The syntax of Merap phrases, clauses and sentences. A Study Based on Government and Binding, Principles and Parameters Approach

by Yohanes Radjaban, Eko Setyo Humanika , Tatit Hariyanti

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Abstract. This research is to describe (1) linguistic typology, (2) phrase structures, (3) clause and sentence structures of Merap language. The analyses on the problems apply Principles Parameters approach to come to the findings. Historical generative method was applied to verify the linguistic typology of Merap and Parameters and Principles of Haegeman's Government and Binding Theories were applied to describe phrase structures, clause, and sentence structures of Merap. Based on the analyses, the research formulated some findings. First, Merap language is a sub-Kayanic language. Second, the structures of phrases of Merap are constructed based on head-modifiers relations with a category as a head and the other elements as modifiers. Third, clause structures of Merap are constructed based on head-modifier relations with a verb as a head and with NP, AdvP, PP, and AP as modifiers, and sentence structures of Merap are constructed based on head-modifier relations with a complementizer as a head and an IP as its modifier.

Keywords. syntax; Merap; head-modifier relations; complementizer

Introduction

Indonesia is the biggest archipelago that has more than 13,000 islands (Soedarso, 2013) with more than 700 languages (Radjaban, (2013), Kompas, (2013), & Suestiningtyas, (2015)). Most of the languages spoken in about 13,000 islands typologically belong to the Austronesian language family (Alieva et.al., 1991). About 400 languages or just about 55% have linguistic documentations in the forms of grammar books (ILB, (2009)). UNESCO (2010) declared that 1% out of about 728 languages or about 7 languages are completely extinct; the languages do not have any speakers nor written documents. In the case of Dayic languages of Kalimantan, UNESCO (2010) also mentioned that most languages of Dayak Kalimantan belong to 'vulnerable' and 'critically endangered' languages. It means that the languages still exist and are used in daily natural conversations but only among old people and only spoken in domestic settings. Young generations do not use the languages in formal settings any longer (Radjaban, 2013).

Indigenous languages of Dayak in Kalimantan are about 142 languages of 268 sub-tribes that are classified into seven main tribes consisting of *Kayan*, *Punan*, *Murut*, *Ot Danum*, *Ngaju*, *Klementan*, and *Iban* (Rautner, 2005). Based on geographical locations, the languages

are dominantly used in different areas. *Kayan*, *Punan*, and *Murut* are spoken by the native people of North and East Kalimantan, and Sabah Malaysia. *Ot Danum* and *Ngaju* are spoken mostly in South Kalimantan, *Klementan* is spoken mostly in West and Central Kalimantan, and *Iban* is spoken by the native people of certain Central Kalimantan and Sarawak, Malaysia (Sulia, 2012).

Referring to the status issued by UNESCO in 2010, most of the languages of Dayak Kalimantan are classified as 'vulnerable' languages. When viewed from the availability of written documents, most of the languages are considered 'critically endangered' languages since most languages do not have linguistic documentations in syntactic level of studies (Radjaban, 2013). It is worth noted that languages belonging to 'vulnerable' status will soon come into extinction if they do not have linguistic documentations since without them language transfers can only happen between generations of the native speakers, but it is impossible to do to non-native speakers of the languages (Dineen, 1967). Dineen (1967) further mentions that language transfers are possible to happen among non-native speakers of the languages when at least there is a complete set of linguistic documentations covering phonetics and phonology, morphology, syntax and discourse or in the forms of *tata bahasa* (Chaer, 2007). Radford (1997) argues that syntactic descriptions are the minimum conditions for a linguistic study that enable non-native speakers to learn a particular language without any assistance and attendance of the native speaker of the language they learn. It is explained further that syntactic study covers both descriptions of phrase-sentence structures and their patterns of interpretations. This is what a non-native speaker needs to make him able to learn the language without the assistance and attendance of the native speakers.

As stated previously, *Murut*, *Kayan*, and *Punan* are spoken in most areas of North Kalimantan. Efforts to make linguistic documentations of these three main languages have been carried out both by local or international linguists. Yustina Yalis (2000), sponsored by Save *Teluk Balikpapan* Foundation, has published a dictionary of Agabag, one of sub-Murutic languages. Long before that, Darmansyah (with Abdul Djebar Hapip, Abdurrachman Ismail, and Nirmala Sari, 1981) has published a grammar book of *Tidung* another sub-Murutic language. In 2013, there was already a research book on *Agabag* in the level of syntax published by De Mazenod Publisher, Banyumas, Central Java, Indonesia. This book is a linguistic documentation of *Agabag*, a sub-language of *Murut* written in Bahasa Indonesia (Radjaban, 2013). With this book, it is hoped that local languages of North Kalimantan which belong to *sub-Murutic* languages, like *Murut, Tahol, Tengalan* and *Tidung,* can refer to the book to develop the descriptions of the languages for preservations. In this paper, a syntax of Merap, one of sub-Kayanic languages, is the main object of the research.

Merap is the language spoken by native people of Borneo living in the area of *Apu Kayan* as is seen in the map below (figure 1). People living in *Gong Solok, Adiu, Sengayan,* and *Seturan* sub-districts, *Malinau* Regency, North Borneo Province are the native speakers of Merap Language. It needs saying that there is no previous study at the description of Merap in terms of phonetics, phonology, morphology, or syntax. One of the reasons for the lack of study on the language is the dominance of Bahasa Indonesia as the national language that causes the role of indigenous languages including Merap get weaker. Therefore, a research on Merap language is not promising either politically or culturally.

