This paper describes the morphosyntactic characteristics of a few languages in Borneo, which belong to the North Borneo phylum. It is a typological sketch of how these languages express undergoer voice. It is based on data from Penan Benalui, Punan Tubu’, Punan Malinau in East Kalimantan Province, and from two Kenyah languages as well as secondary source data from Kayanic languages in East Kalimantan and in Sawaraka (Malaysia). Another aim of this paper is to explore how the morphosyntactic features of North Borneo languages might shed light on the linguistic subgrouping of Borneo’s heterogeneous hunter-gatherer groups, broadly referred to as ‘Penan’ in Sarawak and ‘Punan’ in Kalimantan.

1. The North Borneo languages

The island of Borneo is home to a great variety of languages and language groups. One of the main groups is the North Borneo phylum that is part of a still larger Greater North Borneo (GNB) subgroup (Blust 2010) that includes all languages of Borneo except the Barito languages of southeast Kalimantan (and Malagasy) (see Table 1). According to Blust (2010), this subgroup includes, in addition to Bornean languages, various languages outside Borneo, namely, Malayo-Chamic, Moken, Rejang, and Sundanese. The languages of this study belong to different subgroups within the North Borneo phylum. They include the North Sarawakan subgroup with (1) languages that are spoken by hunter-gatherers (Penan Benalui (a Western Penan dialect), Punan Tubu’, and Punan Malinau), and (2) languages that are spoken by agriculturalists, that is Òma Lóngh and Lebu’ Kulit Kenyah (belonging respectively to the Upper Pujungan and Wahau Kenyah subgroups in Ethnologue 2009) as well as the Kayan languages Uma’ Pu (Baram Kayan), Busang, Hwang Třing and Long Gleaat (Kayan Bahau). The map in Figure 1 displays some of the approximate locations where these languages are spoken. Table 1 shows a classification of North Borneo languages according to the most recent version of Ethnologue (Lewis 2009), omitting the language groups that are not mentioned here. This list is provided to give a sense of the extension of this group and at the same time to discuss the different classifications that have been proposed previously for the languages in this paper, the shortcomings of these classifications, and how they can be adjusted in the light of this study. Languages of hunter-gatherers are in italic and belong to different branches, that is the Melanau-Kajang, the North-Sarawakan, the Rejang-Sajau and the Punan Batu. The names of language groups that I will focus on in this paper appear in bold face font. Note that the language spoken by the Punan Malinau hunter-gatherers is not listed here; it most likely belongs to the Segai subgroup in the Modang group.

1 The languages represented in this paper have a much wider distribution than displayed on map 1, but for reasons of clarity I specify only the locations where data that are used in this paper were collected.
North Borneo (99)

(1) Melanau-Kajang (11)
   Kajang (6)
      Bukitan (Indonesia (Kalimantan))
      Kajaman
      Lahanan
      Sekapan
      Sian
      Ukit
   Melanau (5)

(2) North Sarawakan (53)
   Berawan-Lower Baram (8)
      Berawan (3)
      Lower Baram (5)
   Kiput
   Bintulu (1)
   Dayic (18)
      Kelabitic
         Kelabit
         Lengitu
         Lun Bawang
         Putoh
         Sa’ban
         Tring
   Murutic
   Kayan-Kenyah (25)
   Kayanic (17)
      Kayan Proper (8)
         Bahau
         Kayan Mahakam
      Kayan Baram
         Kayan Busang
         Kayan river Kayan
         Kayan Mendalam
         Kayan Rejang
         Kayan Wahau
   Modang (2)
      Modang (Indonesia (Kalimantan))
      Segai (Kalimantan)
   Müller-Schwaner Punan (6)
      Aoheng (Indonesia (Kalimantan))
      Hovongan (Indonesia (Kalimantan))
      Kereho (Indonesia (Kalimantan))
      Punan Aput (Indonesia (Kalimantan))
      Punan Merah (Indonesia (Kalimantan))
      Bukat (Indonesia (Kalimantan))
   Murik Kayan (1)
   Kenyah (6):
      Kayanic Kenyah (3)
         Kenyah, Wahau
         Long Wat
         Sebop
      Upper Pujungan (2)
         Kenyah, Mainstream
         Uma Lung (Óma Lóngh)
   Penan (2)
      Penan, Eastern (Malaysia (Sarawak))
**Penan, Western** (Malaysia (Sarawak))

**Punan Tubu** (1) (Indonesia (Kalimantan))

(3) Rejang-Sajau (5)
- Basap (Indonesia (Kalimantan))
- Burusu (Indonesia (Kalimantan))

**Punan, Bah-Biau** (Malaysia (Sarawak))

**Punan Merap** (Indonesia (Kalimantan))

Sajau Basap (Indonesia (Kalimantan))

Punan Sajau
Punan Basap
Punan Batu 2

(4) Sabahan (29)
- Dusunic
- Idahan
- Paitanic

(5) **Punan Batu 1** (Malaysia (Sarawak))

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**Table 1. Genealogical classification of North Borneo languages according to Ethnologue**

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**Figure 1. The island of Borneo and the languages of this study**

The languages examined in this paper generally belong to the North Sarawakan phylum, although some of the hunter gatherer languages of Borneo fall outside of this phylum. Penan Benalui belongs to the Western Penan branch, which is part of the Kayan-Kenyah group. Punan Tubu’, in contrast, falls outside of this group. Punan Malinau, also called Ma’ Pnaan, is not listed in Ethnologue (Lewis 2009). It may belong
to the Modang subgroup of the Kayanic languages, as it has much in common with Segai, but so far no thorough classification has been proposed. The voice systems of these languages show parallels with Kenyah languages from two different branches: Lebu’ Kulit and Óma Lólngh. Lastly, since these languages are all surrounded by Kayan variants, I provide some examples from Kayan Uma’ Pu, simply called Kayan throughout this paper (Clayre & Cubit 1963, Clayre 1996).

Kayan and Kenyah are traditionally listed within the Kayan-Kenyah group (see Hudson 1978, Soriente 2004, 2008), but this view has been challenged by Blust (1998, 2010), who believes that Kayan dialects fall outside this group because they do not display the phonological innovations that distinguish the North Sarawak group and that the similarities among these languages are mainly due to contact. For this reason, a comparison of the voice marking systems of the Kayan and Kenyah languages can be enlightening as they both use periphrastic constructions involving auxiliaries, distinct pronoun series and/or word order.

In contrast, Penan languages, as well as Punan Tubu’, express undergoer voice mainly with an infix (<IN> or <EN>). These languages were previously classified as members of the Kenyah subgroup (see Ethnologue 2007, Blust 1998, 2010, Sercombe 2006).

This view was recently abandoned, as can be seen in the most recent version of Ethnologue (Lewis [2009] and Soriente [forthcoming]).

2. Voice in some North Borneo languages

According to Clayre (1996, 2002), many languages of northern Borneo manifest Philippine-type verb systems (sometimes also called 'focus systems'). These systems are similar to those found in Philippine languages such as Tagalog, although the morphological marking involved is less elaborate in northern Borneo languages. In these systems, affixation on the verb indicates which argument in the verb phrase is in subject position, and arguments are marked for prominence according to their thematic properties (benefactive, locative or instrumental). The Borneo languages displaying this Philippine-type system most faithfully are in Sabah. They exhibit 3 sets of pronouns, as well as nominative, genitive and accusative markings on nouns, which function to distinguish actors in subject position from other actors. In other languages of northern Borneo the voice system is much more simplified and better understood as a ‘West Indonesian-type voice system’: only actor and undergoer voice are marked morphologically on verbs and in the selection of pronouns.

In what follows I will describe the voice marking systems of Penan Benalui, Punan Tubu’, Óma Lólngh and Lebu’ Kulit Kenyah, as well as Punan Malinau and Kayanic languages.

