

Talau Verbs: Paradigm of Basic Verbs

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Abstract

The Talau language is an Austronesian language spoken in North Sulawesi, Indonesia. Talau verbs are divided into basic verbs which do not take derivational affixes and derivational verbs that take a derivational affix. This paper focuses on paradigm of Talau basic verbs. Talau verbs can take up to three grammatical voices, but the number of voice(s) which they can take is determined lexically. Accordingly, Talau verbs are categorized into single-voiced, double-voiced and triple-voiced verbs. Each category of verb show distinctive semantic features. Paradigm and semantic features of each category of verb are described in detail.

1. Introduction

This study examines the paradigm of basic verbs in the Talau language that belongs to the Sangiric micro-group within the Philippine language group of the Western Malayo-Polynesian languages. The Talau language is spoken in the Talau Islands located approximately 200 kms north of Sulawesi Island in Indonesia. Unfortunately, this language is in danger of extinction because people younger than 40 years of age rarely speak the language.

The Talau language has a rich morphology in which affixes attached to the verbs are abundant. In this study, verbs are divided into overall two groups: basic and derivational verbs. Basic verbs are those that do not take derivational affixes, and derivational verbs are those that do take such affixes. Because derivational affixes attached to Talau verb bases can total seven or more, the paradigm of basic verbs is primarily referred to in this study for simplicity.

2. An overview of the Talau Language

2.1 Speakers and the situation of the Talau language

In this post-Soeharto era, Indonesia underwent a separation of districts and on July 2, 2002, the Talau Islands became the Region of Talau Islands (*Kabupaten Kepulauan Talau*). In the last decade, the population of the Talau Islands has grown from approximately 40,000 to 70,000, and people from the Sangir Islands (south of the Talau Islands), North Sulawesi Province, and other areas of Sulawesi and Jawa continue to move into the islands. It is unknown whether the separation caused the population increase, but the Talau Islands have witnessed plenty of new infrastructure built in the past 10 years.

The Talau Islands consist of three large islands (Karakelang, Kabaruan, and Lirung) and four smaller

inhabited Nanusa Islands (Karatung, Kakorotan, Marampit, and Miangas). The capital of the region, Melongwane, is located on Karakelang Island.

To date, there is no university in the region and those who look for educational opportunities after high school generally leave the islands for Manado or Tomohon, the two largest educational sites in North Sulawesi Province where the Manado dialect is mainly spoken. As a result, young people with higher education do not speak the Talaud language, and exogamy is becoming more and more common. Nowadays, younger children in the villages of the Talaud Islands speak the Manado dialect as their first language. According to Noorduyn (1991), the Talaud-speaking population is around 40,000 and less people utilize Talaud as their everyday language. This is owing to the fact that outsiders are moving into the region and many young people are leaving the region. Thus, the language is facing extinction. Previous studies of the Talaud language include Sneddon (1985), Bawole (1981), Maalua (1988), Malee (1995), and Tinggenhe (1967). However, the dialects of Talaud, phonology, and morphophonology were not described in detail. Therefore, since 2003, this author has conducted fieldwork research and analyzed data, the results of which are found in Utsumi (2007, 2012). The sociolinguistic situation is described in Utsumi (2011).

2.2 Dialects of the Talaud language

As stated in the previous section, the Talaud Islands consist of three large islands and four smaller inhabited Nanusa Islands. Within each island, the dialects differ from village to village. Larger dialectal groups consist of at least the following seven groups:¹

- 1) The Kabaruan Dialect (spoken in the Kabaruan Island)
- 2) The Salibabu Dialect (spoken in the Salibabu Island)
- 3) The Nanusa Dialect (spoken in the Nanusa Islands)
- 4) The Beo Dialect (spoken in the western part of the Karakelang Island)
- 5) The Rainis Dialect (spoken in the eastern part of the Karakelang Island)
- 6) The Esang Dialect (spoken in the northern part of the Karakelang Island)
- 7) The Nyampak Dialect (spoken in the southern part of the Karakelang Island)

Out of the seven dialects, isoglosses for the Kabaruan, Salibabu, and Nanusa dialects can easily be drawn, because they are divided by the sea. Isoglosses for the Esang, Rainis, Beo, and Nyampak dialects are difficult to draw because there has not been an extensive dialectal research.

The Salibabu dialect, generally regarded as the most prestigious one, predominates this particular study. Such prestige has inspired the Bible Society of Indonesia (*Lembaga Al-Kitab Indonesia*) in 1986 to support a translation of the *New Testament* into the dialect. The fieldwork research for this study was conducted between 2004 and 2012 primarily in Lirung, the capital of Salibabu Island. The two main linguistic consultants were late Mr. Raymond R. Tinggenhe (born in 1939) and Mr. Christofer Ipu (born

¹ In Utsumi (2007), only six dialects were posited. However, in my recent research the consultants mentioned that there were actually seven dialects. The newly added dialect in this paper is the one spoken in Karakelang Island.

in 1942). Both men grew up speaking the Talaud language, and the latter spent most of their time on the Salibabu Island.

2.3 Phonology of the Talaud language

2.3.1 Overview of the Talaud phonology

The number of vowels in Talaud, which is consistent from dialect to dialect, include /i, e, a, o, u/. However, consonants may vary among the dialects. For example, there are 17 consonants in the Salibabu dialect but 18 consonants in the Kabaruan dialect.² The 17 consonants of the Salibabu dialect are as follows: /b, p, d, t, g, k, ʔ, β, s, h, ʒ, l, r, w, r, m, n, ŋ/.⁴ In addition, there are three pairs of phones (/b/ and /w/, /d/ and /r/, and /g/ and /h/) that alternate freely in a word-initial position. The phoneme /w/ can also alternate with /β/ in a word-initial position, but in the description below, /β/ is not employed in order to avoid confusion. These pairs show morphophonemic alternation, and in addition to these pairs, two additional pairs (/l/ and /r/, and /k/ and /z/) also show such an alternation. The latter counterpart appears, for example, when the prefix *UA-* is attached. The details are described in Section 2.4.

2.3.2 Phonotactics

Most of the Talaud dialects are perfect open-syllable languages. The dialects of Talaud, except for the Nanusa dialect (which allows syllable-final consonants), do not show differences in their syllabic structures. Each syllable has a structure of V, CV, or CCV, formulated as (C) (C) V. There are no restrictions on which consonants are utilized at the onset of word-internal syllables.

Many word bases consist of two syllables, but those with three syllables occur just as frequently. Bases are accompanied with one or more affixes when they appear in sentences or utterances so that most words have more than three syllables.

Consonant clusters are frequently observed in word-internal positions, but not in word-initial ones. Except for loan words, most of which are from the Manado dialect (Bahasa Manado), a strict condition exists for the clusters: they must consist of two phonemes at the same place of utterance. The combination should be (1) a nasal + a homo-organic consonant or (2) exactly the same consonants, i.e., geminate. A word base normally contains only one geminate pair, but when it is affixed and the morphological gemination process is required, two sets of geminates may occur within a word.

2.3.3 Historical vowel addition and its influence on word inflection and derivation

Sneddon (1984) reconstructed the proto-Sangiric and compared the five Sangiric languages (including Talaud) from a historical viewpoint. Talaud includes rather unique properties compared to the other four languages, and innovation toward a perfect open-syllable language is one of them. In his 1984 study,

² The consonants in Kabaruan include /b, p, d, t, k, ʔ, β, s, ʃ, h, ʒ, x, ʝ, l, r, w, r, m, n, ŋ/. The phone /g/ in Salibabu corresponds to /x/ in Kabaruan, and the phone /k/ corresponds to /z/ in gemination. In addition, most of the base-final /z/ corresponds to /ʃ/. The initial fieldwork research of the Talaud language by the author was conducted in 2003 and the research on the variations of Talaud dialects was performed in 2012.

⁴ In Utsumi (2007), the phoneme /h/ was not posited. However, the results of recent fieldwork indicate that the phoneme should be posited.

Sneddon assumed that many of the trisyllabic bases in today's Talaud (whose base-final syllable includes geminate onsets followed by /a/) originally ended with a consonant. In the process of the final vowel /a/ addition (the reason for which remains to be studied), gemination of the original base-final consonant occurred.

This historical vowel addition explains the fact why the majority of words ending with a geminate and /a/ have one of the consonants and /a/ deleted when suffixed by *-ANNA*. For example, *ma-lutaŋŋa* (to shoot) from the base *lutaŋŋa*, receives the form *lutaŋ-anna*. Here, the last geminate /ŋŋ/ becomes a single /ŋ/ and the last vowel /a/ is deleted. As seen above, the historically added phonemes are deleted in case of suffixation. The suffix *-ANNA* itself undergoes an innovation where its final consonant is geminized when a vowel is added. The cognates of *-ANNA* in other Sangiric languages are *-AN*.

In the following description of the verb paradigm, the deletion of one of the geminate consonants and the vowel /a/ is often observed.

2.3.4 Stress placement in Talaud

Sneddon (1984) assumed that stress placement in Talaud was not phonemic. He also stated that the stress tends to fall on the penultimate syllable of a base. However, this author has found that in the majority of the trisyllabic bases that have a “geminate + /a/” ending, stress falls on the antepenultimate syllable (i.e., the first syllable of the base). From a historical viewpoint, this is fairly understandable. These bases had been bisyllabic, and the default penultimate stress placement allowed their first syllable to become stressed. As a result of the innovation where gemination of the last consonant and vowel addition occurred (as explained in Section 2.3.3), the bases became trisyllabic while the stress placement was not affected. In contrast, originally trisyllabic bases have a stress on the penultimate syllable. For example, *tallu'ka* (egg) and *lari'ʔa* (knife) are originally trisyllabic, thus they have a penultimate stress placement in which the stress position is indicated by // insertion after the nucleus of the syllable. Originally bisyllabic bases, which became trisyllabic, such as *u'ritta* (thread) and *e'sakka* (male) have an antepenultimate stress placement.

It can be stated that the stress placement in Talaud is largely predictable and therefore not phonemic. However, because the data collected up to this point comes from the Salibabu dialect, further investigation is necessary to determine whether the rule of stress placement described above can be applied to all the Talaud dialects.

2.4 Morphophonemic alternation

The phonology and morphophonology of Talaud is too complicated to describe in such a limited space, but a brief description is necessary for the explanation of the verb paradigm.

The pairs of consonants below are morphologically alternated. The ones on the left are called the “strong” consonants, while the ones on the right are called the “weak” ones in this paper. Strong consonants appear when the consonants undergo gemination. Some affixes, such as the verb forming prefix *ma-* requires the strong ones such as *ma-lappa* (to wipe) from the base *lappa*. In contrast, weak consonants appear when other types of the prefix or the suffix is attached. Some affixes, such as the aspectual prefix *UA-* (as in *ua-raha* (half-cooked) from the base *laha*), the potentive prefix *ʔa-* (such as

ma-ʔa-rutaŋŋa from the base *lutaŋŋa*), and the adjective forming *ma-* (such as *ma-riwue* (slow) from the base *liwue*), requires weak ones. However, there is an exception: *l-um-uassa* forms a verb with the prefix *ma-* resulting in *ma-ruassa* (be hungry) in the non-past tense and *na-ruassa* in the past tense. In this case, the overall tendency is that the weak consonants are selected when an adjective forming prefix *ma-* is attached, but the strong consonants are strongly preferred when a verb forming *ma-/na-* is attached. This type of morphophonemic alternation is observed when the strong consonants appear in the base-initial or the base-final position.

At this point, the following abbreviations are shown in Table 1: Actor Voice (AV); Goal Voice (GV); and *UA*-form (*UA*). *UA*-form is an aspectual form that can be progressive, stative, or resultative.⁵ The affixes appear in capital letters.

Table 1: Consonants that show morphophonemic alternation.

‘Strong’ consonants	‘Weak’ consonants	Example of word in which ‘strong’ consonants appear	Example of word in which ‘weak’ consonants appear
/b/	/w/	<i>MA-bbuanna</i> ‘to be drunk (AV)’	<i>MA-ʔA-wuanna</i> ‘can be drunk (AV)’
/d/	/t/	<i>MA-dumaʔa</i> ‘to fell’ <i>MA-ŋappida</i> ‘to take (AV)’	<i>UA-rumaʔa</i> ‘to fell (<i>UA</i> -form) <i>apir-ANNA</i> ‘to take (GV)’
/g/	/h/	<i>MA-ellega</i> ‘to see (AV)’	<i>elleh-ANNA</i> ‘to see (GV)’
/l/	/t/	<i>l-UM-annikka</i> ‘to dive (AV)’	<i>UA-rannikka</i> ‘to dive (<i>UA</i> -form)
/k/	/z/	<i>MA-dariŋikka</i> ‘to hear (AV)’	<i>dariŋiz-ANNA</i> ‘to hear (GV)’

2.5 Word classes

A total of 10 word classes were posited in Talaud. Open classes included nouns, adjectives, and verbs, and closed classes consisted of pronouns, numerals, noun markers, deixis, conjunctions, aspectual properties, and discourse particles (DP).

