BASAY NOMINAL CONSTRUCTIONS[*]

DORINDA TSAI-HSIU LIU

This paper examines the distributional and syntactic facts of various kinds of nominal constituents in Basay, an extinct East Formosan language, and identifies two suspicious "nominalized" verbal elements—the verbs of the nominalized clauses and the headless relative clauses. Following Chomsky 1970, we adopt two binary category features, [±N] and [±V] and establish the morphosyntactic criteria for features [+N] and [+V] in Basay. The established criteria then help us identify the morphosyntactic properties of the derived nouns, verbs in the nominalized clauses and verbs in the headless clauses. Our study shows that the derived nouns are lexicalized nominals with [+N, −V] values, while the verbs of the nominalized clauses and headless relative clauses carry verbal properties only, being identified as [−N, +V].

1. INTRODUCTION. This paper provides distributional and morphosyntactic facts about various kinds of nominal constituents in Basay, an extinct East Formosan language, and examines possible nominalized verbs in the nominalized clauses and headless relative clauses. The Basay language has not been studied extensively and has been limited by its extremely small database as well. Basay has been extinct for almost one hundred years, and, due to the paucity of the data, there exists very little research on the language, except for Li 1991. The goals for this study are twofold. First, the current study provides details on the nominal constituents in this extinct language. Our study is designed to serve as a database for synchronic studies that focus on exploring the inter-language relationships among Formosan languages and for diachronic research that focuses on ascertaining the historical development and subgrouping of the Austronesian language family. Second, since Basay has certain unique features of nominalized clauses and headless relative clauses not found in other Formosan languages, this study might shed some light on linguistic typological studies.

   A nominal constituent is a syntactic unit that occupies an argument position. According to our corpus, the nominal constituents in Basay include nouns, derived nouns, noun phrases, nominalized complement clauses (nominalized CP), noun phrases modified by relative clauses (RC), and headless relative clauses (headless RC), all of which have the [+N] feature in common. Following Chomsky 1970, we adopt two binary category features, [±N] and [±V], and first apply the morphosyntactic criteria to the set of canonical nouns. We then examine the binary values for derived nouns, verbs of the nominalized CP, and verbs of the headless RC in Basay.

   One major objective in this study is to identify the morphosyntactic properties of the verbs of the nominalized CPs and headless RCs. No such binary-feature examination of verbs in Formosan clauses is evident in the literature. Because there is no extra marking (i.e., nominalizer) attached to these verbs, there are three possibilities for the verbs within these nominal clauses. First, they can still remain verbal ([−N, +V]); second, they can be nominalized ([+N, −V]); and third, they can carry verbal and nominal features ([+N, +V]). Note when our tests are conducted, not every single morphosyntactic criterion can be applied to our constrained data base. Furthermore, no binary-feature examination has been conducted before on verbs in Formosan languages. Despite these facts, we were able to draw some interesting conclusions with regards to the properties of these "suspicious" nominalized verbs.

The results show that verbs of nominalized CPs and headless RCs have different properties from those of the derived nouns. Nouns derived from verbs have the same morphosyntactic behavior as the nouns and other [+N] constituents in Basay. In contrast, the verbs of the nominalized CPs and headless RCs carry only verbal characteristics. This information enables us to establish the internal structures for Basay nominalized CP and headless RCs. In sum, both nominalized CPs and headless RCs are headed by a verb, not a noun. In addition, there are no nominalized verbs in the Basay, only nominalized CPs and headless RCs.

Three interesting findings are discovered as we probe the feature values of the verbs in the nominalized CPs and headless RCs. First, two Basay nominalizers, *-an* and *ka ... an*, are found in the examination of the derived nouns. We propose that *-an* has two homonyms in Basay: one is a voice marker, the other a nominalizer. Second, Basay's subject CPs provide a language fact contrary to Stowell's (1981) CP Resistance Principle, which states that a subject CP without a head noun cannot occur intra sententially in its canonical position to receive case. The subject CPs in Basay can be assigned a nominative case. Third, a language-specific feature of Basay that does not apply to other Formosan languages is found. The wh-word *maunu* 'why' appears as an equational construction and takes a subject complement clause. This morphosyntactic behavior of *maunu* is unique because the wh-word corresponding to the meaning 'why' is either a verb or an adverb in other Formosan languages.