2.1 Penan Benalui - Western Penan (Sarawak and East Kalimantan)

The Penan Benalui are also known as the Penan Badeng and Penan Lurah. They are a group of semi-settled peoples originally inhabiting mountainous rainforest areas around 500 meters above sea level. These hunter-gatherers migrated in 1890, following a group of settled peoples, the Kenyah Badeng. Penan Benalui is the language of members of this group living in two main villages of the Pujungan Regency in East Kalimantan (Long Belaka, Long Lame), which have a combined population of 450. Penan Benalui is a member of the larger Western Penan group (see Ethnologue) mainly living in Sarawak and comprising Penan Geng (around 2100 speakers), Penan Silat (800 speakers) and Penan Apau (Brosius 1999). Together with the branch of Eastern Penan
languages which are also spoken in Sarawak by roughly 1500 individuals, there are some 3600 speakers of Penan varieties spread throughout several villages, which are typically not in contact with one another.

2.1.1 Penan Benalui morphology

Morphologically Penan Benalui lacks suffixes and nominal marking. It exhibits prefixes on verbals, nominals and some precategorials marking the same features as other languages of Borneo such as Kenyah and Kayan. It differs from the Kayan and Kenyah languages in the use of infixes on verbals to mark the undergoer voice, just like in languages of other Punan groups as well as languages of the Melanau-Kajang subgroup. The following is a list of Penan Benalui affixes and a general statement of their respective functions.

- **MEN-** forms actor oriented transitive and intransitive verbs; with a few bases
  - MEN- marks iterative mood;
- **PE-** forms reciprocal, causative/benefactive and some intransitive verbs (examples 10-11)
- **KE-** is a modality marker signaling future and willingness to do something;
- **<EN>** forms passives/resultatives (c.f. Kenyah and Kayan, where this infix is absent).

Completed action in actor focus is marked by the marker *pengah* ‘finished’.

Penan Benalui has two voices: actor and undergoer voice. The affixes that signal voice are MEN- and –EN-.

- **MEN-** is usually reduced to its final nasal, which is realized in several ways. This nasal brings about the following morphophonological changes:
  - homorganic nasal substitution of initial stops:
    - *poru* ‘bath’ > *moru* ‘bathe’ – see examples (1), (5), and (6)
    - *tangéh* ‘a cry’ > *nangéh* ‘cry’ – see example (4)
    - *kempen* ‘picture’ > *ngempen* ‘to make a picture’
  - palatal nasal substitution of initial *s* and *c*:
    - *solu* ‘swallow’ > *menyolu* ‘to swallow’ – see example (3)
  - prefixation of a velar nasal before an initial vowel:
    - *aken* ‘intelligence’ > *ngaken* ‘deceit’
  - prefixation of *nge-* before initial *l* and *r*:
    - *lane* ‘peeping’ > *ngelane* ‘to peep’ – see example (2)

Examples in context:

(1) *pengah akeuq moru*

  *pengah akeuq N-poru*

  PFV 1SG AV-bathe

  ‘I have bathed’

(2) *tei ngelane ireh*

  *tei N-lane ireh*

  go AV-peep 3PL

  ‘they went to peep…’
(3) anak kiq menyolu jah batun napun
    anak kiq MEN-solu jah batun napun
    child 1SG AV-swallow one seed sand
    ‘my child swallowed a grain of sand’

(4) iah menawai banen
    iah MEN-tawai banen
    3SG AV-remember husband
    ‘she remembers her husband’

(5) koriq koq memode éh?
    why 2SG AV-step.on 3SG
    ‘why do you step on it?’

(6) tamen kiq mematai kan
    tamen kiq ME-matai kan
    father 1SG AV-die wildboar
    ‘my father killed the wildboar’

The prefix ME- marks intransitive verbs and is probably a reflex of the PAN *<um>,
the most recognizable realization of which is the frozen verb k<um>an ‘eat < kan (see
7): it occurs mostly with monosyllables and words starting with a vowel (see 8) or with
m and l (see 6, 9).

(7) kuyat k<um>an parai kéq
    kuyat <UM>kan parai kéq
    longtail.macaque <AV>eat rice.plant 1SG
    ‘the macaque eats my rice plants’

(8) tuken éh sat padi néh mejam
    elder.brother 3SG bad younger.sibling 3SG AV-able
    ‘her older brother is stupid, her younger one is clever’

(9) padi kiq melakau
    padi kiq ME-lakau
    sibling 1SG AV-walk
    ‘my brother goes walking’

With bases containing the prefix KE-, the use of the prefix ME- results in a habitual
interpretation: e.g. mekegen iah ‘he likes to sleep a lot’; mekesep alé koq ‘you like to
drink’; mekangéh ‘he keeps on crying’.

The prefix PE- is polyfunctional adding a reciprocal (see 10), benefactive (see 11),
causative, or intransitive meaning to the verb. Intransitive verbs can become transitive
with the addition of nge- or pe-. Sometimes both affixes appear in the same form
without there being a clear distinction between the two: e.g. in lubin ‘roll’ ngelubin
‘make roll’, pelubin ‘make roll’.
Soriente: Undergoer voice in Borneo

2.1.2 Undergoer voice and personal pronouns in Penan Benalui

Undergoer voice is marked by the infix \(<\text{EN}>\) after the initial consonant of the verbal root (see 12-14). If this root starts with a vowel (see sentence (14)), \(<\text{EN}>\) is realized as \(n\)-. If it starts with a nasal, the latter is replaced by \(n\)- (see 15). In combination with the root \(\text{kan} \) 'to eat', \(<\text{EN}>\) is realized as \(<\text{in}>\) (compare \(k<\text{in}>\text{an}\) in sentence (23)).

(12) \(\text{aseuk} \text{éq} \text{penorah} \text{tamen} \text{kéq}\)
    \(\text{aseu} -\text{keq} \ <\text{EN}>\text{porah} \text{tamen} -\text{kéq}\)
    dog-1SG \(<\text{UV}>\text{hit} \text{father-1SG}\)
    ‘my dog is/was hit by my father’

(13) \(\text{sang} \text{ep senuaq} \text{man} \text{tulat akeuq}\)
    \(\text{sangep} \ <\text{EN}>\text{suaq} \text{ama=n} \text{tulat akeu}\)
    dress \(<\text{UV}>\text{buy} \text{father=3SG divide} 1\text{SG}\)
    ‘the dress is/was bought by father for me’

(14) \(\text{bayang} \text{ku} \text{néngang} \text{maléh inéq}\)
    \(\text{bayang} =\text{ku} \ <\text{EN}>\text{éngang} \text{maléh inéq}\)
    dress-1SG \(<\text{UV}>\text{bring} \text{yesterday mother}\)
    ‘the dress was taken along yesterday by my mother’

(15) \(\text{bue nolu jin bawai}\)
    \(\text{bue} <\text{EN}>\text{molu jin bawai}\)
    fruit \(<\text{UV}>\text{separate from} \text{high}\)
    ‘fruits are taken (separated from the tree) from above’

There is no marking on nominal arguments; however, the choice of pronominal forms is related to the voice construction in which they appear. Grammatical relations in the clause are signaled by the verbal affix and word order: the non-focused core nominal immediately follows the verb.

Penan Benalui has two sets of pronouns which are listed in table 2. Set I contains free pronouns that mark the focused argument of the clause, whether it is the actor, undergoer or instrument. Set II pronouns tend to occur immediately following a verb, a noun or a function word. They also mark the undergoer in some undergoer voice clauses. The difference between the two sets of pronouns is reduced to the first three persons (and the 3PL). Pronouns have a dual and a paucal form (from three to ten) expressed by the numeral \(\text{teleuq}\) following the plural.

In Penan Benalui, a few words, including kinship terms and body parts, have a cliticized element –n similar to the Set II 3SG pronoun in other languages (c.f. Kayan), which is probably the remnant of an earlier set of genitive and non-focused actor pronouns indicating originally unalienable possession. Examples of the frozen 3\(^{rd}\) person singular
clitic pronoun include –n on body parts like pipin ‘lips’; bulun ‘body hair’; ulun ‘head’; silun ‘nail’; maten ‘eye’; pan ‘thigh’ and terms of address such as nen ‘mother’; men ‘father’. This occurrence of –n indicating unalienable possession is evidence for the hypothesis that these words were borrowed from Kayan where the clitic –n is mostly employed with singular nouns to mark possession and some verbs appearing in the undergoer focus construction.