Adjectives and verbs primarily differed in two ways. First, verbs have non-past versus past tense opposition. Second, the two word classes have different sets of affixes that can be attached to them. In this study, the primary focus will be on verbs. For more details on adjectives, see Utsumi (2007).

2.6 Noun markers

In Talaud, noun phrases (NPs) that behave as core arguments take one of the following noun markers, which will be written with a hyphen similar to prefixes. Subject NPs take the noun marker *i-* when it is a pronoun, or when it denotes a singular human entity. Otherwise, it takes no marker.

NPs denoting AGENT in undergoer voices take the noun marker *ni-* when it is human singular, but if it denotes plural human and non-human entities, it takes *nu-*. In causative constructions and some of the Conveyance Voice (CV) constructions (see Section 5.1), CAUSER NPs are placed after the verb with this

⁵ The detailed description of *UA*-form is described in Utsumi (2012).

noun marker. CONVEYED THEME, THEME,⁶ and INSTRUMENT NPs in AV and GV sentences take the same noun markers: *ni-* for singular human and *nu-* for plural human and non-human.

In AV and CV sentences, the noun marker *si-* marks human singular NP with a semantic role of GOAL and PATIENT. The noun marker *su-* is attached to plural human NPs when it denotes GOAL and PATIENT. The same marker *su-* also marks non-human entity if it denotes LOCATION or GOAL. However, NPs with the semantic role PATIENT do not take any noun marker. The marker *si-/su-/∅* described here appears both in AV and CV sentences. Table 2 summarizes the correlation between semantic roles and noun markers.

Table 2: Noun markers and semantic roles in AV sentences.

Subject NPs in Every Voice	<i>i-</i> + pronoun	<i>i-</i> + singular human	∅ + plural human ∅ + non-human
ACTOR NPs in GV and CV, CAUSER NPs in GV and CV	<i>ni-</i> + pronoun <i>i-</i> + pronoun	<i>ni-</i> + singular human <i>i-</i> + singular human	<i>nu-/u-</i> + plural human, <i>nu-/u-</i> + non-human
CONVEYED THEME, THEME, INSTRUMENT in AV and GV	<i>ni-i-</i> + pronoun	<i>ni-i-</i> + singular human	<i>nu-/u-</i> + plural human, <i>nu-/u-</i> + non-human
LOCATION in AV and CV			<i>su-</i> + non-human
GOAL in AV and CV	<i>si-</i> pronoun	<i>si-</i> + singular human	<i>su-</i> + plural human, <i>su-</i> + non-human
PATIENT in AV and CV	<i>si-</i> pronoun	<i>si</i> + singular human	<i>su-</i> + plural human, ∅ + non-human

The noun marker *ni-* and *nu-* have conditional allomorphs. When they follow GV verbs, the last two phones of the suffix *-anna* are deleted, and the noun markers *ni-* or *nu-* follow, as shown in Example (1). However, they become only the nasal that regressively assimilates with the following word. For example, when *maria* (Maria) follows *ni-*, it becomes *m-*, as in Example (2). When a CV verb ends with geminate consonants plus /a/, the nasal is deleted so that *ni-* alternates with *i-* and *nu-* alternates with *u-*, as exemplified in Example (3).⁷ When the first person pronoun clitic =*ku* follows the same type of verb, the geminate consonants and the final /a/ are deleted, and =*ku* becomes =*ʔu*, as shown in Example (4). The original verb form is *n-i-ruassa* (be pleased) (CV, past tense), but in Example (4) it becomes *n-i-rua*.

- (1) *oto udde saʔe-an ni-tou GV*⁸
 car that board-ANNA NI-3sg

⁶ THEME is a semantic role that includes information that is conveyed such as “titles of songs or dance” and “something that causes a specific feeling.”

⁷ If a base ends with a vowel other than /a/ after a geminate consonant, a glottal stop is added before *i-* and *u-*.

⁸ GV is the abbreviation of Goal Voice, which will be explained in detail in Section 3.

infix *-in-*. In addition, *n-i-*, the combination of the past tense marker *ni-* and the CV marker *i-*, also alternates with the combination of infixes, that is, *-i-n-*. When a base begins with a vowel, the infix *-in-* or *-i-n-* attaches before the base. For example, the CV of *maŋ-appida* (to take) is *i-appida* in the non-past tense, and *ni-appida* or *i-n-appida* in the past tense. A consonant-beginning base takes the infix *in-* or *-i-n-* after the first consonant of the base. For example, the CV of *ma-nappa* (to chew) is *i-sappa* in the non-past tense and *ni-sappa* or *s-i-n-appa* in the past tense.

It is true that in principle, the prefix *ni-* and *n-i-* freely alternates with *-in-* and *-i-n-*. However, the liability to take the infix allomorph instead of the prefix one differs according to the phonemic condition. When a base begins with the consonants /s/, /t/, and /l/, the probability of the appearance of the prefix *ni-* or the combined prefix *n-i-*, and the infix *in-* and the combined infix *-i-n-* is almost the same. In contrast, the base that begins with the consonant /z/ seldom takes the infix allomorph. Bases that begin with other consonants or vowels prefer the prefix option although both options are available.

Similarly, the prefix *na-*, which attaches to AV UM-verbs, can alternate with the prefix *ni-* and the infix *-in-*. It should be noted that the prefix *na-* that attaches to MA-verbs or the prefix *naN-* that attaches to MAN-verbs do not have any allomorphs. The alternation of *na-* with *ni-* and *-in-* occurs only in the case of UM-verbs. For example, *omaŋŋa* (to crawl) forms UM-verbs as in *um-omaŋŋa* in the non-past tense. It takes one of the following three forms: *na-um-omaŋŋa*, *ni-um-omaŋŋa*, or *in-um-omaŋŋa*, in the past tense.

In the following description, the allomorphs *-in-* and *-i-n-* are not used in order to avoid confusion. For the same reason, the AV past prefix *na-* for UM-verbs do not show alternation with *ni-*, because the latter is the same as the past tense marker of undergoer voices.

In addition to the above, the affix *-ANNA* includes two conditional allomorphs. When first singular pronoun clitic =*ku* (glossed as NI.1sg in the following description) is placed after *-ANNA*, it becomes *-aŋ*, as in *puʔur-aŋ=ku* (beat=NI.1sg).

3.4 Semantics of the subject NP and voice selection

There are correlations between the semantic roles of a subject NP and the voice forms. With respect to basic verbs, the AV form is selected if a subject NP possesses a semantic role of ACTOR or EXPERIENCER. In cases where an NP denotes a PATIENT, GOAL, or LOCATION in the subject position, the GV form is selected. The CV form is used when the semantic role of the subject NP is CONVEYED THEME, THEME, or INSTRUMENT. CONVEYED THEME is defined as the entity that is moved by the ACTOR, and THEME is defined as the information that is transmitted, including titles of a song or a story. In addition, the object of feeling or the entity that causes a specific feeling is also referred to as THEME in this study.

In principle, the inherent meaning of a verb base requires a certain set of semantic roles, and they determine the number of voice(s) the verb takes. However, it is sometimes very difficult for non-native speakers to predict which verbs take which set of voice(s). Inherent meaning of a verb does not play a singular role in determining the selection of undergoer voices. One piece of evidence is that some verbs take CV in the past tense but GV in non-past tense when they take the undergoer voice. Such examples are shown in Section 4.3.

first consonant into its homo-organic nasal. An example of the former is *man-dona* (to be angry) formed from the base *dona* and that of the latter is *ma-naiyore* (to eat vegetables) formed from the base *saiore* (vegetables). Each affix includes a non-past and past form. The ones on the left are non-past forms and those on the right are past forms. Non-past tense verbs with the infix *-um-* will take on the past tense prefix *na-* in addition to *-um-* in the past tense. The infix *-um-* is inserted after the first consonant of the base, as exemplified by *l-um-assa* (to be pleased), which is formed from the base *luassa*. When a base begins with a vowel, the infix is placed just before the base, such as in the case of *um-alayya* (to swim), which is formed with the base *alayya*. The past tense forms require the prefix *na-* to be attached before the infixed verb. *Na-l-um-assa* (be pleased, past tense) and *na-um-alayya* (to swim, past tense) are examples of past tense UM-verbs in AV form. Some speakers allow the past prefix *na-* to alternate with the prefix *ni-*, which is the same as the past tense marker in undergoer voices.¹¹ This prefix, under some circumstances, alternates with the infix *-in-*.

Verbs that take *ma-* in non-past tense take *na-*, and verbs with *maN-* in non-past tense take *naN-* in the past tense. In cases of vowel-initial bases, the glottal stop is inserted after the prefix *ma-/na-*, as in the example *maʔ-azo* (to comb, (hair)) formed from the base *azo*.

GV verbs take the suffix *-anna*, and in the past tense, they take the prefix *ni-* in addition to it. The prefix *ni-* freely alternates with the infix *-in-* in GV verbs.

CV verbs take the prefix *i-*. They also take the prefix *ni-* before the prefix *i-*, in which case the vowel in the prefix *ni-* is deleted. Apparently, the non-past tense of CV lacks a CV marker, but it is the result of the vowel deletion. In the case of CV past tense, the prefix *ni-* does not alternate with the infix *-in-*.

Table 3: Voice-indicating affixes and paradigm of verbs.

	AV	GV	CV
Non-past Form	<i>-um-</i> + BASE <i>ma-</i> + BASE <i>maN-</i> + BASE	Base + <i>-anna</i>	<i>i-</i> + BASE
Past Form	<i>na-um-</i> + BASE (or <i>ni-um-</i> + BASE, or <i>-in-</i> + <i>-um-</i> + BASE) <i>na-</i> + BASE <i>naN-</i> + BASE	<i>ni-</i> + BASE + <i>-anna</i> (or <i>-in-</i> + BASE + <i>-anna</i>)	<i>n-</i> + <i>i-</i> + BASE

3.3 Allomorphs of voice-indicating affixes

The prefix *ni-* marks the past tense when undergoer voice verbs alternate, in principle, freely with the

¹¹ It should be noted here that the prefix *na-*, which attaches to AV verbs can alternate with *ni-*. In addition, only in the case of UM-verbs, can the prefix *na-* alternate with the infix *-in-*, in addition to the prefix *ni-*. For example, the base *omayya* (to crawl) becomes *um-omayya* in the non-past tense and *na-um-omayya* in the past tense. The past form alternates with *ni-um-omayya* or *in-um-omayya*. Consonant initial base *saʔe* (to ride) becomes *s-um-aʔe* in the non-past tense, and *na-s-um-aʔe* or *s-in-um-aʔe*.

infix *-in-*. In addition, *n-i-*, the combination of the past tense marker *ni-* and the CV marker *i-*, also alternates with the combination of infixes, that is, *-i-n-*. When a base begins with a vowel, the infix *-in-* or *-i-n-* attaches before the base. For example, the CV of *maŋ-appida* (to take) is *i-appida* in the non-past tense, and *ni-appida* or *i-n-appida* in the past tense. A consonant-beginning base takes the infix *in-* or *-i-n-* after the first consonant of the base. For example, the CV of *ma-nappa* (to chew) is *i-sappa* in the non-past tense and *ni-sappa* or *s-i-n-appa* in the past tense.

It is true that in principle, the prefix *ni-* and *n-i-* freely alternates with *-in-* and *-i-n-*. However, the liability to take the infix allomorph instead of the prefix one differs according to the phonemic condition. When a base begins with the consonants /s/, /t/, and /l/, the probability of the appearance of the prefix *ni-* or the combined prefix *n-i-*, and the infix *in-* and the combined infix *-i-n-* is almost the same. In contrast, the base that begins with the consonant /z/ seldom takes the infix allomorph. Bases that begin with other consonants or vowels prefer the prefix option although both options are available.

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In the following description, the allomorphs *-in-* and *-i-n-* are not used in order to avoid confusion. For the same reason, the AV past prefix *na-* for UM-verbs do not show alternation with *ni-*, because the latter is the same as the past tense marker of undergoer voices.

In addition to the above, the affix *-ANNA* includes two conditional allomorphs. When first singular pronoun clitic =*ku* (glossed as NI.1sg in the following description) is placed after *-ANNA*, it becomes *-aŋ*, as in *puŋur-aŋ=ku* (beat=NI.1sg).

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There are correlations between the semantic roles of a subject NP and the voice forms. With respect to basic verbs, the AV form is selected if a subject NP possesses a semantic role of ACTOR or EXPERIENCER. In cases where an NP denotes a PATIENT, GOAL, or LOCATION in the subject position, the GV form is selected. The CV form is used when the semantic role of the subject NP is CONVEYED THEME, THEME, or INSTRUMENT. CONVEYED THEME is defined as the entity that is moved by the ACTOR, and THEME is defined as the information that is transmitted, including titles of a song or a story. In addition, the object of feeling or the entity that causes a specific feeling is also referred to as THEME in this study.

In principle, the inherent meaning of a verb base requires a certain set of semantic roles, and they determine the number of voice(s) the verb takes. However, it is sometimes very difficult for non-native speakers to predict which verbs take which set of voice(s). Inherent meaning of a verb does not play a singular role in determining the selection of undergoer voices. One piece of evidence is that some verbs take CV in the past tense but GV in non-past tense when they take the undergoer voice. Such examples are shown in Section 4.3.