Figure 1. *Map of 7 Main Dayak Tribes (Srisulia, 2012)*
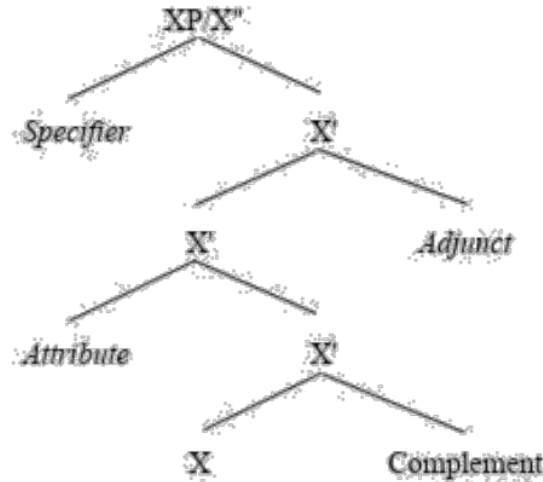
Theoretical Framework

Haegeman's proposals on argument structures and thematic roles are theoretical bases for the analyses of Merap structures in this article. Discussions on argument structures and thematic roles start from a phenomenon stating that every lexeme contains its *prototipical structure* which consists of a main category as the head and one or more arguments as the modifiers. This structure is called the *argument structure* (Haegeman, 1991).

The discussions on thematic roles are closely related to the argument structure of verbs and its relation to sub-categorization frames. It is worth nothing that every predicate has its argument structures which determines obligatory elements of a sentence. The arguments are the participants minimally involved in the activity or state expressed by the predicate. Semantic relationships between verbs and their arguments are referred to in terms of thematic roles or theta roles for short. Predicates in general have a thematic structure. It is the component of the grammar that regulates the assignment of thematic roles.

As is mentioned previously, sentence structure is determined by lexical properties. It is due to the facts that lexical information is syntactically represented (projection principle). It means that lexical items must be saturated in the syntax as stated in the theta criterion stating that each argument is assigned one and only one theta role, and that each theta role is assigned to one and only one argument.

Based on these principles, data in the forms of lexical head of Merap are used to generate the argument structures as the bases to describe the phrase and sentence structures of the language.

(1) a. *enggaie* (VP): bring
b. *enggaie*: NP Agent; NP Patient.
c.

Enggaie bring	
NP Agent	NP Patient

Enggaie (1a), which means 'to bring', has its inherent structure called the *argument structure* as seen in (1c) that consists of two NPs. One NP is the Agent of the action 'to bring' and another NP is the Patient of the verb 'to bring' in which Agent is the one who intentionally initiates the action expressed by the predicate, whereas Patient is the person or thing undergoing the action expressed by the predicate (Haegeman, 1991). From the above structure, then a sentence structure is generated by inserting NPs required by the structure like in (2).

(2) a.

Enggaie bring	
NP Agent	NP Patient
ʰNei	*can*

b. *ʰNei*   *enggaie*   *can*.
Woman+NOM   bring   fish+ACC
c. The woman brings fish.

The research starts by making lists of lexical heads of Merap and their meanings and then based on the argument structures of the lexical heads, structures are generated. The following step is to ask the native speaker to verify the generated sentence structures. The results of the verified structures are formulated as the model of the syntax of Merap. In transformational-generative grammar terms, a phrase is a maximal projection of a category that consists of a category as the head and one or more categories as modifiers. and a sentence is a maximal projection of a tense which a complementizer as the head and an Inflectional phrase functions as the modifier (Haegemann, 1991). It is further explained that the head is the main element of the structure and a modifier is the supporting elements. In Merap language, the head and modifier of phrases have fixed sequence of orders. Verb Phrase (VP), Noun Phrases (NP), Adjective Phrase (AP), Adverb Phrase (AdvP), and Prepositional Phrase (PP), has Head-Modifier sequence of order. Each category of Merap phrases in general has its own typical elements and sequence of order. The summary of Merap phrase structures can be seen in (3).

(3)
Detail explanations on the diagrams can be reviewed from the following points.

1.   X is a variable in the form of a category as the head of the phrase, X' (read: X-bar) is a projection of X, and X" (read: X double bars) or XP (XPhrase) is the maximal projection of X.
2.   The position between X and its complement are equal and the relation is called *sisters*, and so is the positions between X' and *adjunct*, attribute, and *specifier*.
3.   A complement is a modifying argument demanded by the head to form a bigger structure. The choice of a complement is very much dependent on semantic properties of the head. Auxiliary verb *lai'*, for instance, requires a verb, as seen in *Lung nie lai' mblai' can tei* which means 'The woman want to buy fish'.
Infinitive verb *mblai'* is the complement of the auxiliary verb *lai'*.
4.   Attribute and *adjunct* are two kinds of modifying elements which are optional. The existence of attribute and *adjunct* functions as additional modifiers to the head. The difference between attribute and *adjunct* is on the positions towards the head. An optional element which occurs before a head is called an attribute whereas an optional element occurring after the head is called an *adjunct*.
5.   A *specifier* is a modifying argument or a moved element which gives additional
information to the head of which the position is before the head.
Examples of the X-Bar structures to illustrate the above theories can be seen in VP (4a) and PP (4b) below.

(4) a.
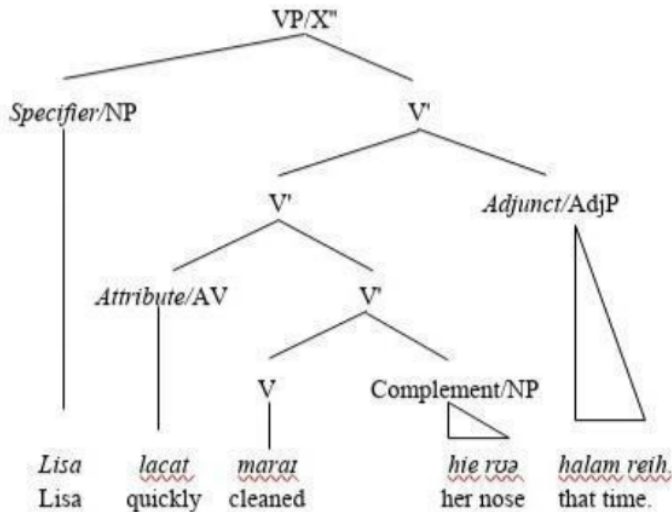
Variable X in (3) is replaced with V for Verb Phrase. Since it is a Verb Phrase, V is to indicate that the head of the phrase is a verb. It is read that (4a) is a Verb Phrase, with NP *Lisa* as the *specifier* of VP, AV *lacat* as the *attribute* of V', NP *hie rʋə*, as the complement of V, and AdjP *halam reih* as the adjunct of V'.
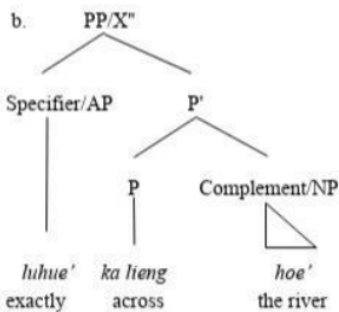
Variable X in (3) is replaced with P for Prepositional Phrase. Since it is a Prepositional Phrase, P is to indicate that the head of the phrase is a preposition. It is read that (4b) is a Prepositional Phrase, with AP *luhue* as the *specifier* of PP, NP *hoe'*, as the complement of P, and P *ka lieng* as the head or V.