<table>
<thead>
<tr>
<th></th>
<th>Set I (focused)</th>
<th>Set II (non-focused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>akeuq</td>
<td>kiq/kéq</td>
</tr>
<tr>
<td>2SG</td>
<td>kau</td>
<td>koq/kuq</td>
</tr>
<tr>
<td>3SG</td>
<td>iah, éh</td>
<td>nah, neh</td>
</tr>
<tr>
<td>1PL.EXCL</td>
<td>ami</td>
<td>ami</td>
</tr>
<tr>
<td>1PL.EXCL.DUA</td>
<td>amuh</td>
<td>amuh</td>
</tr>
<tr>
<td>1PL.EXCL.PAU</td>
<td>mételeu</td>
<td>mételeu</td>
</tr>
<tr>
<td>1PL.INCL</td>
<td>uleuq</td>
<td>uleuq</td>
</tr>
<tr>
<td>1PL.INCL.DUA</td>
<td>tuah</td>
<td>tuah</td>
</tr>
<tr>
<td>1PL.INCL.PAU</td>
<td>keteleu</td>
<td>keteleu</td>
</tr>
<tr>
<td>2PL</td>
<td>kah</td>
<td>kah</td>
</tr>
<tr>
<td>2PL.DUA</td>
<td>kawah</td>
<td>kawah</td>
</tr>
<tr>
<td>3PL</td>
<td>ireh</td>
<td>doh</td>
</tr>
<tr>
<td>3PL.DUA</td>
<td>rawah</td>
<td>rawah</td>
</tr>
<tr>
<td>3PL.PAU</td>
<td>rételeu</td>
<td>rételeu</td>
</tr>
</tbody>
</table>

Table 2. Penan Benalui personal pronouns

In examples (14) to (16) no marker is required for the agent, except if the agent is a singular pronoun, in which case a Set II pronoun can be employed. In examples (16) and (17) the agent is expressed by the Set II pronoun for the 1st person kiq and for the 2nd kuq. In examples (15) and (18) no agent is present, and the verb is marked for undergoer focus with the infix <EN> on the base toli ‘pour’ and molu ‘separate’:

(16) lake penikah kiq
    lake <EN>pikah kiq
    rattan <UV>tie 1SG
    ‘the rattan is/was tied up by me’

(17) kue nin kuq
    kue <EN>min kuq
    cake <UV>bring 2SG
    ‘the cake is/was brought by me’

(18) be tenoli koq tong lepek
    be <EN>toli koq tong lepek
    water <UV>pour LOC LOC bamboo
    ‘water is/was poured inside the bamboo’

In a few cases the infix <EN> is not employed and the verb remains in actor voice. When this is the case, word order is the only way to distinguish an actor voice clause from an undergoer voice clause. In the following example, the patient is followed by the agent and the verb remains in actor voice:
(19a) \[\textit{padikéq tinen/nen moru}\]
\[\textit{padi=kéq t-ina-n N-poru}\]
\[\text{younger.sibling=1SG mother-3SG AV-bathe}\]

‘my younger brother was bathed by mother’

In 19b, the verb is marked in undergoer voice with the infix \(<\text{EN}>\) and the word order is different since the agent does not precede, but rather follows the verb:

(19b) \[\textit{padikéq penoru nen}\]
\[\textit{padi=kéq <EN>poru TRU-tinen}\]
\[\text{sibling=1SG <UV>bathe TRU-mother}\]

‘my younger brother is/was bathed by mother’

There is also an undergoer voice construction with the verb ‘make’ in its passive form \(\textit{neuq}\) occurring together with a verb in the actor voice. No marker for the agent is expressed in this type of construction; however, if the construction contains a pronoun, it must be a member of Set II (Examples: 19-21). This type of construction occurs in Berawan and in Kelabitic languages (Clayre, 2002)

Examples 20-22 show undergoer voice constructions on the basis of intransitive verbs and the use of \(\textit{neuq}\) ‘done’. The verb occurs in the actor voice form \(\textit{N-polim}\) ‘hide’, or in the stative form \(\textit{bilaq}\) ‘shattered’, \(\textit{ME-lokak}\) ‘peel’.

(20) \[\textit{bukui molim tong tilung neuq padi kiq}\]
\[\textit{bukui N-polim tong tilung <EN>neuq padi kiq}\]
\[\text{rattan.bag AV-hide LOC room <UV>do sibling 1SG}\]

‘my bag was hidden by my brother in the room’

(21) \[\textit{gelas bilaq neuq kiq}\]
\[\textit{gelas bilaq <EN>neuq 1SG}\]
\[\text{gelas shattered <EN>do kiq}\]

‘the glass was shattered by me’

(22) \[\textit{kulit kiq melokak neuq péti}\]
\[\textit{kulit kiq ME-lokak neuq péti}\]
\[\text{skin 1SG AV-peel <EN>do heat}\]

‘my skin got peeled off by the heat’

We also find clauses that are ‘double marked’ for undergoer voice such as (23) where the morpheme \(\textit{neuq}\) is employed with the verb in its passive form \(\textit{kinan}\) < \(\text{<EN>kan}\) ‘eaten’.

(23) \[\textit{akeuq gaten neuq kinan nyamok}\]
\[\textit{akeu gaten neuq <EN>kan nyamok}\]
\[\text{1SG itchy <UV>do <UV>eat mosquito}\]

‘I am itchy because I was bitten by a mosquito’

2.2 Punan Tubu’ (East Kalimantan)

The Punan Tubu’-Malinau-Mentarang are the largest community of hunter-gatherers living in a single area, the Malinau Regency in East Kalimantan. They possibly number as many as 4000 speakers and include the Punan Tubu’, Punan Mentarang and Punan Sekatak or Punan Berusu’. Most live in a resettlement camp (Respen Tubu’), while some inhabit the upper part of the Tubu’ river in the Malinau Regency.
2.2.1 Punan Tubu’ morphology

Punan Tubu’ lacks suffixes and nominal marking. It does, however, employ prefixes sharing the same features as in Penan Benalui and other North Borneo languages. The morphophonological realization of the nasal prefix is analogous to that in Penan Benalui. The following is a list of verbal affixes in Punan Tubu’.

- N- and ME- form actor oriented verbs, both transitive and intransitive;
- PE forms reciprocal, causative/benefactive, intransitive verbs;
- KE- is a modality marker generally indicating future action or the willingness to do something;
- ME- is a modality marker used to express iterative action;
- NE- marks perfective aspect or is an allomorph of <EN>;
- NYE- marks stative verbs like nyabun ‘be cloudy’ < abun ‘cloud’, or it marks progressive aspect.

The prefix ME- probably a reflex of the PAN *<um> whose most evident realization is the verb k-em-an ‘eat < kan, occurs in few other verbs like lukau ‘hit’ > lemukau or melukau ‘to hit somebody’ but mostly with monosyllables (me-cak ‘to stab’, me-kan ‘to feed’, me-cik ‘to squeeze a louse’) and words starting with a vowel.

PE- marks causatives, benefactives and reciprocals. Example 24 shows a typical sentence with a verb in its intransitive form: leruh might signify the intransitive ‘fall’ or the stative ‘fallen’. Example 25 displays the causative PE-leruh ‘to cause to fall’.

(24) nak inah leruh tat pu’un kayuh
nak inah leruh tat pu’un kayuh
child that fall from tree wood
‘the child fell from the tree’

(25) hok peleruh nak inah tat pu’un kayuh
hok PE-leruh nak inah tat pu’un kayuh
1SG CAUS-fall child that from tree wood
‘I cause(d) the child to fall from the tree’

PE- has an allomorph [p-] prefixed to words beginning with a vowel, e.g. anyau wild panyau ‘to make/to cause something or somebody become wild’, érok ‘itchy’ pérok ‘to make/cause something or somebody become itchy’. It functions to Causatives can also be formed periphrastically by employing the verb menaq ‘do’.