This paper is organized as follows. Section 2 provides some background on Basay and some basic grammar essential to discussion that follows. In order to draw a clear domain for the nominal constituents in Basay, Section 3 sets up the morphosyntactic criteria for the features [+N, −V] and [−N, +V] based on the canonical nouns and verbs in Basay. We scrutinize the morphosyntactic features and behaviors of Basay derived verbs (or deverbal nouns) in Section 4. Section 5 and Section 6 focus on the examination of binary values and morphosyntactic behaviors of the verbs in the nominalized CPs and headless RCs, respectively. Finally, Section 7 reviews the conclusions drawn from this study and lists the unsolved problems that require further study.

2. BACKGROUND KNOWLEDGE.

2.1 THE LANGUAGE. Basay, an extinct Formosan language, was formerly spoken in northern Taiwan. Most of its speakers were scattered around the Taipei basin. Due to a southeastern migration of Basay speakers in the sixteenth century, their distribution also extends east of Ilan, a city in the northeastern Taiwan. Most of the linguistic data on Basay were gathered in the early twentieth century by Erin Asai, a Japanese scholar. Though nearly all the Basay people were almost sinicized and could not speak Basay, he was able to find two old female speakers of Basay. One Basay informant resided in Shinshe, now the Gungliao Town of Taipei County. Erin Asai (1936) collected two sentences, two short texts, and around 1,000 words from her. The other Basay informant was a native speaker of Trobiawan, the dialect of Basay spoken in Ilan. Based on her memory, Asai collected a wordlist, a dozen texts, and a few traditional songs. The fieldwork notes of Asai were not published until Shigeru Tsuchida made them available. On the basis of a few previously unpublished fieldnotes by Ino, Ogawa, Asai, and others, these Basay wordlists were published by Tsuchida (1985) and Moriguchi (Tsuchida et al. 1991).

These limited resources are the only existing linguistic data that can be used for understanding the Basay grammar. According to Li 1999, "various problems emerged" when Asai's fieldnotes were used. Li 1999 mentioned four major problems: (1) some of Asai's handwriting is too messy to decipher; (2) his transcriptions and word boundaries are inconsistent and unreliable; (3) a large number of words in the texts are left without any gloss or explanation; and (4) his Basay informants were not fully competent, thus providing some data that were influenced by other language(s). As mentioned by Li (1995, 1996), the Shinshe speaker was influenced by Taiwanese and the Trobiawan speaker by Kavalan, an East Formosan language. According to Blust (1999), Basay belongs to East Formosan, one out of the ten branches directly under the Proto-Austronesian language. East Formosan is further divided into three subgroups: Northern (Basay-Trobiawan and Kavalan), Central (Amis), and Southeast (Siraya).

The Basay investigated in this study is the Trobiawan dialect of Basay, based on Asai's twelve texts, which were deciphered primarily by Hsiu-ming Huang and Paul Jen-kuei Li. Li's (1999) Basay concise

grammar, which compares the Shinshe and Trobiawan dialects, was also used. According to Li (1999), there are some grammatical differences between these dialects, such as personal pronouns and case markers. For the sake of consistency, this article is only based on the Trobiawan dialect. In the following sections, the basic grammar of Basay will be provided.

2.2 BASIC GRAMMAR OF BASAY. This section provides some basics on the Basay grammar relevant to our discussion of the Basay nominal constructions, including word order, verbal morphology, case marking, and personal pronouns.

2.2.1 WORD ORDER. Basay is a verb-initial language, whose basic word order is VSO. Because some of the case markers are optional in this language, the VSO word order is rather fixed, as shown in (1).

(1)   T<um>asa[1]   jaku   imuanan.   (Text 3)
        sympathize<AV[2]>   1SG.NOM   2PL.OBL
        'I sympathize with you.'

All the oblique NPs follow the nominative NPs in Basay. The verb obligatorily carries a voice marker. There are two voices in Basay: actor voice (AV) and patient/locative voice (P/LV). The verbs can host a bound personal pronouns and/or a tense and aspect marker (TAM). Bound personal pronouns and TAMs are both postverbal bound morphemes. The stem of the verbs can be reduplicated to express tense and/or aspect, while the nouns can be reduplicated to indicate plurality.