Language typology of Merap

The results of the field research and investigation show that Merap language belongs to Kayan language. From 'Data Dian Document', a historical document written by A.J. Ding

Ngo (1975) and supported by some linguistic features, Merap is a sub-Kayanic language. This finding is a correction to all previous documents which mention that Merap is sub language of Punan. Lontaan (1975), and King (1993) classified Merap as one of sub-Punan languages. The classification is completely inaccurate. Irang Laing, one of the tribe leaders of Merap, convincingly argued that it is completely inaccurate to put Merap as a sub-Punan language.

"No way. Punan and Merap are different. We both are from different blood. It's true that Punan and Merap have had mutual co-operations since very early in history. Yes.... it's right that when there is Merap, there is also

Punan. Punan and Merap always live side-by-side. Throughout history, Punan and Merap work together to fight against the enemies. Punan is very skilful at war and Merap is very skillful in farming and agriculture. Punan helps us fight against the enemies and gets food and other products from Merap. It goes this way throughout history. The expression of Punan-Merap exists to describe this mutual relation. It has nothing to do with blood-relation" (*Irang Laing, Sengayan, 4 May 2017*).

Kayanic tribe has four sub-tribes, and each of the tribe has its own language. Beside Kayan people living in Kayan river, Kayan tribe also lives in Bahau, Mapan, Ga'ai, and Merap rivers (Ngo, 1975). It is worth noted that Dayak people name their tribes after the names of the river they live along. Kayan people mean Dayak people who live along Kayan river. Merap people mean Dayak people who live along Merap river. This happens to all names of the tribes. Languages of Kayan, Bahau, Mapan, Ga'ai, and Merap are slightly different, but among them, they could communicate in their own sub languages. It is needed to add that Ga'ai and Merap languages still show their tonal characteristic in their languages. Ga'ai and Merap still apply *stressing* as a supra-segmental element to develop their vocabularies whereas Kayan, Bahau, and Mapan have completely lost it. The trace of tonal language in Merap can be seen from the occurrences of similar morpheme with different syllable stresses.

Table 1. *Minimal pairs of Merap with different stresses.*

Merap Language

| Initial stress	Final stress
'tuih	tui'
'nyauh	nyau'
ʰnie	nie'
'moa	moa'
'lai	lai'
'ngao	ngao'
'hie	hie'
'bau	bau'
'ngue	ngue'

The trace of tonal language makes Merap language relies on changing stresses on syllables to develop its lexemes rather than on affixations. The stressing system seems to be different from a general rule of English in that it differentiates stressed and unstressed syllable segmentally in the patterning of vowels (Cutler in Adnan, et.al., 2019). The stressing system in Merap language is merely for word modifications due to limited number of single syllable lexical units of the

language. This causes words of Merap language have short and limited numbers of syllables. Another impact of tonal language of Merap is that Merap language makes use of different [1]tonations to relate between clauses rather than conjunctions. Since Merap language shares syntactic feature of Indonesian language on its word order expressing subject-verb-object (SVO) with no copulative verb and non-inflected verbs to mark grammatical aspects including tense, person, and number (Zen, 2016, p.160), syntactic descriptions need to pay attention to the suprasegmental elements in the forms of stress changing to analyze the sentence patterns of the language (Uhlenbeck, 1965).

Phrase structures of Merap

Based on phrase structure principles, each category of Merap phrases in general has its own typical elements and sequence of order. The summary of Merap phrase structures can be seen in (4) below.

(5)
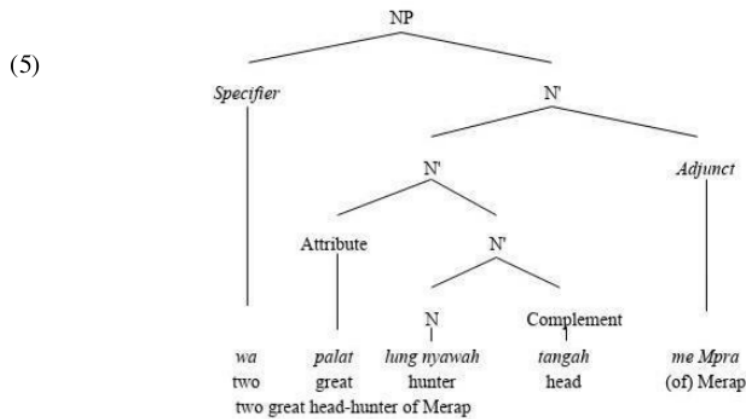
In (5), X is replaced by an N and therefore becomes an NP or a *Noun Phrase*. As is seen in (5), an NP can have complete elements consisting of head, complement, attribute, adjunct, and specifier. Since Merap language has 'head-modifier' sequence of order, it tends to have more adjuncts rather than attributes. In relation to *specifier*, a category of *specifier* in Merap language tends to be very limited. It can be seen from (6) below.