(26) hok menaq nak inah leruh tat pu’un kayuh
hok N-penaq nak inah leruh tat pu’un kayuh
1SG AV-make child that fall from tree wood
‘I cause(d) the child to fall from the tree’

The prefix TE- denotes an unintentional or uncontrolled movement. Although not all verbs appear with this prefix, it combines with a large number of verbs, such as the following:

- tekajing being taken by shock< kajing ‘shocked’
- tekecét ‘suddenly becoming frightened’ < kecét ‘frightened’
- teba’ang ‘run one’s head into a stone wall by accident’ < *ba’ang
2.2.2 Undergoer voice and personal pronouns in Punan Tubu’

Punan Tubu’ employs the infix <EN> to mark undergoer voice and has a passive/resultative function much like the analogous infix in Penan Benalui. However, it is worth noting that the same prefix is absent in the languages of the Kenyah and Kayan agriculturalists with which Punan Tubu’ has long been associated. The infix <EN> occurs after the first consonant of the base (see 27) and is realized as initial n- in roots starting with vowels or nasals (see 31) and as NE- with monosyllabic roots (see 30). This infix is highly productive (see examples 27-31). Notice that the agent can be omitted (example 27 and 28), and when it is overtly expressed it occurs without any preposition (examples 29-31).

(27) putiq awoq teniuq unih tubit kinan
putiq awoq <EN>tiuq unih tubit <EN>kan
banana REL <UV>buy earlier already.happened.once <UV>eat
‘the banana that was bought earlier has been eaten’

(28) Dollop necak an nuan
Dollop <EN>cak an nuan
Dollop <UV>stab at road
‘Dollop was stabbed in the street’

(29) hok senélu aq
hok <EN>sélu aq
1SG <UV>cheat person
‘I was cheated (by people)’

(30) hok nerok keloviq
hok <EN>rok keloviq
1SG <UV>kiss child
‘I am/was kissed by the child’

(31) bayang ku néngang maléh inéq
bayang ku <EN>éngang maléh inéq
shirt 1SG <UV>bring yesterday mother
‘my shirt was brought by my mother yesterday’

(32) nak-keloviq tenelekan telauq
nak-keloviq <EN>telekan telauq
child’ <UV>chase muntjak deer
‘the child is/was chased by the deer’

Nominal arguments are not marked for grammatical function. However, pronouns exhibit several distinct forms (see below) which can indicate grammatical relations. Within the clause the type of affix appearing on the verb can indicate grammatical function. This can also be expressed by word order: e.g. a non-subject core nominal immediately follows the verb.

Punan Tubu’ has three sets of pronouns displaying more or less the same characteristics as Penan Benalui, though there are no plural Set III pronouns. They are listed in table 3. Set I comprises free pronouns that mark the actor in actor voice constructions. The pronouns in Set II occur in non-subject core nominal position and also function as possessives. Moreover, Set II pronouns function as agents in undergoer voice sentences.
(although pronouns from Set I also can also assume this function). Set III includes possessive pronouns that are cliticized to the word and also appear as the agent of passive verbs like kan ‘eat’ and ayu ‘possess’.

<table>
<thead>
<tr>
<th></th>
<th>Set I</th>
<th>Set II</th>
<th>Set III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>hok</td>
<td>ku</td>
<td>-q</td>
</tr>
<tr>
<td>2SG</td>
<td>kou</td>
<td>nuh</td>
<td>-m</td>
</tr>
<tr>
<td>3SG</td>
<td>hén</td>
<td>rin</td>
<td>-n</td>
</tr>
<tr>
<td>1PL.EXCL</td>
<td>katou</td>
<td>katou</td>
<td></td>
</tr>
<tr>
<td>1PL.EXCL.DUA</td>
<td>karò</td>
<td>karò</td>
<td></td>
</tr>
<tr>
<td>1PL.INCL</td>
<td>tero</td>
<td>tero</td>
<td></td>
</tr>
<tr>
<td>1PL.INCL.DUA</td>
<td>tou</td>
<td>tou</td>
<td></td>
</tr>
<tr>
<td>2PL</td>
<td>ketou</td>
<td>ketou</td>
<td></td>
</tr>
<tr>
<td>2PL.DUA</td>
<td>kevo</td>
<td>kevo</td>
<td></td>
</tr>
<tr>
<td>3PL</td>
<td>detou</td>
<td>detou/doh</td>
<td></td>
</tr>
<tr>
<td>3PL.DUA</td>
<td>iro</td>
<td>iro</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Punan Tubu’ personal pronouns

Punan Tubu’ is different from Penan Benalui in that it has Set III clitic pronouns, unlike Penan Benalui, where there is only one third person singular clitic pronoun and it only occurs with a few body parts and kinship terms. The corresponding pronoun in Punan Tubu’ is much more productive and can be attached to most inalienably possessed nouns (body parts and also some close personal belongings such as ‘machete’, ‘dog’ and ‘knife’). These pronouns can also occur with some verbs in undergoer voice: kina-q ‘eaten by me’ kina-m ‘eaten by you’; ayé-q ‘possessed by me’ aya-m ‘possessed by you’.

As I have mentioned, there is no marking on the agent (as illustrated in example 31 and 33), however, singular pronouns in this position must be from Set II. In example 34, the patient subject is expressed by a Set I pronoun, whereas the agent is expressed by a Set II second person pronoun.

(33) *Dollop* tenelekan *Mariam*
Dollop <EN>telekan Mariam
Dollop <UV>run Mariam
‘Dollop is/was chased by Mariam’

(34) *hok* tenicq *nuh*
*hok* <EN>ticiq *nuh*
1SG <UV>hit 2SG
‘I am/was hit by you’

In examples (35-36), the agent is a Set II 1st person pronoun. Example (35) also exhibits the causal conjunction inéq, which is optional and functions as an agent-marking preposition.

(35) *hén* awoq tenicq inéq *ku*
*hén* awoq <EN>ticiq inéq *ku*
3SG REL <UV>hit AG 1SG
‘he is/was hit by me’
There are some exceptions to this pattern. Third person agents belong to Set I rather than Set II, as shown in examples (37), (38) and (39). However, this is not always so: in sentence (40), the agent belongs to Set II.

(36) \( \text{tas inah tenayang ku} \)
\( \text{tas inah <EN>tayang ku} \)
\( \text{bag that <UV>bring 1SG} \)
‘that bag was brought along by me’

(37) \( \text{nak inah teniciq hén} \)
\( \text{nak inah <EN>ticiq hén} \)
\( \text{child that <UV>hit 3SG} \)
‘that child is/was hit by him’

(38) \( \text{bavui inah awoq tenepeluh hén} \)
\( \text{bavui inah awoq <EN>tipeluh hén} \)
\( \text{wildboar that REL <UV>spear 3SG} \)
‘the wildboar was killed by spear by him’

(39) \( \text{bavui-bavui inah awoq teniciq detou} \)
\( \text{bavui-bavui inah awoq <EN>ticiq detou} \)
\( \text{RED-wildboar that REL <UV>hit 3PL} \)
‘those wildboars are/were hit by them’

(40) \( \text{Dollop laq kun woq narung doh} \)
\( \text{Dollop laq kun woq <EN>arung doh} \)
\( \text{Dollop get food REL <UV>serve 3PL} \)
‘Dollop got the food that had been served by them’

The infix <EN> can be used to form an adversative passive and can also occur with the word bok ‘affected’ followed by the verb in undergoer voice. In some cases it is found with a bare verb. Example (41) shows a typical adversative passive with this infix, whereas (42) shows a construction in which the lexeme bok precedes a verb. Example (43) displays bok followed by a bare form cak ‘stab’.

(41) \( \text{hok tenecun ovoq kayuh} \)
\( \text{hok <EN>tecun ovoq kayuh} \)
\( \text{1SG <UV>weight trunk wood} \)
‘I was hit by a falling tree’

(42) \( \text{nak inah bok teniciq Dollop} \)
\( \text{nak inah bok <EN>ticiq Dollop} \)
\( \text{child that affected <UV>hit Dollop} \)
‘the child got hit by Dollop’

(43) \( \text{Petrus bok cak tat malom an nuan} \)
\( \text{Petrus bok cak tat malom an nuan} \)
\( \text{Petrus affected stab from night at road} \)
‘Petrus got stabbed on the road last night’

In some cases where no infix is found in the verb, the word order and the use of a Set II pronoun signals an undergoer voice construction. In example (44), the verb luq appears as a bare form, but the order of constituents indicates the interpretation of the
sentence. The patient precedes the verb and the agent, which are followed by a Set II 1st person pronoun. Similarly, sentences (45) and (46), the verb appears as a bare form preceding the agent, a Set II pronoun.