In the following description, the categorization of verbs with respect to the number of voice(s) they take becomes important. The first category of verbs, called single-voiced verbs, takes only AV form. The second category, called double-voiced verbs, takes the AV and one of the two undergoer voices. The third category, called triple-voiced verbs, consists of verbs that take all three voices.

In addition, verbs that take the infix *um-/na-um-* are called “UM-verbs,” those that take the prefix *ma-/na-* are called “MA-verbs,” and those that take the prefix *maN-/naN-* are called “MAN-verbs.”

3.5 Verbs and their core arguments

In Talaud, it is very difficult to state which NP is required by a verb. However, NPs can be divided into two groups according to their relation with the verb in question. The first group consists of NPs that can be selected as a subject of one of the voice forms. When a verb is single-voiced, it selects only one NP. Most of the double-voiced verbs select two NPs, and naturally, many triple-voiced ones select three NPs. In this study, we call the NPs that are semantically selected by a verb core argument. Such arguments are also morphologically marked and syntactically distinguishable, which is described in Section 2.6.

The following is a summary of the relation between noun markers and voice forms. The subject NPs are always marked by the noun marker *i-* when there is a pronoun or when it denotes human singularity, but no marker appears otherwise. NPs with one of the semantic roles of CONVEYED THEME, THEME, and INSTRUMENT take the noun marker *ni-/nu-* (which alternates with *i-/u-* under conditions described in Section 2.6) in AV sentences. These NPs are called “NU-object.” When these NPs become the subject, CV is always the selected voice form.

The noun marker *si-* appears before a pronoun and singular human NPs that denote GOAL or PATIENT in AV sentences. These are called “SU-objects.” When such objects denote LOCATION, the noun marker *su-* appears. However, when plural human and non-human denotes GOAL or PATIENT in AV sentences, no marker appears. These NPs, which take the noun marker *si-*, *su-*, or none in AV sentences, select GV when they assume the subject position. For example, *si-*-marked *ani* (person name) in Example (5), an AV sentence, take the subject position in a GV sentence, as in Example (6). As for *nu-*-marked *buke* in (5), it selects CV as in Example (7) when it assumes the subject position. The three arguments, *naŋ=ku* (my mother), *buke* (book), and *ani* (Annie) (person name) are core arguments, and each of them can assume the subject position of one of the three voice sentences.

- | | | | | | |
|--|------------------------------------|-------------------------------|--------------------------------------|---------------------------|--------------|
| (5) | <i>i-naŋ=ku</i>
I-mother=NI.1sg | <i>maŋ-aŋgill</i>
MAN-give | <i>u-buke</i>
NU-book | <i>si-ani</i>
SI-Annie | AV, non-past |
| “I will give a book to Annie.” | | | | | |
| (6) | <i>i-ani</i>
I-Annie | <i>aŋgill-an</i>
give-ANNA | <i>ni-naŋ=ku</i>
NI-mother=NI.1sg | <i>m-buke</i>
NU-book | GV, non-past |
| “Annie will be given a book by my mother.” | | | | | |
| (7) | <i>buke udde</i>
book that | <i>i-aŋgill</i>
I-give | <i>i-naŋ=ku</i>
I-mother=NI.1sg | <i>si-ani</i>
SI-Annie | CV, non-past |
| “That book will be given by my mother to Annie.” | | | | | |

The second group of NPs includes adjunct NPs, which do not take noun markers *i-*, *ni-/mu*, and *si-/su-*. This group consists of those that cannot be a subject for any of the voices. This includes NPs that follow a preposition or the objects of a preposition. The noun marker *su-*, which marks the core argument with the semantic role of LOCATION, is also used as a locative preposition. However, because it is different from the noun marker in function, it is categorized as a preposition and is glossed as LOC in this study. The noun marker *su-* and the locative preposition *su-* are phonologically equivalent, but each should be distinguished because the former NP can assume the subject position of GV of a basic verb while the latter cannot. Examples of such adjuncts are *pasakka* (market) in Example (8)a and *ware udde* (that house) in Example (9)a. These NPs can be a subject of locative verbs, as in Examples (8)b and (9)b, but they can never assume the subject position of an undergoer voice of a basic verb (see Example (8)c). The subject NP of GV is *saiyore*,¹² a core argument, as shown in Example (8)d.

(8)a	<i>i-hani</i>	<i>ma-malli</i>	<i>saiyore</i>	<i>su</i>	<i>pasakka</i>	AV, non-past
	I-hani	MAN-buy	vegetables	LOC	market	
	“Hanny will buy vegetables at the market.”					
b	<i>pasakka</i>	<i>pa-malli-an</i>	<i>ni-hani</i>			Locative verb, non-past
	market	Loc-buy-ANNA	NI-Hanny			
	“Market is the place where Hanny buy vegetables.”					
c.	* <i>pasakka</i>	<i>walli-an</i>	<i>ni-hani</i>			GV, non-past
d.	<i>saiyore</i>	<i>walli-an</i>	<i>ni-hani</i>			GV, non-past
	vegetables	buy-ANNA	NI-Hanny			
	“Vegetables will be bought by Hanny.”					
(9)a	<i>i-manjitou</i>	<i>ma-saraingga</i>	<i>su</i>	<i>ware</i>	<i>udde</i>	AV, non-past
	I-3pl	MA-dance	LOC	house	that	
	“They dance in that house.”					
b	<i>ware</i>	<i>udde</i>	<i>pa-saraing-an</i>	<i>ni-manjitou</i>		Locative verb, non-past
	house	that	Loc-dance-ANNA	NI-3pl		
	“That house is the place where they dance in.”					

In Talaud, many core arguments that appear in AV construction of a basic verb can assume the subject position of an undergoer voice of the same verb. However, there are many NPs that do not appear in AV sentences but become subjects of CV construction of a basic verb. Such examples are shown in Section 5.

3.6 Summary: categorization of Talaud verbs

For the ease of describing the Talaud basic verbs, three verb categorizations that were posited in Sections 3.1 and 3.2 are summarized here. The first criterion was the distinction between basic and

¹² *Saiyore* (vegetables) does not take on a noun marker in AV sentence (8)a because it is a non-human NP, which is PATIENT.

derivational verbs. The former is the primary focus of this study, whereas the latter will not be discussed here.

The second criterion was the number of voices that a verb could assume. Single-voiced verbs take only AV forms, double-voiced verbs take AV forms and one of the undergoer voices, and triple-voiced verbs take all three voices.

The third criterion was the selection of voice-indicating affixes in Actor Voice. Three types of verbs, UM-verbs, MA-verbs, and MAN-verbs are posited.

Thus, nine groupings of basic verbs are theoretically possible based on the aforementioned second and third criteria. However, because no single-voiced MAN-verbs were found so far, only the following eight groupings are posited. The figures in the bracket indicate the percentage of each type of verb.¹³

- (1) Single-voiced UM-verbs (5%)
- (2) Double-voiced UM-verbs (11%)
- (3) Triple-voiced UM-verbs (9%)
- (4) Single-voiced MA-verbs (4%)
- (5) Double-voiced MA-verbs (14%)
- (6) Triple-voiced MA-verbs (9%)
- (7) Double-voiced MAN-verbs (27%)
- (8) Triple-voiced MAN-verbs (19%)

The majority of basic verbs are either double-voiced or triple-voiced¹⁴ and there are a limited number of single-voiced UM-verbs and MA-verbs. Even verbs with semantically intransitive meanings such as *s-um-aggo* (to breathe) and *ma-sarainŋa* (to dance) include undergoer voices. Further details are provided in Section 4.2.

4. Paradigm of basic verbs

In this section, basic verbs are categorized according to their paradigm. Section 4.1 focuses on single-voiced verbs and Section 4.2 explains the paradigm of triple-voiced verbs. Double-voiced verbs include three different paradigms, which are examined in Section 4.3.

4.1 Paradigm of single-voiced verbs

Single-voiced verbs take only AV form. Examples of single-voiced verbs are shown in Table 4. In addition, the non-past tense forms are shown above and the past tense forms are provided below.

¹³ The total figure does not reach 100 because fractions have been ignored.

¹⁴ Bantik, which also belongs to the Sangiric micro-group, shows a very different pattern with a number of single-voiced UM-verbs and MA-verbs. Around a third of UM-verbs and more than half of MA-verbs are single-voiced.

Table 4: Examples of single-voiced verbs; AV only.

	Base	Meaning	Actor Voice
UM- verbs	<i>ioʔa</i>	to swing, to move	<i>um-ioʔa</i> <i>na-um-ioʔa</i>
	<i>zoro</i>	to be astonished	<i>z-um-oro</i> <i>na-z-um-oro</i>
	<i>tondo</i>	to slither	<i>t-um-ondo</i> <i>na-t-um-ondo</i>
MA- verbs	<i>dumaʔa</i>	to fell with facedown	<i>ma-dumaʔa</i> <i>na-dumaʔa</i>
	<i>lumussa</i>	to be hungry	<i>ma-rumussa</i> <i>na-rumussa</i>
	<i>rou</i>	to be thirsty	<i>ma-rou</i> <i>na-rou</i>

Example sentences of single-voiced verbs are shown below. In sentence (10), ACTOR is the semantic role of the subject NP, and EXPERIENCER is the subject NP in sentence (11).

(10) *anaʔa kadioʔa udde na-um-ioʔa* AV, UM-verb, past
 child small that NA-move
 “That small child moved.”

(11) *i-majitou ma-rou=te* AV, MA-verb, non-past
 I-3pl MA-thirsty=COMP
 “They are already thirsty.”

The correlation between semantic roles and grammatical roles in single-voiced verb construction are shown in Table 5.

Table 5: Grammatical roles and semantic roles in single-voiced constructions

Single-voiced verb construction		
Grammatical role	Subject	AV verb
Semantic role	ACTOR, EXPERIENCER	
	<i>i-</i> + singular human ZERO + plural human ZERO + non-human	
Example	<i>i-mañitou</i> I-3pl 'They are thirsty'	<i>ma-rou</i> MA-thirsty

4.2 The paradigm of triple-voiced verbs

Triple-voiced verbs take all three voices. Examples of triple-voiced verbs are shown in Table 6. The non-past tense forms are provided above and the past tense forms are shown below in it.

Table 6: Examples of triple-voiced verbs

	Base (Meaning)	Actor Voice	Goal Voice	Conveyance Voice
UM- verbs	<i>lagge</i> (to laugh)	<i>l-um-agge</i> <i>na-l-um-agge</i>	<i>lagge-anna</i> <i>ni-lagge-anna</i>	<i>i-lagge</i> <i>n-i-lagge</i>
	<i>darisikka</i> (to stand)	<i>d-um-arisikka</i> <i>na-d-um-arisikka</i>	<i>darisiz-anna</i> <i>ni-darisiz-anna</i>	<i>i-darisikka</i> <i>n-i-darisikka</i>
MA- verbs	<i>saraiŋŋa</i>	<i>ma-saraiŋŋa</i> <i>na-saraiŋŋa</i>	<i>saraiŋ-anna</i> <i>ni-saraiŋ-an</i>	<i>i-saraiŋŋa</i> <i>n-i-saraiŋŋa</i>
	<i>lutaniŋŋa</i> (to shoot)	<i>ma-lutaniŋŋa</i> <i>na-lutaniŋŋa</i>	<i>ni-lutaniŋ-anna</i> <i>ni-lutaniŋanna</i>	<i>i-lutaniŋŋa</i> <i>n-i-lutaniŋŋa</i>
MAN- verbs	<i>taappa</i> (to close)	<i>ma-naappa</i> <i>na-naappa</i>	<i>taap-anna</i> <i>ni-taap-anna</i>	<i>i-taappa</i> <i>n-i-tappa</i>
	<i>aŋgilla</i> (to give)	<i>maŋ-aŋgilla</i> <i>naŋ-aŋgilla</i>	<i>aŋgir-anna</i> <i>ni-aŋgir-anna</i>	<i>i-aŋgilla</i> <i>n-i-aŋgilla</i>

Example sentences of triple-voiced verbs are shown in (12). The subject NP in AV sentence (12)a is AGENT. The subject NP in GV sentence (12)b is GOAL, which denotes the place that is relevant to the action denoted by the verbs. The subject NP in CV sentence (12)c is CONVEYED THEME. Other subtypes of triple-voiced verb show other sets of semantic roles. Such details are shown in Section 5.

(12)a	<i>i-aʔu</i>	<i>maŋ-addo</i>	<i>m-bohassa</i>	<i>su</i>	<i>urinna</i>	AV, MAN-verb, non-past
	I-1sg	MAN-put	NU-rice	LOC	pan	
	“I put rice in the pan.”					
b	<i>urinna</i>	<i>addo-aŋ=ku</i>	<i>m-bohassa</i>			GV, MAN- verb
	pan	put-ANNA=NI.1sg	NU-rice			
	“In the pan, I put rice.”					
c	<i>bohassa</i>	<i>i-addo=ʔu</i>	<i>su</i>	<i>urinna</i>		CV, MAN- verb
	rice	I-put=NI.1sg	LOC	pan		
	“Rice (is what) I put in the pan.”					