(6) a. the expensive house
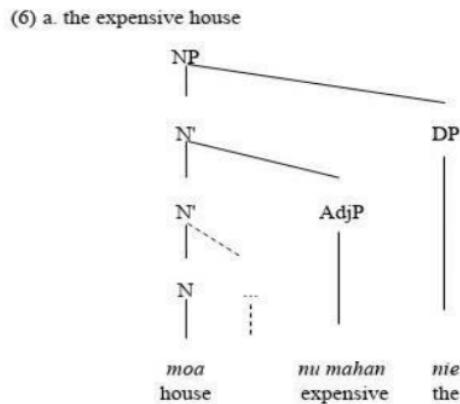
b. the expensive uncle house
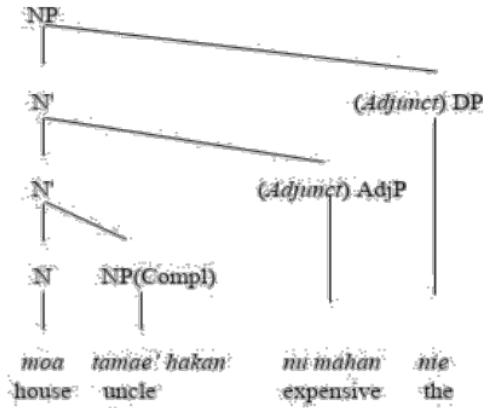

c. three beautiful houses
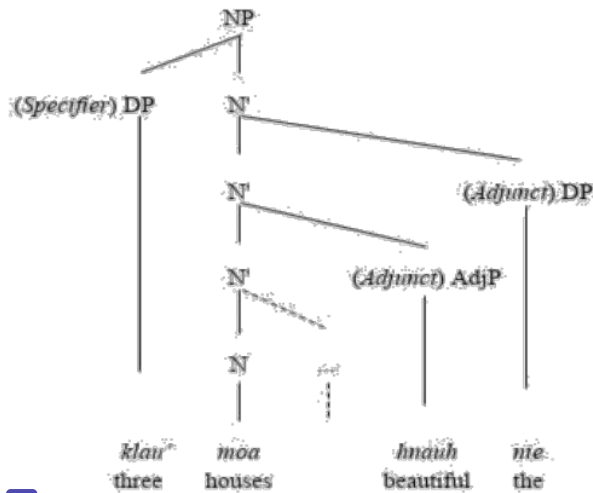
An Adjective Phrase is a phrase of which the head is an adjective. Like an Noun Phrase, an adjective phrase can also have a *complement*, *attribute*, *adjunct* and *specifier*. Haegeman (1991) mentions that an adjective phrase can have a *complement* in the forms of a prepositional phrase (PP), an a noun phrase (NP). An attribute of an adjective phrase can be an Intensifier Phrase (IntP), Adverb Phrase (AdvP), and a noun phrase (NP). An adjunct of an adjective phrase can be a PP, AdvP, and a *to-infinitive*, while a *specifier* of an adjective phrase can be a *Determiner* (D) which can be the subject of the predicative adjective. The structure of an adjective phrase with an attribute can be seen in the following diagram.

(7) a.
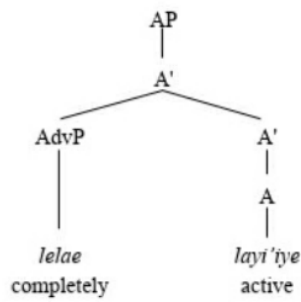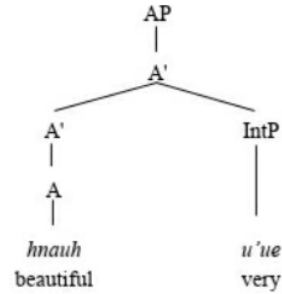
b.

Adjective phrases in (7a and b) does not have a specifier and it makes the AP not have a node but directly goes to A'. A' has a node of an IntP *u'ue,* and A' *hnauh*, in (7a) and AdvP *lelae* and A' *layi'iye* in (7b). A structure of an adjective phrase with an adjunct and an attribute can be seen in the diagram below.
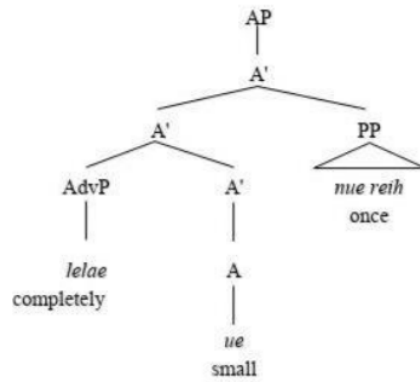
(8)

In (8), the adverbial phrase *lelae* is an attribute, and PP *nue reih* is an adjunct. The adjective phrase in (8) does not have any complement so that the lowest A' does not have a node but directly followed by an adjective *ue* as the head.

An Adjective phrase with a complement can be seen in (9) below.

(9)
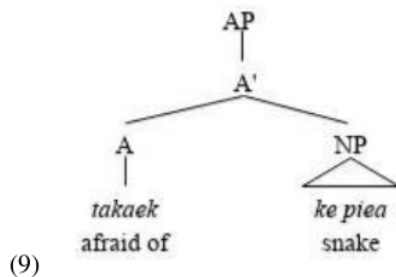
NP *ke piea* in (9) is the complement of *takaek*, so that the position of the Adjective *takaek* as the *head* is at the similar level of the NP *ke piea* as the complement.

An Adjective phrase with a complement, an attribute, and an adjunct can be seen in (10) below.