2.2.2 VERBAL MORPHOLOGY. A Basay word can be decomposed into a stem verb, a pre-verbal voice marker, a postverbal bound personal pronoun, and a TAM. These verb components will be introduced in the following paragraphs.

Basay has a voice[3] system like other Formosan languages[4]. Li (1999:650–52) states that Basay has two voices: actor voice (AV) and patient/locative voice (P/LV). The main dichotomy of the Basay voice system lies in the distinction between actor voice and non-actor voice (NAV). The voice markers in Basay are listed in Table 1.

TABLE 1. **Voice system in Basay**

Voice	Neutral	Realis	Irrealis
AV	-um-, -m-, mi-, ma-, m- ,me-,	---	---
P/LV	-an	ni-	-aw
IV[5]	---	---	---

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[1] The Basay phonemic system consists of 4 vowels /i, u, ə, a/ and 14 consonants /p, b, t, ts, k, m, n, , s, z, ɬ, r, w, j(y)/. The barred *ł* stands for a voiceless lateral fricative.
[2] The abbreviations used in this paper are listed in the appendix.

[3] In the literature of Austronesian linguistics, the term "voice" is synonymous with "focus," "topic," "pivot," and "trigger." This term in the Formosan and Philippine languages is often used to indicate a certain type of grammatical voice. In this paper, we use "voice" exclusively to avoid confusion with the alternatives.

[4] All the Formosan languages except Rukai use the voice system.

[5] Only one example with a suspicious instrumental voice (IV) marking was found in our data, as shown in (i).

(i)   M-aputs-imu   s-uppa-na-ku. (Text 1.1)
        AV-all-2PL.NOM   IV-NEG.want-ASP-1SG.NOM
        'You all don't want me.'
        (lit. 'I am the tool that you all don't want.')

Seven AV markers can be found in the texts: *-um-*, *-m-*, *mi-*, *ma-*, *m-*, *me-* and   . The usage of the AV markers is lexically determined, as shown in (2).

(2) a. **Me**-qvatiŋ   yaku. (Text 11)
        AV-sick   1SG.NOM
        'I am sick.'

    b. K<**m**>ilim   ta   tama-ya   tina-ya. (Text 2)
        find<AV>   NOM   father-3SG.GEN   mother-3SG.GEN
        'His father and mother found (him).'

    c.   -aui-na   a   ŋazi   a   tsuwai. (Text 1.1)
        AV-go-ASP   NOM   Stone.God   LIG   that
        'That Stone God went.'

The AV markers carry no specific tense and/or aspect function and therefore are termed neutral voice markers.

The suffix *-an* is the neutral voice marker for P/LV. The PV and LV in Basay have been merged into *-an*, as shown in the PV (3a) and LV (3b).

(3) a. KiaLa-**an**[6]   yami. (Text 8)
        pick-P/LV   1PL.EXCL.NOM
        '(The fruits of the autumn maple tree) were picked by us.'

    b. Qanit-**an**-i(j)a-na   sapal   tsuwai. (Text 2)
        tie.up-P/LV-3SG.GEN-ASP   plank   that
        '(She) was tied up by him onto that plank.'

Two other P/LV markers, *ni-* and *-aw*, are used to indicate a realis vs. irrealis event, respectively.

(4) a. Realis P/LV: *ni-*

        Ni-arai   apun. (Text 1.1)
        P/LV-bring   deer
        'The deer has been brought (here).'

    b. Irrealis P/LV: *-aw*

        Anu   kaLnas   maku   torpe-**aw**. (Text 2)
        then   slowly   1SG.NOM   approach-P/LV
        'Then, slowly, I will be approached (by somebody).'

Three major TAMs in Basay are *-pai*, *-i*, and *-na*. All are postverbal bound elements. The first bound morpheme, *-pai*, is used to indicate a future event. Another TAM, *-i*, is used to indicate an irrealis event,

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In (i), the verbal negator *upa* is prefixed with an IV *s-*, and the grammatical subject *-ku* receives the emphatic focus as well as the additional meaning of referring to an instrument. As for this uncertain IV marking, there is no further data available to check the suspicious IV marker.