4.3 Three subcategories of double-voiced basic verbs and their paradigm

Double-voiced verbs, as defined above, take only one undergoer voice. In general, the choice of undergoer voice varies in three ways according to both the morphological and the semantic features of the verb. First, there are the double-voiced verbs that have AV and GV forms, both in non-past and past tenses. In other words, this type takes only one type of undergoer voice. For example, the base *tuwo* forms the AV non-past verb form *t-um-uwo* and the past verb form *na-t-um-uwo*. When it is required to form the undergoer voice, it becomes *tuwo-anna* for the non-past tense and *ni-tuwo-anna* for the past tense. Both forms take the suffix *-ANNA*, which is the GV marker. This type of verb is called “double-voiced type 1.” Other examples are shown in Table 7.

The second type is called “double-voiced type 2,” whose examples are shown in Table 8. This particular type includes AV and CV forms in both non-past and past tenses. For example, the verb base *akkanna* (to like) takes the prefix *-um-/na-um-* in AV form, and takes the prefix *i-/n-i-* in CV form when it assumes undergoer voice. Accordingly, the undergoer voice formed with the base *akkanna* is *i-akkanna* and *n-i-akkanna*. In regard to the base *akkanna* (to like), there is no GV form in both tenses; **akkan-anna* and **ni-akkan-anna* are not accepted.

The third type occurs in most of the verbs that take only one undergoer voice. They select GV for non-past tense but CV for past tense. This type of verb is called “double-voiced type 3.” For example, from the base *taʔappa* (to catch), we can make the AV form *ma-naʔappa* (non-past form) and *na-naʔappa* (past form) by attaching the prefix *maN-/naN-*. In undergoer voice, its non-past form is *taʔap-anna*, to which the suffix *-ANNA* is added, while its past form is *n-i-taʔappa* that does not have the suffix *-ANNA*. Instead, it takes the prefix *i-* (the CV affix), which is added to the base. Further examples are shown in Table 9. It should be noted that both CV non-past form (such as *i-taʔappa*) and the GV past form (such as *ni-taʔap-anna*) do not exist. It is difficult to find type 3 UM-verbs and MA-verbs because most of the double-voiced MAN-verbs belong to type 3.

Table 7: Examples of double-voiced TYPE 1: AV and GV

	Base (Meaning)	Actor Voice	Goal Voice	Conveyance Voice
UM- verbs	<i>tuwo</i> (to grow)	<i>t-um-uwo</i> <i>na-t-um-uwo</i>	<i>tuwo-anna</i> <i>ni-tuwo-anna</i>	* *
	<i>ranta</i> (to come)	<i>r-um-anta</i> <i>na-r-um-anta</i>	<i>rant-anna</i> <i>ni-rant-anna</i>	* *
MA- verbs	<i>anu</i> (to go)	<i>m-anu</i> <i>n-anu</i>	<i>anu-anna</i> <i>ni-anu-anna</i>	* *
	<i>zaddo</i> (to wait)	<i>ma-zaddo</i> <i>na-zaddo</i>	<i>zaddo-anna</i> <i>ni-zaddo-anna</i>	* *
MAN- verbs	<i>addu</i> (to spit)	<i>maŋ-addu</i> <i>naŋ-addu</i>	<i>addu-anna</i> <i>ni-addu-anna</i>	* *
	<i>dona</i> (to get angry at)	<i>man-dona</i> <i>nan-dona</i>	<i>don-anna</i> <i>ni-don-anna</i>	* *

Table 8: Examples of double-voiced TYPE 2: AV and CV

	Base (Meaning)	Actor Voice	Goal Voice	Conveyance Voice
UM- verbs	<i>akkanna</i> (to like)	<i>um-akkanna</i> <i>na-um-akkanna</i>	* *	<i>i-akkanna</i> <i>n-i-akkanna</i>
	<i>suŋkuta</i> (to sob)	<i>s-um-iŋkuta</i> <i>na-s-um-iŋkuta</i>	* *	<i>i-suŋkuta</i> <i>n-i-suŋkuta</i>
MA- verbs	<i>lindu?a</i> (to avoid)	<i>ma-lindu?a</i> <i>na-lindu?a</i>	* *	<i>i-lindu?a</i> <i>n-i-lindu?a</i>
	<i>ziŋidda</i> (to think)	<i>ma-ziŋidda</i> <i>na-ziŋidda</i>	* *	<i>i-ziŋidda</i> <i>n-i-ziŋidda</i>
MAN- verbs	<i>io?a</i> (to move)	<i>maŋ-io?a</i> <i>naŋ-io?a</i>	* *	<i>i?io?a</i> <i>n-i-?io?a</i>
	<i>ure</i> (to get angry with sadness)	<i>maŋ-ure</i> <i>naŋ-ure</i>	* *	<i>i-ure</i> <i>n-i-ure</i>

Table 9: Examples of double-voiced TYPE 3: AV and non-past GV and past CV

	Base (Meaning)	Actor Voice	Goal Voice	Conveyance Voice
UM- verbs	<i>inassa</i> (to eat)	<i>um-inassa</i> <i>na-um-inassa</i>	<i>inas-anna</i> *	* <i>n-i-inassa</i>
MA- verbs	<i>azo</i> (to comb)	<i>maʔ-azo</i> <i>naʔ- azo</i>	<i>azo-anna</i> *	* <i>n-i-azo</i>
MAN- verbs	<i>puʔulla</i> (to close)	<i>ma-muʔulla</i> <i>na-muʔulla</i>	<i>puʔur-anna</i> *	* <i>n-i-puʔulla</i>
	<i>izuppa</i> (to suck)	<i>maŋ-izuppa</i> <i>naŋ-izuppa</i>	<i>izup-anna</i> *	* <i>n-i-izuppa</i>

An example of a double-voiced type 1 verb is shown in Example (13) in which the subject of AV sentence (13)a is ACTOR and the subject of GV sentence (13)b is GOAL.

(13)a	<i>raho</i> guest	<i>r-um-anta/ na-r-um-anta</i> UM-come/NA-UM-come	<i>su</i> LOC	<i>ware=ʔu</i> house=NI.1sg	AV, non-past/ past
	“Guests are coming/came to my house.”				
b	<i>ware=ʔu</i> house=NI.1sg	<i>rant-an/ni-rant-an</i> come-ANNA	<i>ni-raho</i> NI-guest		GV, non-past/past

Type 2 verbs appear in Example (14). ACTOR is the subject NP of AV sentence (14)a and INSTRUMENT is the subject of CV sentence (14)b.

(14)a	<i>i-tou</i> I-3sg	<i>ma-lintukka/na-lintukka</i> MA-bring.down/NA-bring.down	<i>harere</i> knife	AV, non-past/past
	“She/Hhe will bring down/brought down a knife”			
b	<i>harere</i> knife	<i>i-lintukk/n-i-lintukk</i> I-bring.down/NI-I-bring.down	<i>i-tou</i> NI-3sg	CV, non-past/past
	“A knife is brought down/was brought down by him/her.”			

Type 3 double-voiced verbs appear in Example (15). The subject NP of the AV sentence below is ACTOR and the semantic role of the undergoer subject found in Examples (15)b and c is PATIENT.

(15)a	<i>i-tou</i> I-3sg	<i>um-anna/na-um-anna</i> UM-eat/NA-UM-eat	<i>uwi</i> cassava	AV, non-past/past
	“She/He eats/ate cassava.”			

<i>b uwi</i>	<i>ana-nann</i>	<i>i-tou</i>	GV, non-past
cassava	eat-ANNA	NI-3sg	
“Cassava will be eaten by her/him”			
<i>c uwi</i>	<i>ni-ann</i>	<i>i-tou</i>	CV, past
cassava	NI-eat	NI-3sg	
“Cassava was eaten by her/him.”			

4.4 Percentages of each verb type

At this point, the paradigms of 100 verbs have been examined. Although the number is relatively small, the following eight aspects can be concluded.

- (1) 9 verbs are single-voiced, 54 verbs are double-voiced, 37 verbs are triple-voiced.
- (2) Out of the 54 double-voiced verbs, there are 24 type 1 verbs, 9 type 2 verbs, and 21 type 3 verbs
- (3) Out of the 25 UM-verbs, 5 are single-voiced, 11 are double-voiced, and 9 are triple-voiced; out of the 11 double-voiced UM- verbs, 6 are type 1 verbs, 3 are type 2 verbs, and 2 are type 3 verbs
- (4) Out of the 27 MA-verbs, 4 are single-voiced, 14 are double-voiced, and 9 are triple-voiced; out of the 14 double-voiced MA- verbs, 8 are type 1 verbs and 3 each are type 2 and type 3 verbs
- (5) Out of the 46 MAN-verbs, 27 are double-voiced MAN-verbs, 19 are triple-voiced, and there are no single-voiced verbs. Out of 27 double-voiced MAN-verbs, 8 verbs are type 1, 3 verbs are type 2, and 16 verbs are type 3.

These figures might change as research accumulates, but the overall tendency should not change significantly.

To summarize, single-voiced verbs are relatively rare (approximately 10%) and double-voiced and triple-voiced verbs are very common (more than 50% are double-voiced and roughly 40% are triple-voiced). Within the double-voiced verbs types 1 and 3 are equally common and account for approximate 40% each, while type 2 verbs account for only 15% of them.

5. Semantic role, choice of voice, and the paradigm

In this section, the correlation between the semantic roles of the subject NP and the voice forms as well as the paradigm pattern are considered.

5.1 Triple-voiced verbs and three voices

Triple-voiced verbs take all three voices, but the set of core arguments in AV form varies in several ways. The set of semantic roles that are required by a verb can also be categorized into several categories. Subtypes (A), (B), (C) are triple-voiced verbs that show a correlation between the core arguments and voice forms. Subtype (D) shows a correlation between AV and GV while subtypes (E) and (F) show a correlation between AV and CV. Subtype (G) does not show a correlation between voice forms because each voice form exhibits slightly different meanings.

The first three subtypes ((A), (B), and (C)) consist of triple-voiced verbs that take three core arguments,

which can assume the subject position of one of the voice forms. The set of semantic roles of this subtype can be further sub-divided into the following: (A) ACTOR - CONVEYED THEME/THEME –GOAL; (B) ACTOR - INSTRUMENT - PATIENT/GOAL; and (C) ACTOR - PATIENT - BENEFICIARY. Semantic roles are aligned as they appear in AV sentences, that is, the order of subject, *nu-* object, and *su-* object. These verbs show a perfect correspondence between core arguments and voices. *Su-* marked objects (GOAL, PATIENT, or BENEFICIARY) take the subject position of GV, and *nu-* marked objects (CONVEYED THEME/THEME, INSTRUMENT, PATIENT) assumes the subject position of CV.

Subtype (D) consists of those which show partial correspondence between AV and GV. The set of semantic roles of NPs that can appear in AV sentences of these verbs is (D) ACTOR - LOCATION/GOAL. NPs with semantic roles LOCATION or GOAL, which are marked with *si-/su-* in AV sentences, can be the subject of GV sentences. In CV sentences, an NP that denotes CAUSEE or THEME assumes the subject position, and the NP placed immediately after the CV verb is CAUSER. CAUSEE or THEME NPs do not appear in AV sentences and neither do CAUSER NPs. CV sentences are not in correspondence with AV or GV.

Subtypes (E) and (F) consist of those which show partial correspondence between AV and CV. There are two sets of semantic roles that appear in AV sentences with this subtype of verb: (E) ACTOR - CONVEYED THEME and (F) EXPERIENCER - THEME. NPs with the semantic roles of CONVEYED THEME and THEME are *ni-/nu-* marked in AV sentences, and they assume the subject position in CV sentences. GV sentences, on the other hand, employ an NP with a new semantic role of LOCATION.

The last subtype (subtype G) consists of those which show no correspondence among the three voice forms. The meanings of the three voices of the same verb are slightly different from one another. Undergoer voices of these verbs appear to be derivational in meaning when compared with AV verbs. The correlation between core arguments, noun markers, semantic roles, and voice forms are shown in Table 10, 11, 12 for subtypes (A) to (F). That of the last does not appear because it is difficult to establish a formula for this subtype (G), which shows different phenomena.

5.1.1 Triple-voiced verbs with systematic correspondence between core arguments and voices

In this section, subtypes (A), (B), and (C), which show systematic correspondence between core arguments and voices, will be the subject of focus.

These subtypes of triple-voiced verbs mainly consist of MAN-verbs and several MA-verbs. They require three core arguments that can function as a subject of each voice. The three subtypes are categorized by the semantic features of the core arguments.

Example (12) in Section 4.2 and Example (16) below belong to subtype (A), and its set of semantic roles of core arguments is (A) ACTOR - CONVEYED THEME/THEME - GOAL. *Asu* (dog), which is marked by the noun marker *su-* in AV sentence (16)a, becomes the subject of GV sentence (16)b where its semantic role is GOAL. In contrast, *nu-*marked *batu* (rock) in Example (16)a assumes the subject position of CV sentence (16)c, in which its semantic role is CONVEYED THEME.