(10)
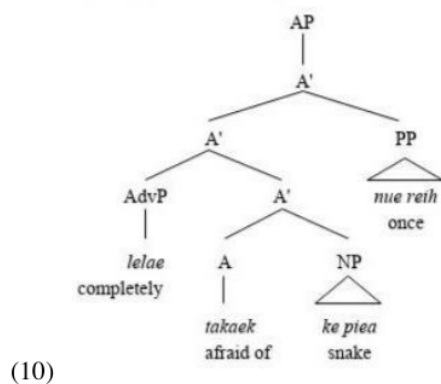
In (10), the adjective *takaek* requires a *complement* in the forms of an NP *ke piea*, and has an attribute in the forms of an AdvP *lelae* and an adjunct in the forms of a PP *nue reih*.
Verb Phrase is a phrase with a verb as the *head*. Like Noun Phrase and Adjective Phrase, a verb can also have a complement, an attribute, an adjunct and a specifier. A verb phrase with a complement can be seen in (11) below.

(11)


```
                    VP
              ┌──────┴──────┐
             NP            V'
              │        ┌────┴────┐
              │        V        NP
              │        │        △
            Lena    tukung    klue nie
            Lena     hit      the animal
```
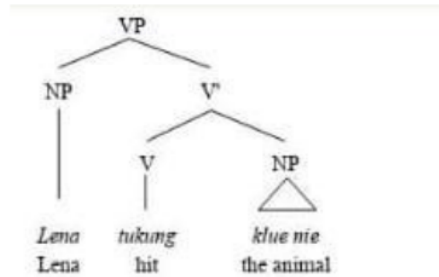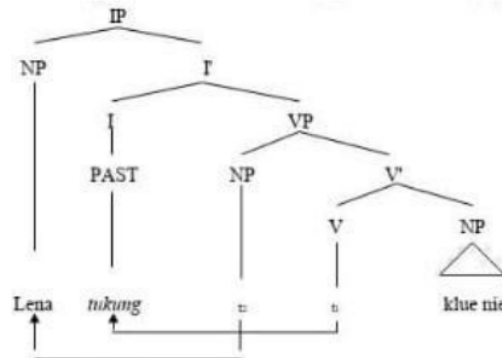
Number (11), the complete description can be explained in (12 a and b). Based on the theory of phrase structure proposed by Haegeman (1991), the sentence *Lena tukung klue nie* is an Inflectional Phrase. Every sentence always refers to a certain *tense* therefore a sentence is always within a *tense*. In (11), *Lena tukung klue nie* is a phrase with a *Tense* as the *head* and a VP *Lena tukung klue nie* the complement. The *tense* for sentence (11) is *Past* symbolized with PAST, the further explanation can be seen in (12 a and b) below.

(12)   a. *Lena tukung klue nie*.

b. PAST [VP *Lena tukung klue nie*]

Inflectional Phrase (12a and b) consists of (PAST) as the head and Verb Phrase (VP) as the complement. The diagram of Inflectional Phrase (12) can be seen in (13) below.

(13)


```
                    IP
              ┌──────┴──────┐
             NP            I'
              │       ┌─────┴─────┐
              │       I          VP
              │       │       ┌───┴───┐
              │     PAST     NP      V'
              │       │       │   ┌───┴───┐
              │       │       │   V      NP
              │       │       │   │      △
            Lena   tukung     t₁  t₁   klue nie
```

In (13), it has two times *movements* or a movement from the previous positions marked with t standing for *trace*. The first movement happens to the verb *tukung* which was formerly in the position of V to the position of PAST *tukung*. It happens since morphologically the verb experiences an inflectional process of Tense marker. The second movement happens to NP *Lena* which was formerly in the position of NP as the specifier of V' to the position of NP as

the specifier of T'. This happens due to the syntactic requirement saying that an NP with Nominative case is required to move in the position before the verb.

A verb phrase with a complement, an attribute, and a specifier can be seen in (14) below.
(14)   a. Lena *lelae nyou ma' hie*.

b. PAST [VP Lena *lelae nyou ma' hie*]
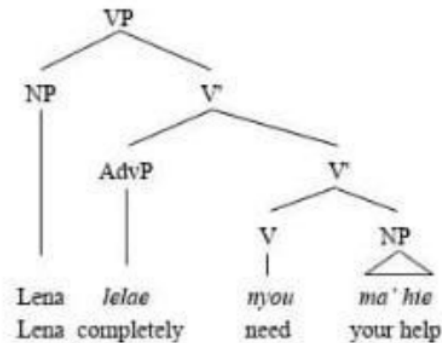
In (14), NP *ma' hie* is the complement of the verb *nyou*, AdvP *lelae* is an attribute, and NP *Lena* is the *specifier* of the verb *nyou*.

A verb phrase with a complement, an attribute, an adjunct, and a specifier like in (14) with Tense PAST can be seen in diagram (15) below. Datum (15) shows that (15a) is a phrase with Tense PAST as the *head* with VP *Lena lema tueh memau na' tang am ka sidang* as the argument.

(15)   a. *Lena lema tueh memau na' tang am ka sidang*.

b. PAST [VP *Lena lema tueh memau na' tang am ka sidang*.]
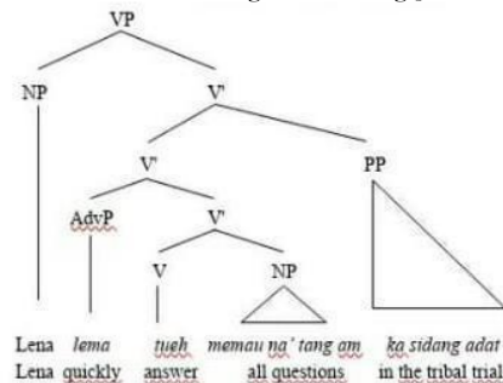
In (16), NP *memau na' tang am* is the complement of the verb *tueh*, AdvP *lema* is the attribute, NP *Lena* is the *specifier* and PP *ka sidang* is an *adjunct* of the verb *tueh*. From the above diagram, PP *ka sidang* clarifies the V' *lema tueh memau na' tang am* so that the position of the PP *ka sidang* is in the equal level of the V' as the *adjunct*.