[6] According to Li (1999), the *L* in Asai's transcriptions probably represents a flap, which can be reanalyzed as /r/.

mostly in a negative, imperative, or conditional sentence. The other TAM -*na* indicates a realis/past event or change of current state. An example of the irrealis marker -*pai* is shown in (5).

(5)   m-aja-**pai**   tunuzun.   (Text 5)
             AV-cook-FUT   glutinous.rice
             '(Mother) will cook glutinous rice.'

One set of short and bound nominative pronominal forms,[7] -*ak*, -*is*, -*im* and -*am*, occurs only in the shape of an infix as illustrated in (6). Note that *t-...-pai* indicates 'do something in the future.'

(6)   a. unu   t<ak>pai (< t-aku-pai)   'What shall I do?'
        b. unu   t<is>pai   (< t-isu-pai)   'What will you (sg.) do?'
        c. unu   t<am>pai (< t-ami-pai)   'What shall we (excl.) do?'
        d. unu   t<im>pai   (< t-imu-pai)   'What will you (pl.) do?'
        e. unu   t<ia>pai   'What will he/they do?'

The irrealis TAM -*i* appears in a declarative, negative, imperative, or conditional utterance, as shown in (7).

(7)   a. Declarative sentence:

         M-aLa-**i**   jaku   tavan. (Text 6)
         AV-take-IRR   1SG.NOM   head.of.aborigine
         'I will take the heads of the aborigine.'

   b. Negative sentence:

         Mia-su   m-kic-**i** . (Text 2)
         NEG-2SG.NOM   AV-wake-IRR
         'You didn't wake up.'

   c. Imperative sentence:

         Ma-kawas   laqiti a,   " tanm-**i**   mau ." (Text 3)
         AV-say   people   bury-IRR   PART
         'People say, "Bury' (her)!"'

   d. Conditional sentence:

         Anu   taval   kaijanu kuka-isu   m-aLa-**i**   kuwanan. (Text 2)
         then   morning   if   can-2SG.NOM   AV-take-IRR   1SG.OBL
         'Then, you can take me (tomorrow) morning if possible.'

The position of the TAM -*na* depends upon which bound personal pronoun it co-occurs with. When occurring with a second or third person bound pronoun, the personal pronoun always precedes -*na*, as shown in (8) and (9).

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[7]Because the reduced bound nominatives are fossilized, the bound nominative pronouns co-occurring with the circumfix are unproductive and cannot appear independently in the Basay texts. Since they are unproductive, this bound nominative set is not included in the personal pronoun sets in Table 3.

(8) Qəzqəz-an-**i(j)na**   ta   vakvaki   a   tsuwai.   (Text 1.2)
     stop-P/LV-3.GEN-ASP   NOM   old.man   LIG   that
     'He was stopped by that old man.'

(9) M-upa-**isu-na**.   (Text 12)
     AV-not.want-2SG.NOM-ASP
     'You don't want (it).'

If the TAM *-na* occurs with a first person bound pronoun *-ku/-aku*, it has to precede the pronoun, as illustrated in (10).

(10) Anu   vivis-an-**i a-na-ku**.   (Text 11)
      then   prop.up-P/LV-3.GEN-ASP-1SG.NOM
      'Then, he propped me up.'

Furthermore, the aspect marker *-na* can intervene between bound personal pronouns, such as *-ia* and *-ku*, as shown in (10).

The functions of *-na* are more extensive than *-pai*, since *-na* can also serve as an indicator of change of current state and attach to a nonverbal element, like *lava* 'night' in (11) and *tuvania* 'the next day' in (12).

(11) Lave-**na**.   "tsakai   maw!"   (Text 1.1)
      night-ASP   return   PART
      'It's night time.' (The old man said to the Stone God), "Please let me return!"'

(12) Tuvania-**na**.   Anu   tanm-an-ia-na.   (Text 7)
      next.day-ASP   then   bury-P/LV-3.GEN-ASP
      'It came to the next day. Then, he buried (her).'