- (16)a *i-efan na-mareta m-batu su-asu udde* AV, past
 I-Evan NAN-throw NU-rock SU-dog that
 “Evan through a rock at that dog.”
- b *asu udde ni-paret-an ni-efan m-batu* GV, past
 dog that NI-throw-ANNA NI-Evan NU-rock
 “That dog was thrown a rock at by Evan.”
- c *batu n-i-pareta ni-efan su-asu udde* CV, past
 rock N-I-throw NI-Evan SU-dog that
 “A rock was thrown at that dog by Evan.”

The THEME NP also behaves the same way as CONVEYED THEME and INSTRUMENT NPs above. The NP that denotes GOAL in (17)a, that is, *maṅa muridda* (all the students), occupies the subject position of GV sentence (17)b. In example (17)a, *wisara ḡk-aṅgaresi* (English) is marked by *nu-* (which is pronounced *u-* here),¹⁵ and it becomes the subject of CV sentence (17)c. This is an example of subtype (A) with the semantic roles of ACTOR - THEME - GOAL.

- (17)a AV, non-past
huru maṅ-aṅa? u-wisara ḡk-aṅgaresi su-maṅa
 teacher MAN-teach NU-language NU-England SU-all
muridda
 pupil
 “The teacher teaches English to all the pupils.”
- b GV, non-past
maṅa muridda aṅ-an nu-huru wisara ḡk-aṅgaresi
 all pupil teach-ANNA NU-teacher language NU-England
 “All the pupils are taught English by the teacher.”
- c CV, non-past
wisara ḡk-aṅgaresi i-aṅa? ḡu-huru su-maṅa muridda
 language NU-England I-teach NU-teacher SU-all pupil
 “English is taught to all the pupils by the teacher.”

A similar relation between core arguments and voice forms is observed in subtype (B), which includes ACTOR - INSTRUMENT - PATIENT NPs. This subtype is shown in Example (18). The PATIENT NP *inassa* is not *su-* marked in AV sentence (18)a because it is not LOCATION or GOAL, but it is the same as Example (18)b in which it occupies a subject position in GV sentence (18)b. The *nu-* marked *bawazunḡ*, a INSTRUMENT NP in Example (18)a assumes the subject position of CV sentence (18)c.

¹⁵ For allomorphs of *ni-/nu-*, please refer to Section 2.6.

- (18)a *i-harun* *ma-mazuyη* *u-bawazuyηa* *inassa* AV, non-past
 I-Harun MAN-catch.fish NU-fish.hook fish
 “Harun catches fish with a fish hook.”
- b *inasa* *bazuy-an* *ni-harun* *m-bawazuyηa* GV, non-past
 fish catch.fish-ANNA NI-Harun NU-fish.hook
 “Fish are caught by Harun using a fish hook.”
- c *bawazuyηa* *udde* *i-wazuyη* *i-harun* *inassa* CV, non-past
 fish.hook that I-catch.fish I-Harun fish
 “That fish hook is used by Harun to catch fish.”

Example (19) is another instance of a subtype (B) sentence, which contains the semantically intransitive verb *ma-saraiηa*. It can take all three voices, and the semantic roles of its core arguments are ACTOR - INSTRUMENT - GOAL. However, not all core arguments appear in GV and CV sentences. AV and GV sentences share two core arguments (ACTOR and GOAL) while AV and CV sentences correspond to one another and share NPs with the same semantic roles of ACTOR and INSTRUMENT.

- (19)a AV, non-past
i-marjitou *ma-saraiηη* *u-lama?a* *su-daho* *udde*
 I-3pl MA-dance NU-dish SU-guest that
 “They will dance (using) a dish for those guests.”
- b GV, non-past
daho *udde* *saraiη-an* *ni-marjitou* *riηan* *nu-saraiηηa* *lama?a*
 guest that dance-ANNA NI-3pl with NU-dance dish
 “Those guests will be entertained by them with ‘dish dance’ (*Lit.* Those guests will be danced ‘dish dance’ by them).”
- c CV, non-past
lama?a *i-saraiηη* *i-marjitou*
 dish I-dance I-3pl
 “Dishes will be used by them in a dance (*Lit.* Dishes will be danced by them).”

Examples (20) and (21) are instances of subtype (C), which contain semantic roles of ACTOR - PATIENT - BENEFICIARY. BENEFICIARY is the subject of GV sentences (20)b and (21)b, and PATIENT becomes the subject of CV sentences (20)c and (21)c.

- (20)a *i-a?u* *na-laha* *inass* *i-maria* AV, past
 I-1sg NA-cook fish I-Maria
- b *i-maria* *ni-lah-aη=ku* *inassa* GV, past
 I-Maria NI-cook-ANNA=NI.1sg fish

<i>c inassa</i>	<i>n-i-laha</i>	<i>huna</i>	<i>m-maria</i>	CV, past
fish	NI-I-cook	for	NU-Maria	
“Fish is cooked by me for Maria.”				
(21)a <i>i-aʔu</i>	<i>maŋ-alin</i>	<i>nu-araʒaʔa</i>	<i>si-hani</i>	AV, non-past
I-1sg	MAN-copy	NU-lesson	SI-Hanny	
b <i>i-hani</i>	<i>alin-aŋ=ku</i>	<i>araʒaʔa</i>		GV, non-past
I-Hanny	copy-ANNA=NI.1sg	lesson		
c <i>araʒaʔa</i>	<i>i-ariŋ=ku</i>	<i>i-hani</i>		CV, non-past
lesson	I-copy=NI.1sg	SI-Hanny		
“I will copy a lesson (in a textbook) for Hanny.”				

To summarize, triple-voiced verbs of subtypes (A) and (B) have three core arguments as seen in Examples (16)–(19) above. Table 10 shows the correspondence between grammatical roles and semantic roles of these subtypes. Their three core arguments are a combination of (1) ACTOR, (2) CONVEYED THEME/THEME, or INSTRUMENT, and (3) GOAL or PATIENT. These types of verbs are frequently observed among semantically transitive verbs that denote an action that involves a moving entity (as in Example (16), subtype (A)), or those that denote an action that may use an instrument (as in Examples (18) and (19), subtype (B)). Examples of subtype (A) include *maŋ-appida* (to take), *maŋ-undamma* (to give medicine), *ma-tazo* (to place something somewhere), and *ma-nuntuŋa* (to toss a stick or wood). Verbs that denote an action that involves the transmission of information, such as *maŋ-aʒaʔa* (teach, as in Example (17)) and *ma-baro* (to tell) also belong to subtype (A). Other examples of subtype (B) are *ma-lutaŋŋa* (to shoot) and *ma-naappa* (to close with something).

Subtype (C) consists of verbs of various meanings. The other examples of this type are *ma-nappa* (to chew something for someone) and *ma-malli* (to buy something for someone). Verbs that have three core arguments and show voice alternation, which is similar to the verbs above, are not very common. In Sections 5.1.2 and 5.1.3, other subtypes of verbs are exemplified.

Table 10: Triple-voiced verb construction of subtype (A), (B), and (C).

Triple-voiced verb construction: Subtype (A), (B), and (C)					
AV	Grammatical role	Subject	AV verb	NU- object	SU- object
	Semantic roles	ACTOR(A, B, C)		CONVEYED THEME(A), THEME(A), INSTRUMENT(B), PATIENT(C)	GOAL(A), PATIENT(B), BENEFICIARY(C)
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/sg human <i>nu-</i> + pl human/non-human	<i>si-</i> + pronoun/sg human <i>su-</i> + pl human/ non-human
	Example	<i>i-harun</i> I-Harun		<i>ma-mazeta</i> MAN-throw	<i>m-batu</i> NU-rock
‘Harun will throw the rock at the dog’ Subtype (A)					
GV	Grammatical role	Subject	GV verb	Agent	NU-object
	Semantic roles	GOAL(A), PATIENT(B), BENEFICIARY(C)		ACTOR(A, B, C)	CONVEYED THEME(A), THEME(A), INSTRUMENT(B), PATIENT(C)
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/sg human <i>nu-</i> + pl human/non-human	<i>ni-</i> pronoun/sg human <i>nu-</i> + pl human/ non-human
	Example	<i>asu udde</i> dot that		<i>pazet-an</i> throw-ANNA	<i>ni-harun</i> NI-Harun
‘That dog will be thrown a rock at by Harun’ Subtype (A)					
CV	Grammatical role	Subject	CV verb	Agent	SU- object
	Set of Semantic roles	CONVEYED THEME(A), THEME(B) INSTRUMENT(B), PATIENT(C)		ACTOR	GOAL(A), PATIENT(B), BENEFICIARY(C)
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/ sg human <i>nu-</i> + pl human/non-human	<i>si-</i> + pronoun/sg human <i>su-</i> + pl human/ non-human
	Example	<i>batu</i> rock		<i>i-pazeta</i> I-throw	<i>ni-harun</i> NI-Harun
‘A rock will be thrown by Harun at the dog’ Subtype (A)					

Table 11: Triple-voiced verb construction of subtype (D)

Triple-voiced verb construction: Subtype (D)					
Partial Correspondence between AV and GV, CV has derivational meaning					
AV	Grammatical role	Subject	AV verb	NU- object	SU- object
	Semantic roles	ACTOR			GOAL
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human			<i>si-</i> + pronoun/sg human <i>su-</i> + pl human/ non-human
	Example	<i>i-ani</i> I-Annie		<i>s-um-utta</i> UM-enter	<i>su-gazeda</i> SU-church
GV	Grammatical role	Subject	GV verb	Agent	NU-object
	Semantic roles	GOAL		ACTOR	
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/sg human <i>nu-</i> + pl human/ non-human	
	Example	<i>gazeda</i> church		<i>sutt-an</i> enter-ANNA	<i>ni-ani</i> NI-Annie
CV	Grammatical role	Subject	CV verb	Agent	Adjunct
	Set of Semantic roles	CONVEYED THEME, THEME		ACTOR	GOAL
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/ sg human <i>nu-</i> + pl human/ non-human	<i>si-</i> + pronoun/sg human <i>su-</i> + pl human/ non-human
	Example	<i>i-petrus</i> I-Peter		<i>i-sutta</i> I-enter	<i>ni-ani</i> NI-Annie

Table 12: Triple voiced construction of subtype (E) and (F).

Triple-voiced verb construction: Subtype (E), (F)					
Partial Correspondence between AV and CV, the subject of GV indicates LOCATION					
AV	Grammatical role	Subject	AV verb	NU- object	SU- object
	Semantic roles	ACTOR(E), EXPERIENCER(F)		CONVEYED THEME(E), THEME(F)	
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/sg human <i>nu-</i> + pl human/ non-human	
	Example	<i>i-ani</i> <i>m-atautt</i> <i>i-atoanna</i> I-Annie MA-be.scared NI-snake 'Annie is scared of snakes' Subtype (F)			
GV	Grammatical role	Subject	GV verb	Agent	Su-object
	Semantic roles	LOCATION		ACTOR(E), EXPERIENCER(F)	
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/sg human <i>nu-</i> + pl human/ non-human	
	Example	<i>kolajjya</i> <i>ataut-an</i> <i>ni-ani</i> cemetery bc.scared-ANNA NI-Annie 'Cemetery is where Annie felt scared' Subtype (F)			
CV	Grammatical role	Subject	CV verb	Agent	(Adjunct)
	Set of Semantic roles	CONVEYED THEME(E), THEME(F)		ACTOR(E), EXPERIENCER(F)	(LOCATION)
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/ sg human <i>nu-</i> + pl human/ non-human	<i>si-</i> + pronoun/sg human <i>su-</i> + pl human/ non-human
	Example	<i>i-atoanna</i> <i>i-atautt</i> <i>i-ani</i> I-snake I-be.scared NI-Annie 'Snakes is what Annie is scared of' Subtype (F)			

5.1.2 Triple-voiced verbs with partial correspondences between voices

5.1.2.1 Triple-voiced motion verbs with CV forms of derivational meaning

The majority of triple-voiced verbs do not take all three core arguments in AV sentences. They are further categorized into subtypes (D), (E), (F), and (G). In this section, subtype (D), which requires ACTOR - LOCATION/GOAL in AV and GV sentences, and CAUSEE and CAUSER in CV sentences will be presented. Triple-voiced verbs of subtype (D) consist of motion verbs including those that denote posture change. Most of them are UM-verbs, and semantically not transitive. It does not appear that they need more than one core argument, but two arguments are principally regarded as the core for these verbs.