The structure of a verb phrase with a complement, and more than one adjunct like in
(16) can be seen in (17).
    (16) a. *Sidung tapak kao ka moa halam reih.*

b. PAST [VP *Sidung tapak kao ka moa halam reih*]

(17)
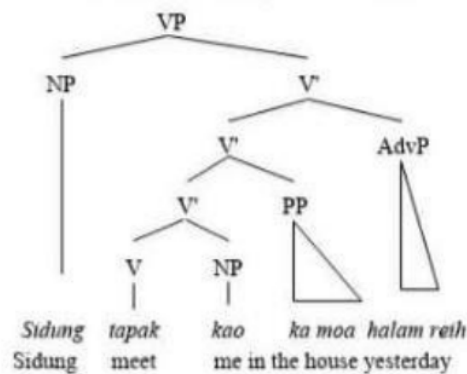
From (17), it can be further explained that the AdvP *halam reih* clarifies the V' *tapak dakon ka moa* and therefore its position is in the equal level with the V', Whereas PP *ka moa* clarifies the V' *tapak kao*, so that its position is in the equal level with V'. As the complement, the position of the NP *kao* iks in the same level with V *tapak*. NP *Sidung* as the specifier is the argument needed as the NP Subject of the verb *tapak*.

The verb phrase structure without complement and only with an NP as the specifier as is seen in (18) and (19) can be drawned in (20) and (21) below.

    (18) a. *Sidung tékah ka rao Minggu.*
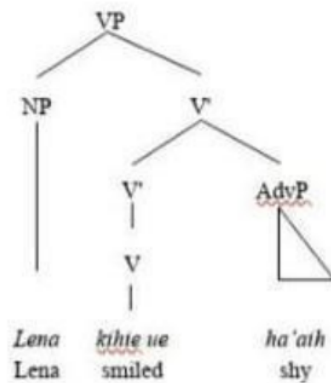
b. PRE [VP *Sidung tékah ka rao Minggu*]

(19)

	Sidung	tèkah	ka rao Minggu
	Sidung	works	on Monday
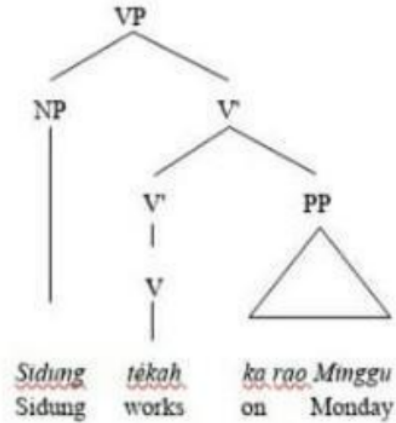
(20)   a. *Lena kihie ue ha'aih.*

b. PRE [VP *Lena kihie ue ha'aih.*]

(21)

	Lena	kihie ue	ha'ath
	Lena	smiled	shy

The verb *tékah* (to work) and *kihie ue* (to smile) semantically do not require an argument as a complement, so that the position of the PP (19) and AdvP (21) is not in the equal level with the V but with the V' and the *sister* position of the V is empty.

[8]   Using the pattern of the noun phrase, adverb and verb phrases as the template, prepositional phrase structure consists of a preposition and a noun phrase.

(22)   a. *ka lieng* [NP *hoe'*]
        b. *luhue' ka lieng* [NP *hoe'*]
        c. *ma* [NP *ladai'*]
Prepositional phrase structure in (22) can be put into diagram in (23 a and b) below.

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(23)   a.
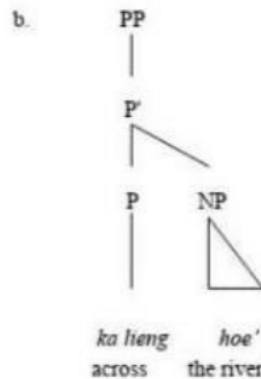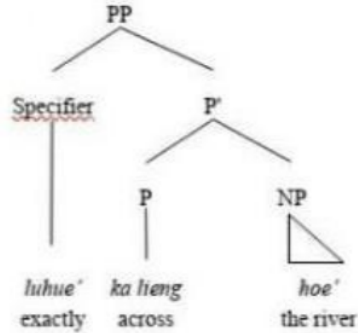
In (23a) the prepositional phrase has a specifier while in (23b) it does not have a specifier.

It makes the position of the *sister* of P' empty.

Sentence and clause structures of Merap

In the scheme of X-bar theory, a sentence is a Tense Phrase which potentially can have a *specifier* in the form of a. Haegeman (1991) argues that the *specifier* of a sentence is called a *complementizer* and usually is symbolized with C since the *specifier* of a sentence can have a complement in the form of a complete sentence.

The sentence structure in (24a) *Police will continue the investigation of the Century case* is a *complementizer phrase* usually symbolized in CP with an empty slot in the position of the specifier and C' as the complement, continued with a node under C' which is filled with C in the head node and IP (or S, *sentence*) as the complement. The empty slot in the position of the specifier is reserved for the *movement* of the element of the sentence to fulfil the syntactic requirement like in an interrogative construction which requires the auxiliary verb precedes the NP subject of the sentence which is called an *inversion*. The X-bar diagram below can help explain the construction of (24a) in explaining the position of CP, C' and C as is seen in the diagram below.

(24)　a. Police will continue the investigation of the Century case.
　　　　b. Bambang wonders if Police will continue the investigation of the Century case.
　　　　c. Many people think that Bambang wonders if Police will continue the investigation of the Century case.
　　　　d. Private polling agency argues that Many people think that Bambang wonders if Police will continue the investigation of the Century case.
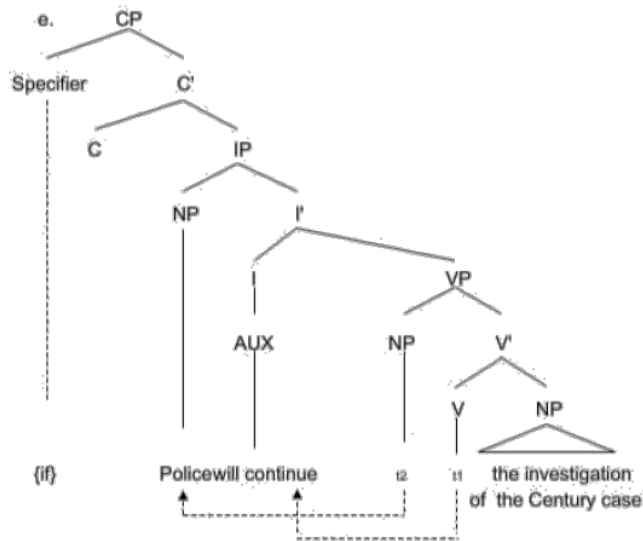

In (24e), the position of C as the of IP is empty just to give a spare slot for a *complementizer* like '*if*' in developing (24a) to be (24b), and *that* in developing sentence (24b) to be (24c) and from (24c) to be (24d).

