house of Amai Busun’

TRANSITIVE N-forms

N-forms can be volitional transitive verbs. These transitive N-forms can be divided into two groups based on the semantic role of the O argument. In (37a), the O argument in each relevant event refers to its goal point, while (37b), the O arguments refer to the patient objects.

(37) a. forms requiring goal O arguments:
    mahku ‘to nail to’ (pahku ‘nail’)
    masap ‘to visit’ (pasap ‘visit’)
    mutah ‘to answer s.o.’ (putah ‘answer’)
    gisok ‘to question s.o.’ (kisok ‘questioning’)

b. forms requiring patient O arguments:
    munu ‘to kill’ (hapunu ‘to kill e.o.’)
    norok ‘to chop’ (torok ‘chopping’)
    notok ‘to cut off’ (totok ‘cut’)
    nōbōŋ ‘to cut down’ (tōbōŋ ‘cutting down’)

Example sentences with these transitive verbs are given in (38). In (38a), the ‘questioning’ event gisok ‘to question s.o.’ is addressed to the goal arop=mu ‘yourself’. On the other hand, the addressee ihko ‘you’ is marked by the preposition umba in (38b), and therefore gisok in this example is a semi-transitive verb without an O argument. In (38c), the ‘chopping’ event norok ‘to chop’ affects the patient sondak barai atuh ‘that big squash’.
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(38) a. ihko qisok arop =mu
   2SG to question s.o. self =2SG
   ‘You may question yourself’

   b. iroh eam puji qisok umba ihko
   3PL NEG AUX to question s.o. PREP 2SG
   ‘They will never question you’

   c. ihko norok sondak barai atuh
   2SG to chop squash big one that
   ‘You chop that big squash’

3.4.2 pV-forms

pV-forms can be causative verbs or nouns. Causative pV-forms are used as volitional transitive verbs. They can be used as predicates of ARI clauses with the constituent order [AVO (OBL)] or of ANI clauses with [V OBL NP] order. Nominal pV-forms denote abstract concepts or ‘habitual-activity-doers’.

CAUSATIVE pV-forms

(39a) and (39b) show transitive pV-forms and ditransitive pV-forms respectively.

(39) a. pa-kosak ‘to cook/ripen’
   ( kosa-kosak ‘bearing full fruit’)
   po-taag ‘to cause s.t. to fly’
   ( taag ‘fly(ing)’
   pa-tonih ‘to silence’
   ( tonih ‘to be silent’

b. pa-kinjam ‘to lend’
   ( qinjam ‘to borrow’
   pa-konih ‘to cause s.o. to listen to’
   ( yonih ‘to listen to’
   pa-tohto ‘to show’
   ( tohto ‘(nice) looking’

   tonih in (40a) is a free base and patonih in (40b) is a derived pV-form of that base. The S argument anak=ah ‘his/her child’ in (40a) functions as O in (40b). A new causer argument Junaidii which functions as A is added in (40b).

(40) a. anak =ah tonih
   child AH to be silent
   ‘His/her child was quiet’

b. Junaidii patonih anak =ah
   ‘Junaidii made his child be quiet’

Both yonih ‘to listen to’ in (41a) and pakonih ‘to cause s.o. to listen to’ in (41b) are derived from the same bound base konih. The former is an N-form (N-konih), the latter is a pV-form (pV-konih). The A argument Tarisman and the O argument karimo Uhko in (41a) function as O and OBL respectively in (41b). A new causer argument Yahudi which functions as A is added in (41b).
(41) a. Tarisman  rlonih karimoi Uhko
    PSN to listen to story PSN
    ‘Tarisman listened to the Uhko Story’

b. Yahudi pakonih Tarisman umba karimoi Uhko
    ‘Yahudi made Tarisman listen to the Uhko Story’

It should be noted that grammatical relations in a clause with a \(pV\)-form predicate depend on which clause type (ARI/ANI) is present. (42a) shows that the actor argument \(ahku\) ‘I’ functions as A in ARI clauses, while in ANI clauses (=42b) the corresponding argument, though the form is reduced to \(ku\), functions as OBL (\(ku\) kai). The undergoer argument \(puti\) ‘banana’ functions as O in ARI clauses (=42a), but the function of the corresponding argument in (42b) is different. The grammatical role of \(puti\) in (42b) cannot be determined in this case (it is represented as NP\(_{ur}\)). There are no hints as to whether \(puti\) functions as the subject or the object in (42b).