An AV sentence includes only two arguments: (1) ACTOR and (2) GOAL or LOCATION. ACTOR NPs occupy the subject position of AV sentences while GOAL or LOCATION NPs occupy the subject position of GV sentences. NPs that become the subject of CV sentences are either CAUSEE or THEME. In Example (22)a, the AV sentence takes ACTOR NP as a subject, and LOCATION NP appears as the subject in GV sentence (22)b. ACTOR and LOCATION NPs are core arguments, and both of them appear in AV and GV sentences. However, CV construction in Examples (22)c and (22)d include NPs with different semantic roles; the subject in Example (22)c is CAUSEE. The subject in Example (22)d can also be called CAUSEE but THEME would be a more suitable term. The NP that appears after the CV verb is CAUSER.¹⁷

(22)a	<i>i-marjitou</i>	<i>d-um-arisikka</i>	<i>su-watu udde</i>		AV, non-past
	I-3pl	UM-stand	SU-stone that		
	“They will stand on the stone.”				
b	<i>watu</i>	<i>udde</i>	<i>dararisiz-an</i>	<i>ni-marjitou</i>	GV, non-past
	stone	that	stand-ANNA	I-3pl	
	“They will stand on that stone (<i>Lit.</i> That stone will be stood on by them).”				
c	<i>ana?a</i>	<i>udde</i>	<i>i-rarisikk i-ani</i>		CV, non-past
	child	that	I-stand NI-Annie		
	“That child will be made to stand by Annie.”				
d	<i>i-?o</i>	<i>i-rarisikk i-ami</i>	<i>ma-ola?a</i>	<i>apitarau</i>	CV, non-past
	I-2sg	I-stand NI-1pl.EXC	MA-become	chief	
	“You will be supported by us to become Chief (of the village).”				

The above syntactic-semantic pattern is found with other verbs that denote posture change such as *um-a?ianna* (to sit), *r-um-arisikka* (to stand), *r-um-ammayya* (to lie face down), and *s-um-alo* (to jump). It is also common with verbs that denote movement from a certain point to another point such as *um-amatta* (to walk), *um-omayya* (to crawl), *s-um-utta* (to enter), and *s-um-abaya* (to go out). One more example of this group of verbs is shown in Example (23) with the motion verb *s-um-a?e* (to board, as on a vehicle). The subject NP in the AV sentence is ACTOR, that of the GV sentence is LOCATION, and that

¹⁷ CAUSER might be interpreted as a subcategory of ACTOR, because CAUSER perform an action such as ordering. The term CAUSER is used to make semantic features of verbs clearer.

of the CV sentence is CAUSEE. AV sentences that include CAUSER and CAUSEE are causative sentences, as shown in Example (24)a. causative CV sentence (24)b¹⁸ shows a very similar construction to the CV sentence of basic verbs given in Example (23)c. However, because causative verbs and causative constructions are not the focus of this study, these terms will not be mentioned any further.

(23)a	<i>i-erna</i>	<i>na-s-um-aʔe</i>	<i>su-oto</i>			AV, past
	I-Erna	NA-UM-board	SU-car			
	“Erna boarded a car.”					
b	<i>oto udde</i>	<i>ni-saʔe-an</i>	<i>ni-erna</i>			GV, past
	car that	NI-board-ANNA	NI-Erna			
	“Erna boarded a car. (<i>Lit.</i> That car was rode by Erna).”					
c	<i>i-hani</i>	<i>n-i-saʔe</i>	<i>ni-erna</i>	<i>su-oto</i>		CV, past
	I-Hanny	NI-I-board	NI-Erna	SU-car		
	“Hanny was made to board the car by Erna.”					
(24) a	<i>i-erna</i>	<i>na-pa-saʔe</i>	<i>ni-hani</i>	<i>su</i>	<i>oto</i>	Causative, AV, past
	I-Erna	NA-CAUS-board	NI-Hanny	LOC	car	
	“Erna made Hanny board on the car.”					
b	<i>i-hani</i>	<i>n-ia-pa-saʔe</i>	<i>ni-erna</i>	<i>su</i>	<i>oto</i>	Causative, CV, past
	I-Hanny	NI-CV-CAUS-board	NI-Erna	LOC	car	
	“Hanny was made to board on the car by Erna.”					

If we compare an AV sentence and a GV sentence with the same basic verb of this subtype, two core arguments in both sentences are shared: ACTOR and LOCATION (or GOAL). The set of core arguments in the CV sentence is very different: they are CAUSER and CAUSEE in which CAUSEE takes the subject position. This type of CV verb is semantically derivational in the sense that causative meaning is added to such a verb. Another set is given in Example (25) with the verb *um-omanʔa* (to crawl). AV and GV sentences take ACTOR and LOCATION, as seen in Examples (25)a and b. CV sentence (25)c appears to be rather derivational in its meaning because it means “to work through (a problem)”, but there is the corresponding AV sentence (25)d. In the two sentences, ACTOR and THEME appear as core arguments.

(25)a	<i>anaʔa</i>	<i>kadioʔa</i>	<i>udde</i>	<i>na-um-omanʔ=ke</i>	<i>i-sindi</i>	AV, past
	child	small	that	NI-UM-crawl=COMP	LOC-here	
	“That baby can already crawl here.”					
b	<i>i-sindi</i>	<i>ni-omanʔ-an</i>	<i>nu-anaʔa</i>	<i>kadioʔa</i>	<i>udde</i>	GV, past
	LOC-here	NI-crawl-ANNA	NU-child	small	that	
	“Here, that baby crawled.”					
c	<i>hatto</i>	<i>udde</i>	<i>ni-omanʔ=ku</i>			CV, past
	problem	that	NI-crawl=NI.1sg			

¹⁸ The causative verb takes the prefix *ia-* in conveyance voice.

“That problem was worked through by me (to solve it).”

d	<i>i-aʔu</i>	<i>na-um-omaŋ</i>	<i>ŋu-hatto</i>	<i>udde</i>	AV, past
	I-1sg	NA-UM-crawl	NU-problem	that	

“I worked through the problem (to solve it).”

In short, *um-omaŋŋa* has two meanings: “to crawl” and “to work through (a problem).” The undergoer voice of the former, which involves LOCATION where the action denoted by the verb takes place, is GV, and that of the latter is CV. This type of derivational meaning is very often found in semantically intransitive triple-voiced verbs. Additional examples are shown in Section 5.1.3.

To summarize, verbs that belong to subtype (D) show a partial correspondence between AV and undergoer voice sentences. Many of them show a correspondence between AV and GV sentences, and CV verbs have derivational meaning, such as the causative meaning in Examples (22)c and (23)c. In some cases, AV verbs include two meanings, one of which is expressed by a GV verb and the other by a CV verb when an undergoer voice is required, as seen in Example (25). Table 11 shows the construction of this subtype of triple-voiced verbs.

5.1.2.2 Triple-voiced verbs with GV verb that is not in correspondence with AV

The following are the examples of triple-voiced verbs that belong to subtypes (E) and (F). These subtypes of verbs show a correspondence between AV and CV sentences in which two core arguments appear. Subtype (E) requires the set of ACTOR - CONVEYED THEME and subtype (F) requires the set of EXPERIENCER - THEME. On the other hand, GV sentences take LOCATION as the subject, which does not appear in both AV and CV sentences as a core argument. One example of subtype (E) is presented in Example (26). Sentences (26)a and (26)b have ACTOR and CONVEYED THEME, and CV sentence (26)b takes CONVEYED THEME as the subject. The AV and CV sentences are in correspondence, but the GV sentence is not. In addition, the meaning of the verb slightly changes in GV form, as shown in Example (26)c.

(26)a AV, past

<i>i-ami</i>	<i>na-malaŋo</i>	<i>n-saʔalanna</i>	<i>udde</i>	<i>su</i>	<i>labuanna udde</i>
I-1pl.EXC	NAN-anchor	NU-boat	that	LOC	port that

“We anchored the boat at that port (i.e., An anchor was thrown to the sea and the boat was anchored).”

b CV, past

<i>saʔalanna</i>	<i>udde</i>	<i>n-i-walaŋo</i>	<i>i-ami</i>	<i>su</i>	<i>labuanna udde</i>
boat	that	NI-I-anchor	NI-1sg.EXC	LOC	port that

“A boat was anchored by us at that port (i.e., An anchor was thrown to the sea and the boat was anchored).”

c GV, past

<i>saʔalanna</i>	<i>udde</i>	<i>ni-walaŋo-an</i>	<i>ni-ami</i>	<i>su</i>	<i>labuanna udde</i>
boat	that	NI-ahcnor-ANNA	NI-1pl.EXC	LOC	port that

“That boat was boarded/attached an anchor by us at that port (i.e., ‘that boat’ is the place where they loaded the anchor).”

Subtype (F) is shown in Example (27) in which sentences (27)a and (27)b contain EXPERIENCER and THEME. Again, the correspondence between AV and CV sentences is observed. GV sentence (27)c takes LOCATION subject, which does not appear in either AV or CV sentences.

(27)a	<i>i-ani</i>	<i>ma-tautt</i>	<i>i-atoanna</i>	AV, non-past		
	I-Annie	MA-be.scared	NI-snake			
	“Annie is scared of snakes.”					
b	<i>atoanna</i>	<i>i-atautt</i>	<i>i-ani</i>	CV, non-past		
	snake	I-be.scared	NI-Annie			
	“Snakes is what Annie is scared of.”					
c	GV, non-past					
	<i>kolayya</i>	<i>su</i>	<i>wingi</i>	<i>n-daranna</i>	<i>udde</i>	<i>ataut-an</i> <i>ni-ani</i>
	cemetery	LOC	side	NU-road	that	be.scared-ANNA NI-Annie
	“The cemetery on the side of the road is where Annie felt scared.”					

To summarize, subtypes (E) and (F) triple-voiced verbs show correspondence between AV and CV sentences. ACTOR or EXPERIENCER is the subject of an AV sentence and CONVEYED THEME or THEME is the subject of a CV sentence. GV sentences, on the other hand, require LOCATION NP as the subject, which is not required in AV or CV sentences: GV verbs of subtypes (E) and (F) do not show derivational meaning because the meaning does not drastically change as seen in the triple-voiced subtype (D) verbs in Section 5.1.2.1 even though syntactically they appear to be derivational. Table 12 shows triple-voiced construction with verbs of subtype (E) and (F).

5.1.3 Triple-voiced verbs with semantically intransitive meaning

Motion verbs that are presented in Section 5.1.2 are semantically intransitive. In this section, other semantically intransitive verbs, which belong to subtype (G) that take three voice constructions, will be presented. Subtype (G) primarily consists of UM-verbs and MA-verbs with only a few MAN-verbs. The shared feature of subtype (G) is that there appears to be no clear correspondence between AV and GV sentences or between AV and CV sentences. In contrast, verbs of subtypes (D) through (F) show a partial correspondence between voice forms. Verbs in subtype (G) normally require (1) ACTOR or EXPERIENCER and (2) CONVEYED THEME, THEME, or INSTRUMENT.

An additional example of motion verbs are shown below, which belongs to subtype (G) because it does not have a clear correspondence between core arguments and voice forms. The verb *maŋ-elekka* (to drift) is semantically intransitive. AV sentence (28)a is also syntactically intransitive with only one core argument: the subject in which its semantic role is ACTOR. GV sentence (28)b includes two core arguments: LOCATION and ACTOR. In CV sentence (28)c, on the other hand, CONVEYED THEME appears as the subject and ACTOR NP appears after the verb. There are two core arguments each for both GV and

CV sentences, but their semantic roles are different. In addition, the corresponding AV sentence is syntactically intransitive with only one argument. There is no clear correspondence between AV sentences and undergoer voice sentences.

- (28)a *uaʔe* *naŋ-elekka* *wuassu* *urume* *watukku* *warane* AV, past
 water NAN-drift from source from valley
 “Water drifted from the source (of water) to the valley.”
- b *tarake* *udde* *ni-elez-an* *nu-uaʔe* GV, past
 big.road that NI-drift-ANNA NU-water
 “That big road was flooded by water.”
- c *niukka* *udde* *ni-ellekk* *u-manawanna* CV, past
 coconut that NI-drift NU-flood
 “That coconut was drifted by flood.”

In Example (29), the semantically intransitive verb *ma-soʔolla* (cough) appears in three voices. There is only one core argument in AV sentence (29)a, and GV sentence (29)b expresses similar meaning with the AV sentence. However, there is an additional meaning in GV form, which expresses that the person, shown as the subject, has undergone suffering by the action denoted in the verb. CV sentence (29)c, on the other hand, takes CONVEYED THEME as the subject. There is no ACTOR present in both of the undergoer voice sentences.

- (29)a *i-ani* *na-soʔolla* AV, past
 I-Annie NA-cough
 “Annie coughed.”
- b *i-ani* *suete* *ni-soʔor-anna* GV, past
 I-Annie already NI-cough-ANNA
 “Annie has already suffered from coughing.”
- c *alaʔa* *udde* *zino=ne* *n-i-soʔolla* CV, past
 mucus that must NI-I-cough
 “That mucus should have coughed out.”

In Example (30), the verb *l-um-agge* (to laugh) is used, and ACTOR (the person who laughs) is present in every voice. However, verbs of different voices convey different meanings. In AV sentence (30)a, only ACTOR (*maria*) appears, which is semantically and syntactically intransitive. GV sentence (30)b is used when a person denoted by a subject NP with GOAL (*hawe n-tou* (her/his friend)) as a semantic role intends to make ACTOR (*maria*) laugh. In contrast, the CV verb in (30)c means something like “to be mocked.” When compared with AV sentences, syntactically derivational phenomena are observed in GV sentences, and semantically derivational meaning is observed in CV sentences.