Beside giving a spare slot for a *complementizer*, the empty slot in C is designed to give a slot for movements of the sentence element due to syntactic requirements like the example below.

(25)　a. Police will continue the investigation of the Century case. b.Will Police continue the investigation of the Century case?

Sentence construction (25a) changes the position of the auxiliary *will* which was formerly in the position after NP Subject *Police* to be before the NP Subject *Police*. In X-bar, this changing is possible if there is an empty slot in the structure, like in (26).

(26)
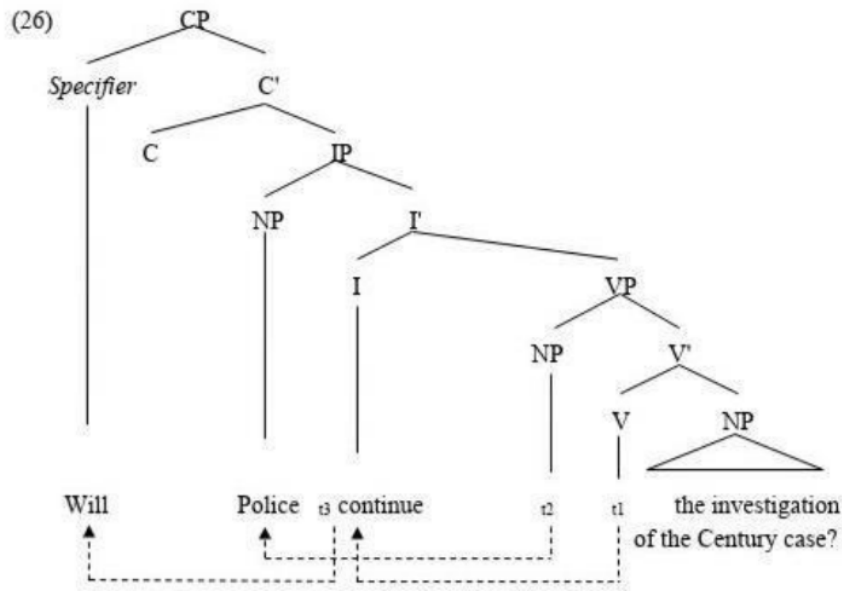
In the clause structures, phrases are arranged in such a way that native speakers can express different ideas in their utterances. Clause structures of Merap are constructed based on Head-modifier relations with I as the projection of Inflection on verb as tense indicator and as infinitive projection for an auxiliary verb. It is further explained that a clause based on transformational theory can be seen from the data below.

(27)   a. *Lena mblai'   can   nei*.
'Lena buys   (a) fish.'
b. Sentence: [*Lena*]   [*ø-*]   [*mblai' can nei*].
NP   I-PAST   VP

        c. s-structure: [IP *Lena* j [PAST *ø-mblai*1 [VP[V' t1 [NP1 tj; NP2 *can nei*]]]]]
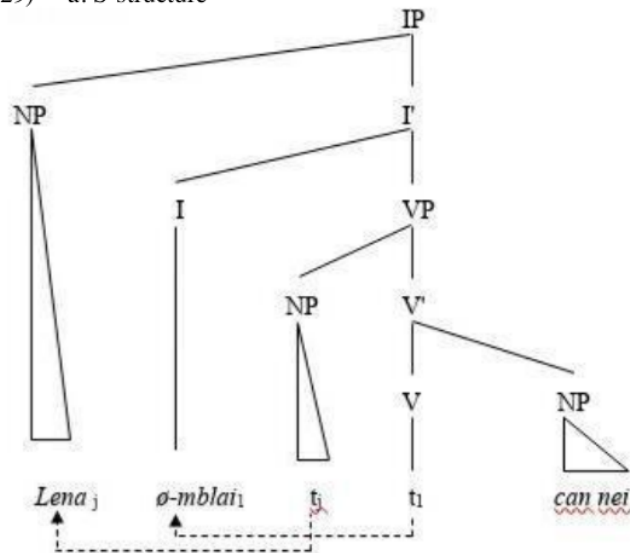   d. d-structure: [IP[PAST *ø-* [VP[V' *mblai'* [NP1 *Lena* ; NP2 *can nei*]]]]]

Sentence (27a) consists of NP *Lena*, the inflection for past tense indicator in the forms of allomorph *ø-* and a verb phrase which consists of V *mblai'* and NP *can nei* (27b). Based on the theory of phrase structure, a structure is a maximal projection of a category (Haegemann, 1991). The structure *Lena mblai' can nei* is a structure which is a maximal projection of a tense category symbolized with allomorph *ø-*. It means that the whole structure is a tense phrase or inflectional phrase represented in IP due to the fact that a sentence structure is not only a tense maximal projection but can also be a maximal projection of an AUX or an infinitive verb like in (27c). The D-structure diagram and S-structure diagram can be seen in the x-bar below.