(42) a. \(ahku\) pakosak puti
    1SG to ripen banana
    ‘I ripened the banana’

b. pakosak ku kai puti
    to ripen 1SG POST banana
    ‘I ripened the banana’

In clauses with ditransitive \(pV\)-forms, at least one of the two non-causer arguments must be marked by a preposition. In the following examples featuring a ‘showing’ event, the causee argument Botan is obligatorily marked by \(ahkan\) (43a), while this marking is optional in (43b). The theme argument \(sarafar=ah\) ‘his/her trousers’ is unmarked in (43a), however, it must be marked by \(umba\) in (43b).

(43) a. If\(\beta\)an patohto sarafar =ah ahkan Botan
    PSN to show trousers AH PREP PSN
    ‘Iwan showed his trousers to Botan’

b. If\(\beta\)an patohto (ahkan) Botan umba sarafar =ah
    ‘Iwan showed Botan his (Iwan’s) trousers’

In clauses with ditransitive \(pV\)-forms, only theme arguments are referred to by \(ah\), as in the case of \(sarafar\) tuh ‘this trousers’ in (44a). Goal arguments can be referred to only by pronouns such as \(io\) ‘him/her/it’ as in (44c).

(44) a. \(sarafar\) tuh, If\(\beta\)an patohto =ah ahkan Botan
    This trousers, Iwan showed it to Botan’

b. *Botan orih, If\(\beta\)an patohto =ah umba sarafar =ah
    (*Botan, Iwan showed him his trousers; orih ‘REF’)

c. Botan orih, If\(\beta\)an patohto io umba sarafar =ah
    ‘Botan, Iwan showed him his trousers’ (io ‘3SG’)

— 58 —
In (44a), *sara$\bar{a}$ar* $tuh$ behaves as a regular 0 argument in a clause initial position, which is referred to by $ah$, *13 but in (44b) the goal argument *Botan* $orih$ does not. Like $sara$bh$ar$=$ah$ in (43a), a postverbal undergoer argument is unmarked if its semantic role is theme, while such an argument can be marked by prepositions if its semantic role is to represent a goal (e.g. 43b: *ah$\bar{k}$an* $Botan$). The prepositionally marked goal argument can also be seen in (§ 3.4.1: 38b; $nisok$ $umba$ $ihko$ ‘to question you’).

**NOMINAL $pV$-forms**

Most nominal $pV$-forms contain $N$-forms as in (45a) with a few exceptions as seen in (45b).

(45) a. 1. abstract concepts
   
   $pa$-$mahku$ ‘nailing’ ($mahku$ ‘to nail to’)
   
   $pa$-$gomo$ ‘sense’ ($gomo$ ‘to feel’)
   
   $pa$-$quman$ ‘meal’ ($quman$ ‘to eat s.t.’)

   2. ‘habitual-activity-doer’
   
   $pa$-$mander$ ‘chatty person’ ($mander$ ‘to say s.t.’)
   
   $pa$-$ni$h$oh$koh$ ‘coward’ ($ni$h$oh$koh$ ‘to be afraid’)
   
   $pa$-$moros$ ‘ill person’ ($moros$ ‘to suffer from’)
   
   $pa$-$nony$ih$ ‘person of few words’ ($nony$ih$ ‘to take into heart’)
   
   $pa$-$ya$ru$hc$a$ ‘spitter’ ($ya$ru$hc$a$ ‘to spit on’)
   
   $pa$-$namu$b$u$ ‘fish trap user’ ($namu$b$u$ ‘to use fish trap’)
   
   $pa$-$y$umo$ ‘farmer’ ($umo$ ‘to farm’)

b. $pa$-$hombo$h$ ‘passenger’ ($hombo$h$ ‘together’)

   $pa$-$rombo$ $t$ ‘arrival’ ($rombo$t $‘to$ $come’)

3.4.3 $tV$-forms

$tV$-forms are used as non-volitional verbs. $tV$-$N$-forms have a passive meaning, while $tV$-forms without an $N$-form have a spontaneous meaning. *14

**SPONTANEOUS $tV$-forms**

Spontaneous $tV$-forms are used as non-volitional intransitive/transitive verbs. They can be used as predicates of $ARI$ clauses with the constituent order [SV] or [AVO], and as predicates of $ANI$ clauses with $[V$ OBL $NP_{UR}]$ order. (46) lists examples of intransitive verbs, and example sentences including some of them are given in (47).

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*13 A regular 0 argument in Kadorih is a non-oblique core argument, that is, it is not marked by adpositions. It functions as S when its predicate is passivized, and is referred to by $ah$ when it is in a clause initial position.