- (30)a *i-maria* *l-um-agge* AV, non-past
 I-Maria UM-laugh
 “Maria will laugh.”
- b *hawe* *n-tou* *lagge-an* *ni-maria* GV, non-past
 friend NU-3sg laugh-ANNA NI-Maria
 “Her/His friend will make Maria laugh (*Lit.* Her/His friend is what Maria will laugh at).”
- c *hawe* *n-tou* *i-lagge* *m-maria* CV, non-past
 friend NI-3sg I-laugh NI-Maria
 “Mary will mock at her/his friend.”

Another example is *s-um-arande* (to sigh), as seen in Example (31), in which GV and CV verbs express derivational meaning such as “to be begged for (GV)” and “to keep quiet (CV)”. No semantic roles are shared among different voices.

- (31)a AV, non-past
i-aʔu *s-um-arande* *si-ʔo*, *ampuŋe-we* *anaʔa* *udde*
 I-1sg UM-sigh SI-2sg forgive-IMP child that
 “I sigh for you, (because you are robust), (it’s time you) forgave that child.”
- b GV, non-past
i-ʔo *sarande-an=ku*
 I-2sg sigh-ANNA=NI.1sg
 “I beg you (You are the one begged by me).”
- c CV, non-past
hatto *indi* *i-sarande* *si-ʔo* *rannawa-ʔe*
 problem this I-sigh SI-2sg quiet-IMP
 “(I) ask you to keep quiet with this matter (*Lit.* This matter will be sighed for quietly by you).”

To summarize, subtype (G) verbs do not show a clear correspondence between any of the voices, and the syntactic or semantic derivation process can be observed if we compare AV verbs with GV or CV verbs. Many of the semantically intransitive verbs that can take all three voices are categorized in subtype (G).

5.2 Semantic explanation of subtypes of double-voiced verbs

Double-voiced verbs are categorized into three subtypes, as seen in Section 4.3. Section 5.2 examines the morphosyntactic and semantic features of each subtype.

5.2.1 Morphosyntax and semantics of double-voiced verbs type 1

Double-voiced verbs that belong to type 1, as explained in Section 4.3, requires two core arguments: (1) ACTOR and (2) GOAL. The latter semantic role has the feature of non-movability. In addition, it has minimal affectedness by the action denoted in the verb. For example, in Examples (32) and (33), GOAL

NPs do not undergo a drastic change.

(32)a *i-aʔu* *ma-ʔaratiŋŋa/na-ʔaratiŋŋa* *laubb* *i-maria* AV, non-past/past
 I-1sg MA-find/NA-find clothes I-Maria

“I will find/found Maria’s clothes.”

b *laubb* *i-maria* *aratiŋ-aŋ=ku/ni- aratiŋ-aŋ=ku* GV, non-past/past
 clothes NI-Maria find-ANNA=NI.1sg/NI-find-ANNA=NI.1sg

“Maria’s clothes will be/were found by me.”

(33)a AV, non-past/past

i-tou *m-asaʔu/n-asaʔu* *si-maŋitou* *uauggu* *tawe* *ni-r-um-anta*
 I-1sg NA-scold SI-3pl because not NI-UM-come

su *andeʔanna*

LOC party

“She/He scolded them because (they) did not come to the party.”

b GV, non-past/past

i-maŋitou *asaʔu-anna/ni-asaʔu-anna* *uauggu* *tawe* *ni-r-um-anta*
 I-3pl angry-ANNA/NI-angry-ANNA because not NI-UM-come

su *andeʔanna*

LOC party

“They were scolded by her/him because (they) did not come to the party.”

Example (34) also requires ACTOR and GOAL. Here, the entity in this case is referred to as GOAL because that entity is not yet met by ACTOR.

(34)a *i-jofan* *ma-zaddo/na-zaddo* *si-efan* AV, non-past/past
 I-Jofan MA-wait/NA-wait SI-Evan

“Jofan waits for/waited for Evan.”

b *i-efan* *addo-an/ni-zaddo-an* *ni-jofan* GV, non-past/past
 I-Evan wait-ANNA/NI-wait-ANNA NI-Jofan

“Evan is waited for/was waited for by Jofan.”

The data collected up to this point show that double-voiced type 1 verbs require an ACTOR NP and an GOAL NP. The semantic feature of GOAL NPs in a sentence with a type 1 verb is summarized as follows. First, the entity denoted by GOAL NPs does not move in the process of the action denoted by the verb. Second, it is hardly affected by the action denoted by the verb. Non-movability and low affectedness are widely shared among the subject NPs of GV sentences with type 1 double-voiced verbs. Table 13 shows the construction of double-voiced verbs type 1.

Table 13: Construction of double-voiced type 1 verbs

Double-voiced verbs TYPE 1				
AV	Grammatical role	Subject	AV verb	Su- object
	Semantic roles	ACTOR		GOAL
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human \emptyset + non-human		<i>si-</i> pronoun/ sg human <i>su-</i> + pl human/ non-human
	Example	<i>i-harun</i> I-Harun 'Harun will scold them'		<i>ma-saʔu</i> MA-scold
GV	Grammatical role	Subject	GV verb	Agent
	Semantic roles	GOAL		ACTOR
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human \emptyset + non-human		<i>ni-</i> pronoun/ sg human <i>nu-</i> + pl human/ non-human
	Example	<i>i-manjitou</i> I-3pl 'They will be scolded by Harun'		<i>saʔu-an</i> scold-ANNA

5.2.2 Morphosyntax and semantics of double-voiced verbs type 2

Double-voiced verbs that belong to type 2 have AV and CV forms, but not GV forms. The two core arguments are (1) EXPERIENCER and (2) THEME in which the former is the subject of AV sentences and the latter is that of CV sentences.

THEME, or more specifically, an entity that causes a specific feeling (which can also be labeled as REASON), appears as NU- object in AV sentences. It also becomes the subject of CV form in Examples (35)b and (36)b below.

(35)a AV, past

i-tou *na-l-um-ass* *u-anaʔ* *i-tou* *apan* *na-ʔaŋkat=te* *huru*
I-3sg NA-UM-be.pleased NU-child NI-3sg who NA-promote=COMP teacher
"She/He was pleased because of her/his child who became a teacher."

b CV, past

anaʔ i-tou *i-luass/ni-luass* *i-tou* *uaŋgu* *na-ʔaŋkat=te* *huru*
child NI-3sg I-be.pleased/NI-be.pleased NI.3sg because NA-promote=COMP teacher
"Her/his child was (the reason why) she/he was pleased because she/he (child) became a teacher."

- (36)a *i-andi* *ma-zijidd* *u-daranna* *mapia* AV, non-past
 I-Andy MA-think NU-road good
 “Andy will come up with a good way (to solve the problem).”
- b *daranna* *mapia* *i-zijidd* *i-andi* CV, non-past
 road good I-think NI-Andy
 “A good way will come up (to) Andy.”

Similar correspondence is observed with *maṅ-une* (to be angry), *ma-pulu* (to like), *s-um-ujkuta* (to sob, for), and *ma-lliṅa* (to cheat).

Another example of type 2 double-voiced verb is shown below. The avoided entity, which is the subject of CV sentence in (37)b, would not be affected at all by the action denoted by a verb.

- (37)a *i-maria* *ma-linda?a/na-linda?a* *i-harun* AV, non-past/past
 I-Maria MA-avoid/NA-avoid NI-Harun
 “Maria will avoid Harun.”
- b *i-harun* *i-linda?/n-i-linda?* *i-maria* CV, non-past/past
 I-Harun I-avoid/NI-I-avoid NI-maria
 “Harun will be avoided by Maria.”

To summarize, double-voiced type 2 verbs require two core arguments: EXPERIENCER and THEME. Similar to GOAL in type 1 double-voiced verb constructions, the latter argument has minimal affectedness. The difference between GOAL in type 1 sentences and THEME in type 2 sentences is that the former is a concrete entity or location while the latter is an abstract idea or an unseen entity. Table 14 shows the construction of double-voiced verb type 2.

Table 14: Construction of double-voiced verb type 2

Double-voiced verbs TYPE 2				
AV	Grammatical role	Subject	AV verb	Nu- object
	Semantic roles	ACTOR, EXPERIENCER		THEME
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/ sg human <i>nu-</i> + pl human/ non-human
	Example	<i>i-tou</i> I-3sg 'S/he soothed her/his child'		<i>na-naro</i> NA-soothe
GV	Grammatical role	Subject	CV verb	Agent
	Semantic roles	THEME		ACTOR
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/ sg human <i>nu-</i> + pl human/ non-human
	Example	<i>anaj=ŋe</i> I-3pl 'Her/His child was soothed by him/her'		<i>n-i-saro</i> NI-I-soothe

5.2.3 Morphosyntax and semantics of double-voiced verb type 3

Double-voiced type 3 verbs, as already described, take GV form in the non-past tense but CV form in the past tense. As discussed in Sections 5.2.1 and 5.2.2, double-voiced type 1 and type 2 verbs, which consistently select one of the undergoer voices, share the feature that the subject NP of the undergoer voice denotes an entity that is not very much affected by the action denoted by the verb.

As opposed to these verbs, type 3 verbs predominantly take PATIENT as the subject of undergoer voices. A PATIENT NP does not take noun markers when it denotes non-human entity, as described in Section 2.6. Example (38)a shows an AV sentence with ACTOR and PATIENT NPs. The undergoer sentences (38)b (non-past GV sentence) and (38)c (past CV sentence) take PATIENT NP as the subject. In Example (38)b, the entity denoted by PATIENT NP is largely affected and in Example (38)c, the entity, *laubba* (clothes), has been perfectly affected by the “sewing” action.

(38)a AV, non-past/past

i-naj=ku *ma-nabbi?a/na-nabbi?a* *laubb* *i-tuari=?u*
I-mother=NI.1sg MA-sew/NA-sew clothes NI-younger.sibling=NI.1sg
“My mother sews clothes of my sister/brother.”

b GV, non-past

<i>laubb</i>	<i>i-tuari=ʔu</i>	<i>tabbiʔ-an</i>	<i>ni-naŋ=ku</i>
clothes	I-younger.sibling=NI.1sg	sew-ANNA	NI-sew=NI.1sg

“My sister’s/brother’s clothes will be sewn by my mother.”

c CV, past

<i>laubb</i>	<i>i-tuari=ʔu</i>	<i>ni-tabbiʔa</i>	<i>ni-naŋ=ku</i>
clothes	I-younger.sibling=NI.1sg	NI-sew	NI-sew=NI.1sg

“My sister’s/brother’s clothes will be sewn by my mother.”

Similarly, in Example (39) with the verb *ma-ŋizuppa* (to suck) and Example (40) with the verb *ma-nattadda* (to chop), ACTOR and PATIENT NPs appear in AV and undergoer voice sentences. PATIENT is affected once the action is completed.

- | | | | | | |
|-------|---------------------------------------|--------------------------------|-------------------|---------------|--------------------|
| (39)a | <i>i-tou</i> | <i>ma-ŋizuppa/na-ŋizuppa</i> | <i>uaʔe</i> | <i>udde</i> | AV, non-past/ past |
| | I-3sg | MAN-suck/NAN-suck | water | that | |
| | “She/He will suck/sucked that water.” | | | | |
| b | <i>uaʔe</i> | <i>udde</i> | <i>izup-an</i> | <i>ni-tou</i> | GV, non-past |
| | water | that | suck-ANNA | NI-3sg | |
| c | <i>uaʔe</i> | <i>udde</i> | <i>n-i-izuppa</i> | <i>ni-tou</i> | CV, past |
| | water | that | suck-ANNA | NI-3sg | |
| (40)a | <i>i-tou</i> | <i>ma-nattadda/na-nattadda</i> | <i>inassa</i> | | AV, non-past/ past |
| | I-3sg | MAN-chop/NAN-chop | fish | | |
| | “She/He will chop/chopped fish.” | | | | |
| b | <i>inassa</i> | <i>tattaʔ-an</i> | <i>ni-tou</i> | | GV, non-past |
| | fish | chop-ANNA | NI-3sg | | |
| c | <i>inassa</i> | <i>n-i-tattada</i> | <i>ni-tou</i> | | CV, past |
| | fish | NI-I-chop | NI-3sg | | |

However, there are cases in which CONVEYED THEME is selected as a core argument of the verb, as in Example (41). *Harere* (knife) is moved in its position by ACTOR, and it is not greatly affected by the “taking” action. In this sense, it differs from PATIENT NPs, which appear in Examples (38), (39), and (40). Based on the discussions in Section 5.2.2, CONVEYED THEME such as *harere* in Example (41) is expected to take CV form in both the non-past and the past tenses. The verb *maŋ-anu* (to take) is quite exceptional within double-voiced type 3 verbs.