(44) \( \text{tas} \ \text{ku} \ \text{luq} \ \text{ku} \ \text{an} \ \text{tilung} \)  
\( \text{tas} \ \text{ku} \ \text{luq} \ \text{ku} \ \text{an} \ \text{tilung} \)  
\text{bag} \ 1\text{SG} \ \text{leave} \ 1\text{SG} \ \text{at} \ \text{room}  
\'my bag I left (was left) in the room’

(45) \( \text{nak} \ \text{inah} \ \text{kan} \ \text{nuh} \)  
\( \text{child} \ \text{that} \ \text{feed} \ 2\text{SG} \)  
\'the child was fed by you’

(46) \( \text{nak} \ \text{inah} \ \text{lukau} \ \text{ku} \)  
\( \text{nak} \ \text{inah} \ \text{lukau} \ \text{ku} \)  
\text{child} \ \text{that} \ \text{hit} \ 1\text{SG}  
\'that child was hit by me’

The following sentence might seem ambiguous as the verb in its passive form is followed by two pronouns, but the fact that \text{nuh} is taken from Set II demonstrates that it is the agent, whereas \text{hén} is the patient. The same happens in the examples (48) and (49).

(47) \( \text{nekan} \ \text{nuh} \ \text{hén} \ \text{unih} \)  
\( \text{NE-kan} \ \text{nuh} \ \text{hén} \ \text{unih} \)  
\text{UV-feed} \ 2\text{SG} \ 3\text{SG} \ \text{earlier}  
\'he was given food by you earlier’

(48) \( \text{nekan} \ \text{nuh} \ \text{you} \ \text{nih} \ \text{unih}? \)  
\( \text{NE-kan} \ \text{nuh} \ \text{you} \ \text{nih} \ \text{unih}? \)  
\text{UV-feed} \ 2\text{SG} \ \text{chicken} \ \text{here} \ \text{earlier}  
\'has the chicken been fed by you earlier?’

(49) \( \text{kun} \ \text{unih} \ \text{kinam} \)  
\( \text{kun} \ \text{unih} \ <\text{EN}>\text{kan}=\text{m} \)  
\text{food} \ \text{earlier} \ <\text{UV}>\text{feed}=2\text{SG}  
\'the food was given by you earlier’

In ditransitive constructions the indirect object is marked by a preposition like \text{nyan} ‘towards:

(50) \( \text{Dollop} \ \text{ngatuh} \ \text{surat} \ \text{nyan} \ \text{inéq} \ \text{hén} \ (\text{rin}) \)  
\( \text{Dollop} \ \text{N-katuh} \ \text{surat} \ \text{nyan} \ \text{inéq} \ \text{hén} \ (\text{rin}) \)  
\text{Dollop} \ \text{AV-send} \ \text{letter} \ \text{towards} \ \text{mother} \ 3\text{SG} \ 3\text{SG}.\text{POSS}  
\'Dollop sent a letter to his mother’

The corresponding passive sentence exhibits two variants (51-52), since both direct and indirect objects can be promoted to the subject position.

(51) \( \text{surat} \ \text{inah} \ \text{kenatuh} \ \text{Dollop} \ \text{nyan} \ \text{inan} \ \text{rin} \)  
\( \text{surat} \ \text{inah} <\text{EN}>\text{katuh} \ \text{Dollop} \ \text{nyan} \ \text{inan} \ \text{rin} \)  
\text{letter} \ \text{that} \ <\text{UV}>\text{send} \ \text{Dollop} \ \text{to} \ \text{mother}.\text{ref} \ 3\text{SG}.\text{POSS}  
\'that letter was sent by Dollop to his mother’
Figure 2 displays the tree of the Kayan-Kenyah subgroup comprising three main branches, Kenyah, Penan and Kayanic. This classification is more fine-grained than the classification provided in Ethnologue (Lewis 2009) where the high diversity of Kenyah languages is not displayed.\(^2\) The Kenyah branch comprises the main Kenyah languages despite the striking difference between the Upper Pujungan and the Usun Apau branches. The Kayanic branch has more sub-branches such as the one including Lebu’ Kulit, Mboh, Pua’ and proper Kayan dialects such as Uma’ Leken.

\(^2\) Note that the language taxonomy used in this figure does not correspond to Ethnologue’s as displayed at the beginning of this paper in table 1. Kenyah Wahau corresponds to Lebu’ Kulit in this chapter. Long Wat corresponds to Mboh, and Sebop (also noted as Cebop) should be listed in the Penan branch. Mainstream Kenyah corresponds to Usun Apau Kenyah and Uma’ Lung corresponds to Öma Lóngh.
2.3.2 Voice morphology in Kenyah Òma Lóngh and Lebu’ Kulit

The verbal morphology of Kenyah languages is very similar to that of Kayan, Penan and other languages in Borneo both in terms of morphotactics (only prefixes) and paradigmatic structure. Kenyah, Kayan and Penan share the same prefixes: (ME)N- for actor orientation, ME- for stativity (in a few cases also for iterative), PE- for reciprocal, causative/benefactive and intransitive verbs (and also as a nominalizer), and lastly KE- for future and irrealis.

Like Penan Benalui and Punan Tubu’, Kenyah languages have two sets of pronouns: Set I contains free pronouns that occur as actor subjects, and Set II consists of short form pronouns that are used as possessives and occur as clitics following verbs and function words. Table 3 list the pronouns from the Òma Lóngh and Lebu’ Kulit languages.
Table 4. Òma Lóngh and Lebu’ Kulit personal pronouns

Unlike Penan Benalui and Punan Tubu’, Òma Lóngh and Lebu’ Kulit lack an undergoer voice construction marked by affixation as well as the ‘make’ construction found in Penan Benalui and other languages. In my attempts to elicit passive constructions, speakers responded by changing the word order of the sentence or producing a sentence wherein the agent was preceded by the word *uben* (in Badeng or *uben* in Lepo’ Tau, *òbèny* in Òma Lóngh, *uvan* in Lebu’ Kulit). This morpheme means ‘trace’ or ‘because’ (see example 55) and indicates a perfective action. It can also function as an agentive preposition (see examples 53, 54). The lexeme *òbèny* in Òma Lóngh is polyfunctional: It can be a causal conjunction as in (55), it can mark the agent of undergoer sentences, or it can mark perfective aspect or undergoer voice. The agent can be also marked by the lexeme *ko’on* (in Lebu’ Kulit or *kè’en* in Òma Lóngh) which means ‘by, because’ (52-57).

(53) *sadìn* (uben) *uwèq* *ndo*  
s-adi-n uwèq ndo  
younger.sibling=3SG AG mother bathe  
‘the younger brother is bathed by mother’ Badeng Kenyah

(54) *sapài uben amai meli makèq*  
sapai uben ama-i N-beli (ku)ma=kèq  
dress AG father AV-buy for=1SG  
‘the dress was bought by father for me’ Badeng Kenyah

(55) *kelunan iti mpei a nai luq pu’un*  
person that NEG 3SG come PRTCL never  
*uvan a sakít*  
because 3SG sick  
‘that person did not come because he was sick’ Lebu’ Kulit Kenyah
(56) udoq kayeu daruq ié dulu ka pedeng
undoq kayeu daruq ié dulu ka PE-deng
mask wood long 3SG people KA CAUS-stand
neng jumé ti o neng
towards in.front that PRTCL towards
‘the statue made of a long piece of wood will be built in front of it’
Lebu’ Kulit Kenyah

(57) un na sang yaq uvan méq neké
be PRTCL k.o.palm REL AG 1PL UV-tie
i’uk kanen méq ti
wrap rice 1PL.INCL that
‘it is palm leaves that are tied to wrap our rice’
Lebu’ Kulit Kenyah

(58) dulu menesun ta uleu yaq uvan dulu alaq ti iti
dulu MEN-tesun ta uleu yaq uvan dulu alaq ti iti
people AV-stab PRTCL head REL AG people take that that
‘people stack the heads that had been cut (taken)’
Lebu’ Kulit Kenyah