*14 (Shibatani, 1985, p. 827) defines ‘spontaneous occurrence’ as ‘an event that automatically occurs, or a state that spontaneously obtains without the intervention of an agent’.
A sketch on the morphosyntax of Kadorih (Dohoi: Austronesian)

(46) ta-baras ‘to get sand’
    ta-diag ‘to rise’
    ta-kariq ‘to be sprawled on one’s back’
    ta-poros ‘(body) to hurt’
    ta-tiruh ‘to fall asleep’

    (baras ‘sand’
     diag ‘above’
     kariq ‘to lie down’
     poros ‘ill/ache’
     tiruh ‘to sleep’)

(47) io turus takariq turus tatiruh
    3SG then to be sprawled then to fall asleep
    ‘He was then sprawled, then fell asleep’

Examples of transitive tV-forms are given in (48).

(48) ta-konih ‘to hear’
    ta-ruhca ‘to spit on uncauciously’
    ta-tonih ‘to be silent for’

    (ronih ‘to listen to’
     ruhca ‘saliva’
     tonih ‘to be silent’)

The actor argument (here a ‘perceiver’) Kusmañan functions as A in (49a), and the corresponding argument functions as OBL in (49b). The undergoer (here a ‘stimulus’) argument auh orih ‘the voice’ functions as O in (49a), and corresponds to the final NPUR in (49b).

(49) a. Kusmañan takonih auh orih
    PSN to hear voice REF
    ‘Kusmawan heard the voice’

b. takonih Kusmañan kai auh orih
    ‘Kusmawan heard, the voice’

The grammatical relations in tV-form clauses depend on the clause type as in the case of pV-form clauses in (§ 3.4.2: 42).

PASSIVE tV-N-forms

tV-N-forms are used as passive verbs, or in other words, non-volitional intransitive verbs. They can be used as predicates of URI clauses with the constituent order [SV (OBL)] and as predicates of ANI clauses with [V OBL S] order. It is not obvious whether /tVn/-forms in (50b) are derived from tV-N- and /t/-initial bases, or from infix -Vn- and /t/-initial bases. The contrast between tV-N- and -Vn- is lost when tV- or -Vn- is attached to /t/-initial bases.

(50) a. tV-forms with /m, ŋ/-initial bases

    ta-mahkat ‘to be taken (by)’
    ta-moros ‘to be harmed’
    ta-muhi ‘to be washed’
    ta-garuhca ‘to be spat on’
    ta-ŋonih ‘to be listened to’

    (mahkat ‘to ask s.o. to go’
     moros ‘to harm’
     muhi ‘to wash’
     garuhca ‘to spit on’
     ŋonih ‘to listen to’)

    b. tV-N-forms with /m, ŋ/-initial bases
b. *tV/n*-forms (*tV-N-* or *-Vn-*):  
- *tanonih* ‘to be taken into heart’  
- *tanotok* ‘to be cut off’  
- *tanotui* ‘to be said’  
- *tonapa* ‘to be made’  
- *tonohto* ‘to be looked at’

The actor argument *Aβo* functions as A in (51a), and the corresponding argument functions as OBL in (51b) and (51c). The undergoer argument *pinjan* ‘dish’ functions as O in (51a), while the corresponding argument functions as S in (51b) and (51c).

\[(51)\]  
a. *Aβo muhi pinjan*  
\[PSN\] to wash dish  
‘Awo washed the dishes’

b. *pinjan tamuhi* Aβo kai  
‘The dishes were washed by Awo’

c. *tamuhi Aβo kai pinjan*  
‘Washed by Awo, were the dishes’

*tV-N-*passives are functionally and semantically similar to *-Vn-* passives. The *tV-N*-form *tamuhi* ‘to be washed’ in (51b) can be substituted for the *-Vn*-form *panuhi* ‘to be washed’ as in (52b) without altering the grammatical relations or the meaning. In other words, the correspondences A—OBL (Aβo) and O—S (pinjan) in (51a—51b) are preserved in (52a—52b). In addition, the possible clause types of *tV-N-* passive and *-Vn-* passive are identical (URI/ARI).

\[(52)\]  
a. *Aβo muhi pinjan*  
\[PSN\] to wash dish  
‘Awo washed the dishes’

b. *pinjan panuhi* Aβo kai  
‘The dishes were washed by Awo’

c. *panuhi Aβo kai pinjan*  
‘Washed by Awo, were the dishes’

4 Conclusion

This paper provides a descriptive classification of affixes in Kadorih, which can be summarized in table form as in (53). Affix types (1st slot, infix, 2nd slot and plain) and clause types (actor-initial, action-initial and undergoer-initial) were introduced in order to systematize affix forms and to describe each clause.
(53) a. *A descriptive classification of affixes in Kadorih*