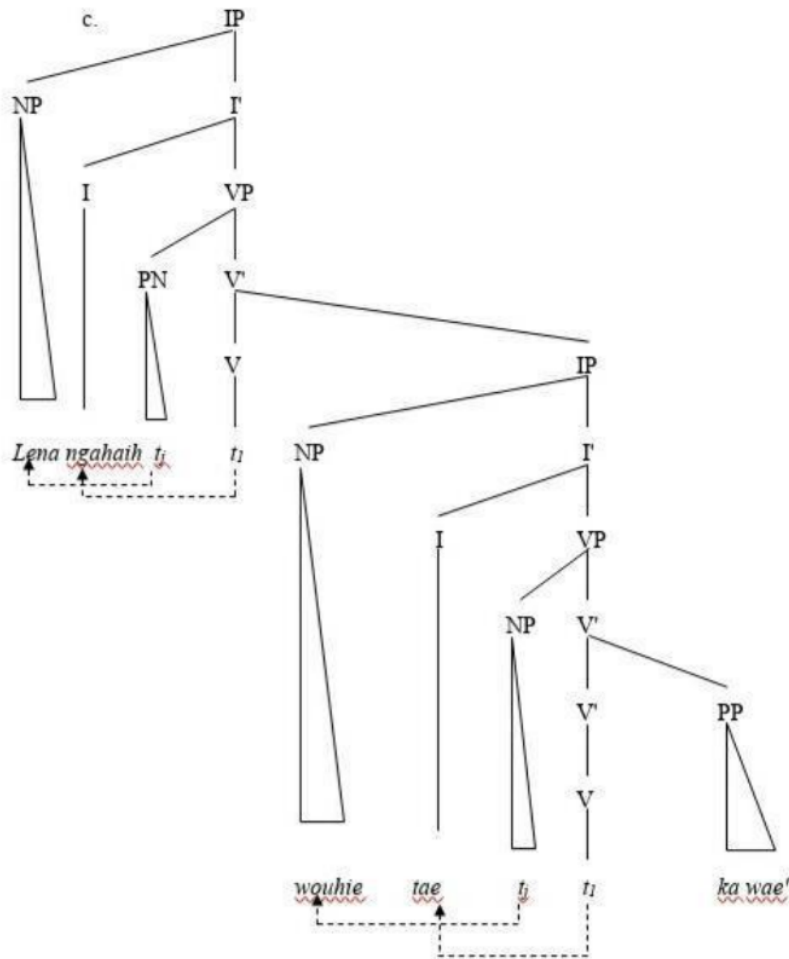(28)   a. *Lena mblai' can tei.* b. d-structure:
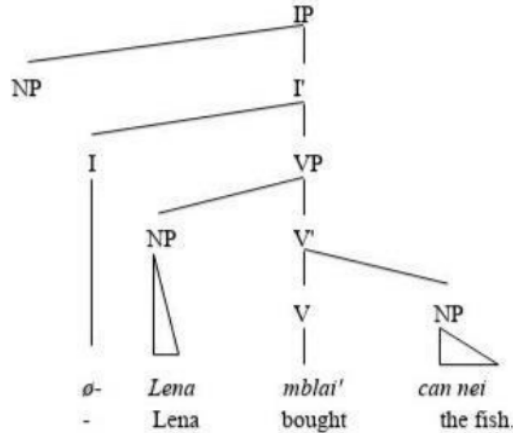
In d-structure, it is seen that allomorph *ø-* as the past tense indicator in Merap is the head of the argument *Lena mblai' can nei.* As a bound morpheme, allomorph *ø-* need to be bound to a verb *mblai'* as a free morpheme in the process of inflection therefore in the S-structure, the verb *mblai'* as the argument moves from the position of V to the position of 13 The movement of the verb *mblai'* makes the position of the verb precedes the NP *Lena* as the external argument or the subject of the sentence. To satisfy the Extended Projection Principle, the syntactic rules in S-structure of Merap requires an NP Subject precedes the verb, therefore NP *Lena* which was formerly in the position of NP as the external argument of V moved to the empty position of the specifier of I' due to the *head-to-head movement* principle (Haegeman, 1991). The s-diagram of the d-structure in (28b) can be seen in (29) below.

(29)   a. S-structure

b. Phonological Form: *Lena mblai' can nei.*
Lena bought   the fish.

Sentence structure of Merap is constructed from a main clause and one or two sub-clauses. Transformationally, the patterns of sentence constructions are based on the relations between head and modifiers with the head of *complementizer* and with modifier of IP as is seen in (30) below.

(30)   a. *Lena ngahaih*   **wouhie   tae   ka   wae'**.
                                            Main   Dependant
                                            'Lena said   her mother went to the spring'

S-structure in (30b) shows that IP *wouhie tae ka wae'* is an inflectional phrase which is the internal argument or the complement of the verb *ngahaih*. The phrase *wouhie tae ka wae'* is named after inflectional phrase due to the fact that the phrase is the maximal projection of an inflectional operation of the verb *tae* caused by the movement of the verb from the position of V to the position of I as tense category. The complete description can be seen in (30c) which is the development of (30b) below.

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Merap language has three kinds of sub-clause, that is noun clause, relative clause, and adverbial clause. A noun clause is the modifier of the verb or noun and can function as the subject or object of a clause initiated with a *complementizer* or not. A relative clause is the modifier of an NP whereas an adverbial clause is the modifier of any category except an NP.

Conclusion

Based on its typology, Merap is sub language of Kayan. The syntax of Merap is constructed based on its argument structure and left-to-right orders for its phrases decide the function of the NP arguments. It is also detected that Merap language has supra-segmental element in the forms of stressing tone to enrich its lexemes and help decide meanings. The head and modifier of phrases of Merap language have fixed sequence of orders. Verb Phrase (VP), Noun Phrases (NP), Adjective Phrase (AP), Adverb Phrase (AdvP), and Prepositional Phrase (PP) have Head-Modifier sequence of order. Each category of Merap phrases in general has its own typical elements and sequence of order. Sentence and clause structures of Merap are

constructed based on Head-modifier relations with I as the projection of Inflection on verb as tense indicator and as infinitive projection for an auxiliary verb.

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The syntax of Merap phrases, clauses and sentences. A Study Based on Government and Binding, Principles and Parameters Approach