(59) ini uvan aseu maat éq
this AG dog AV-bite 1SG
‘here I have been bit by a dog’
Lebu’ Kulit Kenyah

The following are examples in which word order indicates that the sentence is an undergoer voice structure:

(60) buaq iti iré tai koq dalem buan
fruit this 3PL go LOC inside container
‘that fruit was put inside the pocket by them’
Lebu’ Kulit Kenyah

Furthermore, in the following examples the resumptive pronoun emphasizes that the subject is the undergoer:

(61) sarik sinak diq ntuq ié
y.sibling=1SG mother=1SG PRTCL bathe 3SG
‘my brother is bathed by my mother’
Lebu’ Kulit Kenyah

(62) iti aseu uman a
that dog -AV-eat 3SG
‘that was eaten by the dog’
Lebu’ Kulit Kenyah

In Kenyah there is no specific passive morphology, but thematic roles are expressed through word order or the use of words marking the agent. The following are some
examples from Òma Lóngh Kenyah in which the agent is marked by ôbêny (63), and kè’en ‘by’ (64), and followed by a verb as well as (in (63)) the resumptive pronoun -e.

(63) énó rae ôbêny kam negheneka mè’è bò’è re
énó rae ôbêny kam N-tegheneq-e mè’è bò’è re
be voice AG 2PL AV-tell a story-3SG at.that time in the past RE
‘you told me the story once’ Òma Lóngh Kenyah

(64) engne isi le ngkiny jòteq le,
eng-NE isi le ngkiny jòteq le,
exist-PRTCL apparently 1PL bring rice PRTCL
kè’en le mejep te sòngè,
kè’en le N-pejep te sòngè,
AG 1PL AV-dip LOC water
‘apparently we brought the rice and we dipped it in the water’ Òma Lóngh Kenyah

(65) kè’en le ômèny kajèny le meghala ntu
kè’en le ômèny kajèny le ME-ghala ntu
AG 1PL eat long.time 1PL AV-play bathe
ki’i te
ki’i te
there PRTCL
‘we ate it while we were playing and bathing there’ Òma Lóngh Kenyah

(66) malèj ncam ôbêny é’ó métó tòq ti’i eng
malèj ncam ôbêny é’ó N-pétó tòq ti’i eng
iron can AG 3PL AV-look.for exactly there be
‘they could look for iron exactly where it was’ Òma Lóngh Kenyah

In the following examples the word ôbêny does not mark the agent but signals that the verb, which has an actor voice marker, is actually perfective and is part of an undergoer voice clause:

(67) be ôbêny nyelapang babé rè’è....
be ôbêny N-selapang babé rè’è
if AG AV-rifle wild.boar that
‘if the boar was shot at....’ Òma Lóngh Kenyah

(68) engne ôbêny ômó te zi’i ôbêny e nyòrèj
eng-ne ôbêny ômó te zi’i ôbêny e N-sòrèj
be-PRTCL trace dry.field PRTCL that AG 3SG AV-letter
‘(about) our former ricefield was written by her’ Òma Lóngh Kenyah

(69) felanóq ôbêny matè kè’en kólé
felanóq ôbêny N-fatè kè’en kólé
mousedeer UV AV-dead AG clouded.leopard
‘the mousedeer was killed by the clouded leopard’ Òma Lóngh Kenyah
In (71), only word order indicates undergoer voice: the agent de ‘people’ is not marked by either kè’en ‘by’ or òbèny, and it is followed by a verb in the actor voice (ngelasij).

(71) tele zaq de ngelasij kelônèny laminy
three chicken people AV-steal LOC-back house

‘three chicken were stolen by people in the back yard’ Òma Lóngh Kenyah

TEN- denotes an unintentional or uncontrolled movement. In Ôma Lóngh, it is found only in passive type constructions. The only way to stress whether the agent or patient is focused is via the ordering of constituents (69-71).

• tenaôngh ‘left behind’ (unintentionally) < aòngh ‘place to put things’
• tenedengh ‘constituted by’ < dengh ‘standing pole’
• tenesèj ‘cut by accident’ < sèj ‘chop’
• tenepè ‘called’ < tepè ‘call’

It remains a mystery whether TEN- is the relic of the PAN *<EN> infix, or whether forms showing this prefix are fossilized borrowings from languages where –IN- infixation is productive. Speakers themselves are not aware that derivations like tenepè ‘called’ < tepè ‘call’ can also be interpreted as <EN>tepè, or that tenafiengh ‘be fanned’ < tafiengh in (72) is not the product of TEN- prefixation but indeed of <IN> infixation.

(72) tenafiengh ki kè’en bazé
<EN>tafiengh ki kè’en bazé
<UV>fan 1SG AG wind

‘I am fanned by the wind’ Òma Lóngh Kenyah

(73) tè.. tè tengkiny ne le méé ce?
tè.. tè TEN-ngkiny ne le méé ce?
go go UP-bring PRTCL 1PL.EXCL like.that PRTCL

‘were we taken by people like that?’ Òma Lóngh Kenyah

It is interesting to note that in Kenyah Lebu’ Kulit the structure with zero marking where the order of the constituents plays a role and therefore the patient has to be located before the agent, is preferred in naturalistic data. On the other hand in elicited data, the structure with the lexeme uvan followed by the agent occurs more often. In Ôma Lóngh the use of òbèny and kè’en seems more pervasive in both elicited and naturalistic data. It might be interesting to observe the distribution of these two lexemes and their correspondences in other Kenyah languages and see whether this is the reflex of an internal subgrouping.

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3 Note that but this derivation could also be interpreted as <EN>tepè.
2.4. Kayan and Kayanic (East Kalimantan and Sarawak)

The Kayanic languages are found across a wide area of Central Borneo between Sarawak, and East and West Kalimantan. They are relatively uniform in comparison to their relatives, the Kenyah languages. Data discussed in this section are mainly from Kayan Uma Pu on the Baram River in Sarawak (simply referred to as Kayan; Clayre and Cubit 1974) and Kayan Bahau (taken from Devung 1982) and from two Kayanic languages, mainly Hwang Tring (Devung 1982), and Long Gleaat (or Long Glit) (Guerreiro 2009).

2.4.1 Kayan and Kayanic voice morphology

Kayan displays voice morphology that is very similar to Kenyah and a three set system of pronouns: free pronouns, short form pronouns and cliticized pronouns. Short form pronouns can function as either a possessive or as a non-focused actor (in which case the pronoun follows the verb). Cliticized pronouns attach to certain nouns and passive verbs.

What Clayre (1996) and Clayre and Cubit (1974) have referred to as the undergoer construction involves an active verb form preceded by the particle \( \text{EN} \). The agent occurs as a Set II pronoun or full noun intervening between \( \text{EN} \) and the verb, or a full noun following the verb. Sometimes the agent is preceded by the lexeme \( \text{kenan} \) ‘by action of’ functioning as an agent-marking preposition.

These authors interpret \( \text{EN} \) as a cognate of the verb \( \text{an} \) ‘make, do’. An alternative interpretation is that \( \text{EN} \) is a cognate of the Kenyah forms \( \text{uben}, \text{uvan} \) and \( \text{ôbêny} \) (§2.3.2). In fact, these morphemes are strikingly similar to \( \text{EN} \) insofar as they occur in an analogous construction where they precede a pronoun/nouns positioned before an active verb. The preposition \( \text{kenan} \) ‘by action of’, which often occurs in so-called \( \text{EN} \) sentences, looks remarkably similar to the Kenyah morpheme \( \text{ko’on} \). If the claim that \( \text{EN} \) in Kayan is related to \( \text{uben}, \text{uvan}, \text{ôbêny} \) in Kenyah is a correct one, the function of the agent marker \( \text{uben} \) must be slowly changing from that of a preposition introducing causal sentences to a grammatical marker. Adelaar (2009) discusses a similar development in Malay, Kendayan (West Borneo) and other West Indonesian languages. Further work on Kayan dialects is needed to better understand this relation.