<table>
<thead>
<tr>
<th>affix type</th>
<th>1st slot</th>
<th>infix</th>
<th>2nd slot</th>
<th>plain</th>
</tr>
</thead>
<tbody>
<tr>
<td>affix form</td>
<td>bV-</td>
<td>hV-</td>
<td>-Vn-</td>
<td>kV-</td>
</tr>
<tr>
<td>construction type</td>
<td>(ANT)</td>
<td>RECP</td>
<td>PASS</td>
<td>(NOUN)</td>
</tr>
<tr>
<td>transitivity</td>
<td>in</td>
<td>in</td>
<td>in</td>
<td>in</td>
</tr>
<tr>
<td>volition</td>
<td>no</td>
<td>no</td>
<td>vo</td>
<td>no</td>
</tr>
<tr>
<td>ARI clause</td>
<td>*</td>
<td>*</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ANI clause</td>
<td>*</td>
<td>*</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>URI clause</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

(tr[ansitive], in[transitive], vo[litional], no[n-volitional])

b. *bV- and hV- are 1st slot prefixes*

c. *-Vn- is an infix*

d. *kV- is a 2nd slot prefix*

e. *N-, pV- and tV- are not restricted to 1st or 2nd slot positions*
   (i.e. they are plain prefixes)

f. *hV-/N-forms can be used as volitional intransitive verbs*

g. *bV-/hV-/-Vn-/N-/tV-forms can be used as non-volitional intransitive verbs*

h. *N-/pV-forms can be used as volitional transitive verbs*

i. *tV-forms can be used as non-volitional transitive verbs*

j. *kV-/pV-forms can be used as nominals*

k. *hV-/N-/pV-/tV-forms can be used as predicates of actor-initial clauses*

l. *-Vn-/pV-/tV-forms can be used as predicates of action-initial clauses*

m. *bV-/hV-/-Vn- (and tV-N-) forms can be used as predicates of undergoer-initial clauses*

From a phonological perspective, *N-* is considered to be an autosegmental prefix morpheme, unlike other affixes. It was observed that, in the case of *N-kV-forms* (§3.3), *N-* behaves like a floating feature [+nasal].

From a grammatical perspective, intransitive, semi-transitive and transitive predicates were described using *ah*, which refers anaphorically to a core argument. *pV- and tV-forms can be used as predicates of actor-initial or action-initial clauses (53k, 53l). They are extraordinary in the respect that the grammatical relations of the arguments depend on the clause type.
List of abbreviations

✓ ........................ exists  AUX .................. auxiliary  PP···· Prepositional Phrase
* ........................ unacceptable  C ........................ Consonant  PREP ........................ preposition
1 ........................ 1st person  CAUS ........................ causative  PSN ........................ person name
1+2 ........................ inclusive 1  DEM .................. demonstrative  RECP ........................ reciprocal
2 ........................ 2nd person  e.o. ........................ each other  REL ........................ relativizer
3 ........................ 3rd person  (in)tr. ........................ (in)transitive  S ........................ intransitive subject
A ........................ transitive subject  N ........................ Nasal feature / Noun  SG ........................ singular
ADV ........................ adverb  NEG .................. negatives  s.o. ........................ someone
AH ........................ action initial  NP ........................ Noun Phrase  s.pon ........................ spontaneous
ANI ........................ action initial  O ........................ transitive object  s.t. ........................ something
ANPH ........................ anaphoric marker  OBL ........................ oblique element  URI ........................ undergoer initial
ANTC ........................ anticausative  PASS ........................ passive  V ........................ Vowel / Verb
AR ........................ actor  PL ........................ plural
ARI ........................ actor initial  POST ........................ postposition

References


カドリ語形態統語法の概略

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Abstract

本論文は、これまで明らかにされていなかったカドリ語の形態法と形態統語法を記述したものである。

§2.1 では、接辞の形式と、接辞添加のプロセスを音韻論的に同定した。続く §2.2 で、複合的な接辞を形態音韻論的に分析し、この分析を基にした接辞の 4 分類を提案した。即ち、語基の左側にスロットを認め、i) 第 1 スロットの接頭辞、ii) 接中辞、iii) 第 2 スロットの接頭辞、iv) 特に制限のない接頭辞の 4 タイプに分けた。§2.3 では、語順による節の 3 分類を提案した。即ち、動作主構成要素を節の先頭に置く動作主先置節、動作先置節、被動作主先置節の 3 タイプに分けた。

§3 では、それぞれの接辞のタイプや形式、他動性、意志性、可能な節タイプ等の点から、接辞が形成する語の記述をおこなかった。特に、pV-形と tV-形は、それがるる節のタイプによって文法関係のわりあてが異なることを指摘した。

§3 における記述の要約として、§4 で、接辞を特徴別にまとめた一覧をしめした。

（受理日 2006年7月28日）