(41)a AV, non-past

<i>i-aʔu</i>	<i>maŋ-anu/naŋ-anu</i>	<i>harere</i>	<i>udde</i>	<i>su</i>	<i>rapuzanna.</i>
I-1sg	MAN-take/NAN-take	knife	that	LOC	kitchen

“I will take/took that knife in the kitchen.”

b	<i>harere</i>	<i>udde</i>	<i>anu-an=ku</i>	<i>su</i>	<i>rapuzanna</i>	GV, non-past
	knife	that	take-ANNA=NI.1sg	LOC	kitchen	
	“I will take that knife in the kitchen.”					
c	<i>harere</i>	<i>udde</i>	<i>ni-anu=ʔu</i>	<i>su</i>	<i>rapuzanna</i>	CV, past
	knife	that	NI-take=NI.1sg	LOC	kitchen	
	“I will take that knife in the kitchen.”					

The same verb, *maŋ-anu*, which appears in Example (42), takes CONVEYED THEME as the subject of undergoer voices. However, in this case, CONVEYED THEME is more like PATIENT because *niukka* (coconut) undergoes a drastic change of state when the action of “taking” is completed, or in this case, when it is forced to detach from the tree. Similarly, the verb *ma-nipo* (to pick up, as in fruits) takes GV in the non-past tense and CV in the past tense.

(42)a	<i>i-tou</i>	<i>maŋ-anu/naŋ-anu</i>	<i>niukka</i>	<i>udde</i>	AV, non-past/past
	I-3sg	MAN-take/NAN-take	coconut	that	
	“She/He will take/took that coconut.”				
b	<i>niukka</i>	<i>udde</i>	<i>anu-an</i>	<i>ni-tou</i>	GV, non-past
	coconut	that	take-ANNA	NI-3sg	
	“That coconut will be taken by her/him.”				
c	<i>niukka</i>	<i>udde</i>	<i>n-i-anu</i>	<i>ni-tou</i>	CV, past
	coconut	that	NI-I-take	NI-3sg	
	“That coconut was taken by her/him.”				

Although we have counterexample like (41) for the claim that double-voiced type 3 verbs takes PATIENT NP as a subject of undergoer voices, there is a strong tendency that verbs that require CONVEYED THEME are found in type 2 whereas those that require PATIENT take a type 3 paradigm. Verbs that denote eating or drinking, such as *um-anna* (to eat anything), *um-inassa* (to eat fish), *ma-naiore* (to eat vegetables), *ma-ŋiruppa* (to suck), and *maŋ-inumma* (to drink), are type 3. Verbs with the meaning of “breaking” are also found among type 3 verbs. For example, there are following type 3 verbs: *maŋ-unsuʔa* (to pierce), *ma-mesaŋŋa* (to break into pieces), *ma-laʒahari* (to cut by a saw), *ma-nutuŋŋa* (to burn), *ma-domba* (to break), *ma-moro* (to cut hair), *ma-zata* (to behead), and *ma-nummaʔa* (to crush). In addition, the following verbs take type 3 paradigms: *ma-olaʔa* (to make), *ma-narihaŋŋa* (to warm), *ma-naʔappa* (to steal), and *ma-piara* (to take care of). Table 15 shows the construction of double-voiced verb type 3.

Table 15: Construction of double-voiced verb type 3

Double-voiced verb: TYPE 3					
AV non- past, past	Grammatical role	Subject	AV verb	NU- object	SU- object
	Semantic roles	ACTOR			PATIENT
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human			<i>si-</i> + pronoun/sg human <i>su-</i> + pl human/ non-human
	Example	<i>i-jofan</i> I-Jofan 'Harun will punch/ punched you'		<i>maŋ-oʔa/naŋ-oʔa</i> MAN-punch	<i>si-ʔo</i> SI-2sg
GV only in the non- past tense	Grammatical role	Subject	GV verb	Agent	NU-object
	Semantic roles	PATIENT		ACTOR	
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/sg human <i>nu-</i> + pl human/ non-human	
	Example	<i>i-ʔo</i> I-2sg 'You will be punched by Jofan'		<i>oʔ-an</i> punch-ANNA	<i>ni-jofan</i> NI-Jofan
CV only in the past tense	Grammatical role	Subject	CV verb	Agent	
	Set of Semantic roles	PATIENT		ACTOR	
	Noun marker	<i>i-</i> + pronoun <i>i-</i> + sg human ∅ + non-human		<i>ni-</i> pronoun/ sg human <i>nu-</i> + pl human/ non-human	
	Example	<i>i-ʔo</i> I-2sg 'You were punched by Jofan'		<i>n-i-ʔoʔa</i> NI-I-punch	<i>ni-jofan</i> NI-Jofan

5.3 Summary: semantic feature of verb and the paradigm

Talud basic verbs are primarily categorized into single-voiced, double-voiced, and triple-voiced verbs. Single-voiced verbs take only AV form and all of them take the same paradigm. Double-voiced verbs are categorized into three types according to the paradigms that they take. Double-voiced type 1 verbs take AV and GV in the non-past and the past tenses, and type 2 verbs take AV and CV in both tenses. Type 3 verbs, however, take AV and GV in the non-past tense but AV and CV in the past tense. The

selected undergoer voice is consistent in type 1 and type 2 double-voiced verbs, but it is not so in type 3 verbs.

Double-voiced verbs of type 1 and type 2 are semantically less transitive because the action denoted by the verb does not affect an entity in an irreversible way. Type 1 double-voiced verbs take ACTOR and GOAL NPs as core arguments, and type 2 double-voiced verbs take EXPERIENCER and THEME as core arguments. In contrast, most of the double-voiced type 3 verbs are semantically transitive because the action denoted by the verb affects the entity.

To support the above description, two sets of sentences with a polysemous verb, Examples (42) and (43), are presented. The base *azo* takes the prefix *maN-/naN-* to form *maŋ-azo*, which includes two meanings. One of them, “to snatch” or to obtain something by force, takes type 3 paradigm and the GV is selected in the non-past tense and CV is selected in the past tense because “something snatched” is PATIENT. When the same AV verb means “to scratch,” it shows a type 3 paradigm, as shown in Example (43). The action of scratching is performed on a certain location. LOCATION requires GV form when it is in the subject position, and so it takes a type 1 paradigm (GV in both the non-past and past tenses).

- | | | | | | |
|-------|--|------------------------------|-------------------------|------------------|-------------------|
| (42)a | <i>i-petrus</i> | <i>maŋ-azo/naŋ-azo</i> | <i>tassa</i> | <i>udde</i> | AV, non-past/past |
| | I-Peter | MAN-snatch/NAN-snatch | bag | that | |
| | “Peter will snatch/snatched that bag.” | | | | |
| b | <i>tassa</i> | <i>udde</i> | <i>azo-an</i> | <i>ni-petrus</i> | GV, non-past |
| | bag | that | I-snatch | NI-Peter | |
| | “That bag will be snatched by Peter.” | | | | |
| c | <i>tassa</i> | <i>udde</i> | <i>n-i-azo</i> | <i>ni-petrus</i> | CV, non-past/past |
| | bag | that | NI-I-snatch | NI-Peter | |
| | “That bag was snatched by Peter.” | | | | |
| (43)a | <i>toumata</i> | <i>udde</i> | <i>maŋ-azo/naŋ-azo</i> | <i>lima=ne</i> | AV, non-past/past |
| | person | that | MAN-scratch/NAN-scratch | hand=NI.3sg | |
| | “That person will scratch/scratched his/her hand.” | | | | |
| b | <i>lima=ne</i> | <i>azo-an/ni-azo-an</i> | <i>ni-toumata</i> | <i>udde</i> | GV, non-past/past |
| | hand=NI.3sg | scratch-ANNA/NI-scratch-ANNA | NU-person | that | |
| | “His/her hand will be scratched/was scratched by that person.” | | | | |

There is a tendency that the subject of the GV is less affected than that of the CV.¹⁹ The location where the action has taken place is hardly irreversibly affected. The NPs with semantic roles of LOCATION or GOAL tend to be the subject of GV verb form, which are minimally influenced by the action. The subject of CV sentences, on the other hand, is more affected from the action denoted by the verb. CONVEYED THEME or INSTRUMENT also moves due to the action denoted by the verb. The difference between the affectedness of the subjects of GV and CV verbs would be the reason why type 3

¹⁹ This argument is suggested by Frantisek Kratokchvil (personal communication).

double-voiced verbs take GV form in the non-past tense and CV form in the past tense. The non-past tense usually denotes future action, and at the point when the action is not yet performed, the entity is entirely unaffected. Thus, the type 3 double-voiced verbs select GV form for the non-past tense. The past tense indicates that the action has been performed and the entity is affected by the action. Then, CV form is selected by type 3 verbs in the past tense. However, further study is necessary to support this argument.

Triple-voiced verbs are morphologically homo-genic because each of them take all three voices in the non-past and past tenses. However, from the morphosyntactic and semantic viewpoints, they are further categorized into seven subtypes according to the semantic roles of their core arguments. The sets of semantic roles found in subtypes (A)–(F) can be described to some extent, but subtype (G) takes so different sets that it is impossible to mention here.

The semantic roles of subtypes (A)–(F) are shown below. Each semantic role is followed by the voice name, which it takes when it is employed as a subject. Subtypes (A), (B), and (C) show a perfect correspondence between the NPs of the semantic roles and the voice forms, but subtypes (D), (E), and (F) show partial correspondence in which only two of the semantic roles and voice forms are involved in it. The third NPs which appear in additional undergoer voice sentences of subtypes (D)–(F) are shown after “+” in the below.

(A) ACTOR (AV) - CONVEYED THEME/THEME (CV) –GOAL (GV)

(B) ACTOR (AV) –INSTRUMENT (CV) - PATIENT/GOAL (GV)

(C) ACTOR (AV) –PATIENT (CV) –BENEFICIARY (GV)

(D) ACTOR (AV) - LOCATION/GOAL (GV)

+ CAUSEE (appears immediately after CV verb) –THEME (CV)

(E) ACTOR (AV) - CONVEYED THEME (CV) + LOCATION (GV)

(F) EXPERIENCER (AV) –THEME (CV) + LOCATION (GV)

It is possible to predict to a certain extent which paradigm a verb takes or of which subtype a verb belongs based on its semantic feature. Some verbs with semantically intransitive meanings are categorized into single-voiced verbs. When they are not single-voiced, they tend to become triple-voiced verbs that belong to subtypes (D) or (G). Most motion verbs and verbs that denote posture change are categorized into subtype (D). The others are categorized into subtype (G), where both CV and GV verbs show derivational meanings. In addition, semantically transitive verbs that employ INSTRUMENT or CONVEYED THEME are categorized into subtypes (A), (B), and (E). Some of them are double-voiced, which take the type 2 paradigm. In other words, only CV forms are allowed in both tenses. Verbs that indicate mental activity or emotion are categorized into triple-voiced subtype (F) or double-voiced type 2. Verbs that denote action, which greatly affects the entity, are mostly found within double-voiced type 3. When the BENEFICIARY is easily related to the meaning of the verb, they take all three voices and are categorized as triple-voiced subtype (C).

6. Conclusion

Talaud verbs take various affixes and their paradigm is difficult to explain. In this article, the paradigms of basic verbs, which take only voice-indicating affixes, are described. Verbs are primarily categorized into single-voiced, double-voiced, and triple-voiced verbs. Single-voiced verbs take only AV form, and triple-voiced verbs take AV, GV, and CV forms. They are morphologically simple in that verbs in each category show the same paradigm. Triple-voiced verbs, however, can be further categorized into seven subtypes according to morphosyntactic correspondence and their semantic roles.

Double-voiced verbs, on the other hand, are morphologically categorized into three types. The difference is found in the choice of the undergoer voice. Double-voiced type 1 verbs take AV and GV forms, whereas type 2 verbs take AV and CV forms. Double-voiced type 3 verbs are unique in that they take AV and GV forms in the non-past tense but AV and CV forms in the past tense. Semantic features of a double-voiced verb affect the choice of the paradigm. Based on the findings in this study, it can be concluded that the semantic features of Talaud basic verbs affect the choice of paradigm.

Abbreviation

-AN NA	Voice-indicating suffix –AN, which indicates Goal Voice
CAUS	Causative derivational prefix <i>pa-</i>
I-	Noun marker for subject NPs (for singular human)
I-	Voice-indicating prefix that indicates Conveyance Voice
NI-	Noun marker for agent NPs and NU-object (for singular human)
NI-	The past tense marker for Undergoer Voices
NU-	Noun marker for genitive NPs (for plural human and non-human)
NU	Linker, Genitive marker, Complementizer
SI-	Noun marker for SU-object (for singular human)
SU-	Noun marker for SU-object (for plural human and non-human)
SU	Locative marker

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タラウド語の動詞

—基礎動詞の形態論—

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キーワード： タラウド語 形態論 動詞のパラダイム サギル諸語 オーストロネシア語族

要旨

タラウド語はインドネシア北スラウェシ州で話されているオーストロネシア諸語の一つである。タラウド語の動詞には様々な接辞が付加する。本論文では、これらの接辞のうちヴォイスを標示する働きを持つ接辞のみが付加した動詞を *basic verb* と呼ぶ。タラウド語の動詞は最大三つの態を持つことができ、*basic verb* はそれがとりうるヴォイスの数によって、*single-voiced*、*double-voiced*、*triple-voiced* の三種に分けられる。本論文ではそれぞれの動詞がどのような形態論的特徴と意味的特徴を持つかについて詳細に論じる。

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