The verb stem can be reduplicated to indicate progressive, habitual aspect, or intensified aspect in Basay, as shown in (13).

(13) a. Reduplication as a progressive marker:

      SaLo-saLoL-an-ia-na   votse   maktsatsejan.   (Text 7)
      RED-water-P/LV-3.GEN-ASP   hot.water   whole.day
      'He keeps watering (his father) for the whole day.'

      b. Reduplication as a habitual marker:

      Semammaŋ   **Lasə**-Laseq-an   ta   vakvaki   a   tsuwai.   (Text 1.1)
      usually   RED-sweep-P/LV   NOM   old.man   LIG   that
      'That old man usually sweeps (the yard).'

      c. Reduplication as an intensified marker:

      Zok-zokkasi-na[8].   (Text 6)
      RED-tired-ASP
      'He is very tired.'

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[8] The geminates are a possible syllable combination in Kavalan.

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The reduplication in (13a) and (13b) is CVCV-word-initial reduplication, while (13c) is CVC-reduplication. Note that reduplication can apply to nouns as well. When reduplication applies to noun stems, the derived reduplicated forms indicate plurality, as shown in (14).

(14)   Reduplication as a plural marker:

    a. Quvanijan.   SuLoL   ta   tuqoqe-ja.   (Text 10)
       ominous   drown   NOM   chicken-3.GEN
       'It is ominous. His chicken was drowned.'

    b. "T<um>qa-it   maw   **ta**-toqoqa-ita
       grill<AV>1PL.INCL.NOM   PART   RED-chicken-1PL.INCL.GEN

       naku[9]   isuwanan.   (Text 12)
       1SG.POSS   2SG.OBL
       'Let's grill the chickens of ours for you!'

The reduplication pattern for plurality in (14b) is the partial Ca- reduplication.[10] It is different from the reduplicated patterns for the verbs, CVCV- and CVC-.

2.2.3 CASE MARKING. Basay nouns are marked by a prenominal case marker except for the oblique proper nouns, which are marked by the bound morpheme *-an*. There are three cases in Basay—nominative, genitive, and oblique. Nominative marks to the agent of an AV sentence, the patient of a PV sentence, and the location of an LV sentence.

There are two functions of genitives. The first is to indicate an actor of a non-actor voice sentence (NAV), that is, P/LV; the other to serve as a personal possessive. The oblique case is used to mark the patient of an AV sentence. In addition, Basay case markers make a distinction between common nouns and proper nouns. The three case markers for common nouns are *ta* for nominative case marking, *nu* for genitive case marking, and *u* for oblique case marking. Two case markers, *ni* and *-an*, are used with genitive proper nouns and oblique proper nouns, while the nominative proper nouns are zero-marked. The Basay case marking system is shown in Table 2.

TABLE 2. **Case markers in Basay**

Case	Nominative	Genitive	Oblique
Common nouns	ta	nu	u
Proper nouns		ni	-an

Examples of the case markers for common nouns and proper nouns are shown in (15) and (16), respectively.

(15) a. Nominative case marker for common nouns: *ta*

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[9] The portmanteau possessive *naku* is derived from *nu + aku > naku.* It functions as a possessive personal pronoun, meaning 'mine'.

[10] Ca- reduplication is quite common in Formosan languages. Ca- reduplication is derived by copying the first consonantal segment of the stem followed by a fixed low vowel [a]. The reduplicant *ta* in **ta**-*toqoqa-ita* is to copy the first consonant of the stem *t* followed by an invariant low vowel.

A ui-na[11]   **ta**   wanak-i a.   (Text 6)
go-ASP   NOM   child-3SG.GEN
'His child went.'

  b. Genitive case marker for common nouns: *nu*

ALa-an   **nu**   pusaLum.   (Text 1.2)
take-P/LV   GEN   aborigines
'(He) was taken by the aborigines.'

  c. Oblique case marker for common nouns: *u*

M-aLa-na   **u**   kavilaan. (Text 2)
AV-take-ASP   OBL   clothes
'(She) took clothes.'