(74) \( \begin{array}{llll}
\text{EN} & \text{naq} & \text{nasaq uma anan} \\
\text{AG} & 3\text{SG} & \text{AV-destroy house} & \text{That} \\
\end{array} \) \\
\text{‘the house was destroyed by him’} \quad \text{Kayan} \n
(75) \( \begin{array}{llll}
\text{EN} & \text{naq ngaham haruk anan} \\
\text{AG} & 3\text{SG} & \text{AV-capsize boat} & \text{that} \\
\end{array} \) \\
\text{‘the boat was capsized by him’} \quad \text{Kayan} \n
(76) \( \begin{array}{llll}
\text{EN} & \text{naq uk basung men ihaq} \\
\text{AG} & 3\text{SG} & \text{give shirt to} & \text{3SG} \\
\end{array} \) \\
\text{‘he gave the shirt to him’} \quad \text{Kayan} \n
(77) ihaq uh en dahaq geri di
    ihaq uh EN dahaq geri di
    3SG PFV AG 3PL bring PRTCL
    ‘he was brought by them’ Kayan

(78) kayuq atih en naq lek
    kayuq atih EN naq lek
    wood that AG 3SG leave
    ‘the wood was left by him’ Kayan

(79) hiap atih en Anyiq ngaput mena’a di
    hiap atih EN Anyiq N-kaput mena’a di
    chicken that AG Anyiq AV-tie a.little.ago PRTCL
    ‘the chicken was tied up by Anyi a while little ago’ Kayan

(80) ihaq em en kelunan masi
    ihaq em EN kelunan N-pasi
    3SG NEG AG people AV-pity
    ‘he is not pitied by people’ Kayan

(81) en ameq duan nah ihaq
    EN ameq duan nah ihaq
    AG 1PL.INCL speak towards 3SG
    ‘we spoke to him’ Kayan

(82) en dahaq ngaput pah ihaq
    EN dahaq N-kaput pah ihaq
    AG 3PL AV-tie also 3SG
    ‘he too was tied up by them’ Kayan

(83) uvaat kui an iné ngepat
    uvaat kui AN iné N-pat
    clothes 1SG AG mother AV-sew
    ‘my clothes were sewn by my mother’ Busang/Kayan-Bahau

(84) uvaat kiiq an naay mejoot
    uvaat kiiq AN naay ME-joot
    clothes 1SG AG mother AV-sew
    my clothes were sewn by my mother Hwang Tring (Kayanic)

(85) abeyn kei mé ngepaat
    abeyn kei mé N-paat
    clothes 1SG mother AV-sew
    my clothes were sewn by my mother Long Gleaat (Kayanic)

2.5 Punan Malinau

The Punan Malinau (or Punan Segah or Ma’Pnaan) is spoken by 80 individuals living along the Segah River in Berau Regency and seems to be related to the Punan Kelai and other Kayanic languages like Segai (also called Mengg’aay) in East Kalimantan. These people are Punan, hunter-gatherers who settled only recently but have long been in close contact with Kayanic agriculturalists, especially the Mengg’aay/Segai. It is still
unclear whether the similarities between Punan Malinau and Mengga’ay/Segai are due to contact or to a common origin.

2.5.1 Punan Malinau undergoer voice construction

Punan Malinau has a relatively reduced morphology, exhibiting prefixes like N- for actor voice and PA- for reciprocal and causative constructions. The language has no suffixes and the undergoer focus construction is not marked morphologically, unlike that found in the languages of hunter gatherers like the Penan Benalui and Punan Tubu’. Rather, the undergoer construction is marked via word order and zero suffixation or with the use of the word IN, a morpheme that shows behavior similar to EN in Kayan and uben in Kenyah. The particle IN is also used occasionally as a preposition indicating causality or purpose. For this reason, this language seems to align more with Kayanic languages and Kenyah than with the languages of other hunter-gatherers like the Punan Tubu’ or the Penan Benalui, despite the fact that it is spoken by people who were hunter-gatherers until very recently.

Example (86) displays a simple actor voice sentence where the verb is marked with the N- actor voice prefix, whereas the corresponding undergoer voice in (87a) has the verb in its bare form preceded by IN. Sentence (87b) shows that IN also occurs before the agent:

(86) \textit{diq koi nhut bupet neh} \\
\textit{mother 1SG AV-sew dress that} \\
\textit{‘my mother sewed that dress’} \\
\textit{Punan Malinau}

(87a) \textit{bupet neh diq koi in hut} \\
\textit{dress that mother 1SG UV sew} \\
\textit{‘the dress was sewed by my mother’} \\
\textit{Punan Malinau}

(87b) \textit{bupet neh in diq koi hut} \\
\textit{dress that AG mother 1SG sew} \\
\textit{‘the dress was sewed by my mother’} \\
\textit{Punan Malinau}

(88) \textit{koi bop asau} \\
\textit{1SG hit dog} \\
\textit{‘I hit the dog’} \\
\textit{Punan Malinau}

(89) \textit{asau in bop ulin co koi} \\
\textit{dog UV hit sibling little 1SG} \\
\textit{‘the dog was hit by my brother’} \\
\textit{Punan Malinau}

(90) \textit{asau ulin co koi bop} \\
\textit{dog sibling little 1SG hit} \\
\textit{‘the dog was hit by my brother’} \\
\textit{Punan Malinau}
3. Conclusion

To return to the initial assumption made by Clayre (1996), the voice system in most northern Borneo languages is considerably reduced in comparison with that of Philippine-type languages. In this paper we have observed two clearly distinct systems: In Kayan and Kenyah we described a simple system, where, in addition to a single morphological process, only personal pronouns and word order identify the voice orientation. In contrast, Penan Benalui and Punan Tubu exhibit a morphologically more complex system wherein the use of the infix –IN-/<EN> marks undergoer voice. This infix is clearly derived from PAN *<EN>, which was a marker of undergoer voice and perfective aspect (Blust 2002).

In conclusion, despite the fact that Penan (Benalui and other Penan variants in Sarawak) and Punan Tubu' have been classified within the Kenyah subgroup (see Blust 2010), from a morphosyntactic point of view they seem to share more features with other languages like Kelabit and languages of the lower Baram like Berawan and Kiput than with Kayan and Kenyah. In contrast, Kayan and Kenyah are much more similar to each other in their voice behavior. The uban construction in Kenyah seems to be the counterpart of the EN construction of Kayan. Moreover, the use of the lexeme ko’on/kè’en in Kenyah, marking the agent of an undergoer voice construction, behaves in the same way as the morpheme kenan in Kayan.

So what happened to the <EN> infix in Kayan and Kenyah? Traces of this original PAN infix can only be found in a few scattered verbal forms, especially in Öma Lóngh. In other Kenyah variants and in Kayan there seems to be no trace of this morpheme. Nevertheless, in Kenyah, the preferred way of marking the undergoer voice construction is via word order and the use of Set II pronouns for the agent argument. Collection of naturalistic data on Kayan might prove that in Kayan the use of en is not the only way to mark the undergoer voice construction, and that there also exists an undergoer construction marked by word order. This finding supports the view that the similarities between Kayan and Kenyah are not based only on language contact, as has been suggested by Blust (1998, 2010) but reflect a common origin.

In further conclusion I would like to address the question of how the languages discussed in this paper are related to one another, as well as to other languages in their vicinity on the basis of morphosyntactic evidence. In the literature, there is some evidence that hunter-gatherers constitute a single group historically (see for instance Sellato 1993 and 1994). Traditional linguistic classifications, based primarily on lexical
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However, it should be emphasized that the possibility that the Punan and Penan languages are related to each other and form a single group is still under debate. Some anthropologists, such as Sellato (1993, 1994) and Sercombe & Sellato (2007), have suggested that hunter-gatherer groups are separate populations that have borrowed linguistic and cultural elements from agricultural populations; therefore, the evident similarities with Kenyah and Kayan languages might be attributed to borrowings from the agriculturists groups. For this reason Sercombe & Sellato (2007) have introduced a new term, ‘Pnan,’ that overcomes the dichotomy of Penan vs. Punan. In contrast, some other scholars believe that some of these populations are derived from settled agricultural peoples (Blust 1974, 1998; Hoffmann 1986; Bellwood 1999). The origin of Borneo forager groups is highly controversial, and the discussion is complicated by the fact that the simple opposition between hunter-gatherers and agriculturalists is itself problematic because the various subsistence systems in the area rather form a continuum involving rice agriculture, sago and tuber cultivation, forest foraging, hunting, and fishing. The history of hunter-gatherers in this region is usually based on a symbiotic exchange with the agriculturalists like the Kayan and the Kenyah, which has continued for several centuries to the point that most of the communities are nowadays not fully nomadic, nor permanently settled (Langub 1989, Sellato 1994, Sather 1995).