(16) a. Nominative case marker for proper nouns:

Anu " aui inu   Amu(:)t(t)a ?"
then   go where NOM Amuta
'Then, where does Amuta go?'

  b. Genitive case marker for proper nouns: *ni*

Pina   i   tia   na zijan kuwarij-an-na **ni**   Qupa ? (Text 10)
how many PREP FUT NA day   send-P/LV-ASP GEN   Qupa
'In how many days will (something) be sent by Qupa?'

  c. Oblique case marker for proper nouns: *-an*

Zawzaw, k<m>atsau-it   maw   Qupa-**an** ! (Text 10)
Zawzaw marry<AV>-1PL.INCL.NOM   PART   Qupa-OBL
'Zawzaw, let's marry Qupa!'

    Both the nominative and oblique case markers for common nouns are optional. While *laqita* 'villager' in (17a) is preceded by a nominative case marker *ta*, it does not take any case marker in (17b). This indicates that the nominative case marker *ta* is optional. The oblique marker *u* for common nouns is also optional in Basay, as evidenced in (18a) and (18b).

(17) a. " Matay-na-nu ?   nuLatsəŋ-imu,"   t<om>ozo **ta**   **laqiti a**. (Text 5)
       die-ASP-then   deserve-2PL.NOM   say<AV> NOM   villagers
      'The villagers said, "He died then? You deserve it!"'

  b. Ts<um>atsaq-na   **laqita**,   aui-na-ku. (Text 3)
    hurried<AV>-ASP   villagers go-ASP-1SG.NOM
    'Because the villagers were hurried, I went.'

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[11] Asai 1936 makes use of a tie bar " "below the two vowels to mark the coarticulation of two neighboring vowels. In fact, the two segments are neither two vowels nor a diphthong. The first segment is a vowel, while the second a glide homorganic with the second "vowel" transcribed by Asai. For instance, the name of this language was written as "Basai" in Asai's field notes. However, there is no diphthong in this language. The correct transcription of this language name should be "Basay," not "Basai."

(18) a. Tavali(j)a   m-ati-na   s<m>aLa   **u**   **apun**.   (Text 1.1)
        morning   AV-go-ASP   hunt<AV>hunt   OBL   deer
        '(The hunter) was to go hunting deer this morning.'

    b. M-aLai-ti-mu   **apun**.   (Text 1.1)
       AV-bring-ASP-2PL.NOM   deer
       'You bring a deer.'

The genitive case markers for common nouns only occur a couple of times in the Trobiawan texts. However, there is no evidence to prove that they are optional. Also, the oblique case marker for proper nouns *-an* seems to be obligatory, since there is no example of the omitted case marker *-an* in the entire corpus.

The *u* marker is also used to indicate a nominal predicate in sentence-initial position, as shown in (19). Notice that this *u* is no longer a case marker, since predicates do not require case.

(19) **U**   tsa   ta   m-aka i.   (Text 1.2)
     NEU   one   NOM   AV-return
     'Those who return are one.'

A demonstrative in Basay are inflected for case. The examples in (20) and (21) show the nominative and oblique demonstrative pronouns, while no genitive demonstrative pronoun is found in the texts.

(20)   Nominative demonstrative pronouns: *tsizai/tsuwai* 'this/that'

    a. Tsai   **tsizai** ?   (Text 5)
       who   this.NOM
       'Who is this?'

    b. Tsai   **tsuwai** ?   (Text 5)
       who   that.NOM
       'Who is this?'

(21)   Oblique demonstrative pronouns: *zaai* / *tsuwai-an* 'this/that'

    a. Mia   takna   zaai .   mia   takna   **zaai**.   (Text 3)
       not   1SG.want   this.OBL   not   1SG.want   this.OBL
       'I don't want this. I don't want this.'

    b. Anu   unù   tispày ?   Sijamammaŋ-isu   **tsuwaj-an**.
       then   what   2SG.NOM.FUT   only-2SG.NEU   that-OBL
       'Then, what will you do? You only do that.'

On the other hand, determinative demonstratives (or demonstrative adjectives) are postnominal modifiers and cannot carry case.

(22)   M-Lavut-na   ta   vakvakij   **a**   **tsuwai**.   (Text 1.2)
       AV-hate-ASP   NOM   old.man   LIG   that
       'That old man hated (it).'