This paper provides linguistic evidence that the languages of North Borneo display two very distinct voice marking systems. One the one hand, Penan Benalui and Punan Tubu’ display a voice system in which undergoer voice is typically marked by infixation of the morpheme <EN>. On the other hand, Kenyah languages as well as Kayan and Kayanic show a voice system in which undergoer voice is marked by a free morpheme that is clearly separate from the verb, as evidenced by the fact that a pronoun or full NP can intervene between it and the verb.

However, the stark contrast observed in the voice systems of these languages sheds doubt on traditional classifications that group Kenyah and Punan languages together. Under the assumption that something as systemic as the voice system in a language is less readily borrowable than lexical items we can speculate that the properties of the voice systems in these languages, and in particular in the languages of hunter-gatherers, will serve as a means to classify languages that is not confounded by the issue of lexical borrowing and cultural contact. So the common core of these languages could actually be considered this voice marking system, as was done by Sellato (1993) when he was looking for core features of these languages. As is well known, the hunter-gatherers have entertained symbiotic exchange with agriculturalists that can justify a considerable amount of lexical borrowing in domains where the groups share common interests. On the other hand it is necessary to stress the concept of fluidity between hunter-gathering and agricultural lifestyles and maybe a clear-cut difference between these two groups and lifestyles cannot be drawn.

Is there any possibility of the unity of hunter-gatherer groups? I would like to argue that the typology of voice systems in the languages studied puts Penan Benalui and Punan Tubu’ in a different subgroup from the languages of the Kenyah and the Kayan agriculturalists. Nevertheless it does not provide entirely uncontroversial evidence in
favor of classifying all the languages of hunter-gatherers within a single group. For example, the language of one of the hunter-gatherer groups under study, Punan Malinau (or Segah) does not have any of the voice morphology attested in Penan Benalui and the Punan Tubu’ and appears to align more with Kayan (and Kenyah) languages in its use of the free morpheme \textit{IN}. Furthermore, the <EN> infix also occurs in other language groups in Borneo such as the languages belonging to the Berawan-Lower Baram group like Kiput, the Kelabitic languages and some Barito languages such as Kadorih (see Inagaki, this volume). As far as the Melanau-Kajang subgroup that comprises languages of hunter-gatherers is concerned, very little is known linguistically but it cannot be excluded that they have morphosyntactic features in common with Penan Benalui and Punan Tubu’. At this stage of knowledge of the North Borneo languages we can say that \textit{–IN-} infixation as a marker of undergoer voice is diagnostic for language classification. Clearly, addressing this question should involve taking a deeper look into the yet undescribed languages of Borneo’s hunter gatherers and compare their features to those possessed by the languages of agriculturalists. A more comprehensive approach is needed in which undergoer voice is investigated in conjunction with a qualitative analysis of the lexicon (distinguishing different lexical categories, such as environment specific terms and cultural terms). Combining an analysis of the lexicon with the study of voice and other grammatical features will yield the sort of results that enable us to test the apparent dichotomy between the voice systems of Penan Benalui and Punan Tubu’ on the one hand, and those of the Kayan and the Kenyah on the other.

However, we should not forget that grammatical features can be adopted across languages of different genetic affiliations and take into account that areal features may play a role in the development of hunter-gatherer languages in Borneo, where intricate relations have occurred for centuries among various ethnic groups.

### Abbreviations

<table>
<thead>
<tr>
<th>1/2/3</th>
<th>1ST/2ND/3RD PERSON</th>
<th>PAU</th>
<th>paucal</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG</td>
<td>agent marker</td>
<td>PFV</td>
<td>perfective</td>
</tr>
<tr>
<td>AV</td>
<td>actor voice</td>
<td>POSS</td>
<td>possessive</td>
</tr>
<tr>
<td>BEN</td>
<td>benefactive</td>
<td>PL</td>
<td>plural</td>
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<td>CAUS</td>
<td>causative</td>
<td>PRTCL</td>
<td>particle</td>
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<tr>
<td>CLASS</td>
<td>classifier</td>
<td>RECP</td>
<td>reciprocal</td>
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<tr>
<td>DUA</td>
<td>dual</td>
<td>RED</td>
<td>reduplication</td>
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<td>EXCL</td>
<td>exclusive</td>
<td>REL</td>
<td>relativizer</td>
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<tr>
<td>INCL</td>
<td>inclusive</td>
<td>SG</td>
<td>singular</td>
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<tr>
<td>LOC</td>
<td>locative</td>
<td>TRU-</td>
<td>truncation</td>
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<tr>
<td>NEG</td>
<td>negator</td>
<td>UP</td>
<td>uncontrolled passive</td>
</tr>
<tr>
<td>PAN</td>
<td>Proto-Austronesian</td>
<td>UV</td>
<td>undergoer voice</td>
</tr>
</tbody>
</table>

### Transcription

The transcription of the examples of the languages provided in this paper does not follow the IPA system but the orthographic system devised for these languages. The spelling system developed had to take into account both the sound system of the languages in addition to those orthographies with which the communities of speakers were already familiar, that is the spelling of the national language, Indonesian, with a few additions. Some of the consonants and vowels conventionalized in Indonesian writing are listed below.
<table>
<thead>
<tr>
<th>Lower case</th>
<th>Description</th>
<th>Upper case</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>voiced bilabial stop</td>
<td>p</td>
<td>voiceless bilabial stop</td>
</tr>
<tr>
<td>c</td>
<td>voiceless palatal stop</td>
<td>r</td>
<td>apical trill</td>
</tr>
<tr>
<td>d</td>
<td>voiced dental stop</td>
<td>s</td>
<td>voiceless alveolar fricative</td>
</tr>
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<td>f</td>
<td>voiceless bilabial fricative</td>
<td>t</td>
<td>voiceless dental stop</td>
</tr>
<tr>
<td>g</td>
<td>voiced velar stop</td>
<td>v</td>
<td>voiced bilabial fricative</td>
</tr>
<tr>
<td>gh</td>
<td>voiced velar fricative</td>
<td>z</td>
<td>voiced alveolar fricative</td>
</tr>
<tr>
<td>j</td>
<td>voiced palatal stop</td>
<td>a</td>
<td>low central vowel</td>
</tr>
<tr>
<td>k</td>
<td>voiceless velar stop</td>
<td>é</td>
<td>mid high front tense vowel</td>
</tr>
<tr>
<td>/q</td>
<td>glottal stop</td>
<td>è</td>
<td>mid high front lax vowel</td>
</tr>
<tr>
<td>l</td>
<td>lateral approximant</td>
<td>e</td>
<td>mid central vowel</td>
</tr>
<tr>
<td>m</td>
<td>voiced bilabial nasal</td>
<td>i</td>
<td>high front unrounded vowel</td>
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<tr>
<td>ng</td>
<td>voiced velar nasal</td>
<td>ó</td>
<td>mid high back rounded vowel</td>
</tr>
<tr>
<td>ngh</td>
<td>voiceless velar nasal</td>
<td>ô</td>
<td>low back rounded vowel</td>
</tr>
<tr>
<td>ny</td>
<td>voiced palatal nasal</td>
<td>u</td>
<td>high back rounded vowel</td>
</tr>
</tbody>
</table>

References


Sather, Clifford, 1995. ‘Sea nomads and rainforest hunter-gatherers: foraging adaptations in the Indo-Malaysian Archipelago.’ In Peter Bellwood, James J. Fox and Darrell T. Tryon (eds), The Austronesians: Historical & Comparative Perspectives. 229-68. Canberra: The Australian National University, Department of Anthropology.