In (22) the determinative demonstrative *tsuwai* carries no case marking, because the NP *vakvakij a tsuwai* 'that old man' is preceded by a nominative case marker *ta*. It is noteworthy that no singular/plural

division can be found in the Basay demonstratives. The semantic differences can be distinguished only by the contexts and reflected in the sentence translation. In addition, the linker *a* between the head-noun and its modifier is quite common in Basay, as shown in (22).

2.2.4 PERSONAL PRONOUNS. There are three sets of Basay personal pronouns: nominative, genitive, and oblique, as shown in Table 3. There is no distinction between the third person singular and plural in Basay. The distinction between the third person singular and plural is identified by the aid of the context. Notice that the symbol --- in the tables represents an information gap, a result of limited data in the texts.

TABLE 3. **Personal pronouns in Basay**

	Nominative		Genitive	Oblique
	Free	Bound	Bound	Free
1st Singular	kaku / yaku	-aku / -ku	-aku/ -ku	kuanan
2nd Singular	kisu	-isu / -su	-isu / -su	suanan
1st inclusive Plural	kita	-ita / -ta / -it	-ita / -ta	tianan
1st exclusive Plural	yami	-ami	---[12]	mianan
2nd Plural	kimu	-imu / -mu	-imu / -mu	muanan
3rd Singular/Plural	---	-ja	-ja	---

The nominative personal pronouns are composed of free forms and bound forms except for the third person pronouns. Take the first person inclusive plural nominative pronouns, for example.

(23)   M-LiLiŋ   **kita**   anu   t<um>qa-ita.   (Text 12)
         name.of.ritual   1PL.INCL.NOM   when   roast<AV>-1PL.INCL.NOM
         'When we perform *mLiLing* ritual, we roast it (a chicken).'

(24) a. M-iip-**ita.**   (Text 9)
         AV-sleep-1PL.INCL.NOM
         'We sleep.'

      b. -awi-**ta**   m-iip.   (Text 9)
          AV-go-1PL.INCL.NOM   AV-sleep
          'We go to sleep.'
          (lit. 'Let's go to sleep.')

      c. UttKŋ-na.   k<m>an-**it**   maw!   (Text 4)
         noon-ASP   eat<AV>-1PL.INCL.NOM   PART
         'It's already noon. Let's eat!'

The bound nominative personal pronouns in Basay must be attached to a verbal element, such as *iip* 'to sleep' in (24a), *awa* 'to go' in (24b), and *kan* 'to eat' in (24c).

There are two major usages of the genitives. One is to mark a possessor of an object (or possessed), and the other is to indicate an agent in a NAV sentence.

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[12] The possible reconstructed form, according to the systematic variation among different sets, would be **ami*, as suggested by Li (1999).

(25) Genitive pronoun as a possessor: Noun-Genitive

    a. ALa-(a)n-ia-na   tama-**isu**. (Text 4)
       take-P/LV-3SG.GEN-ASP   father-2SG.GEN
       'Your father took it away.'
       (lit. 'It was taken away by your father.')

    b. Vesl-i   maw   kaipan-**su**! (Text 9)
       latch-P/LV   PART   bedroom-2SG.GEN
       'Please lock your bedroom!'

(26) Genitive pronoun as an agent of a NAV sentence: Verb-Genitive

    Mampak-kaku<u>u</u>   putaw-an-**su**? (Text 10)
    how.can-1SG.NOM   chop-P/LV-2SG.GEN
    'How can I be chopped (with an axe) by you?'

    A genitive personal pronoun is always bound and attached to a head noun if it is a possessor, and to a verbal element if it is an agent of a NAV construction.

    With regards to the two-argument verbs, a patient, a location, or a beneficiary is an oblique[13] in an AV sentence, as shown in (27).

(27) a. Oblique as a patient

    Tumasa   jaku   i   **muanan**. (Text 3)
    sympathize 1SG.NOM   PREP   2PL.OBL
    'I sympathize with you.'

    b. Oblique as a location:

    Kuqa-isu   vuq(q)aŋ   **kuwanan**. (Text 2)
    can-2SG.NOM   open   1SG.OBL
    'You can open my place.'

    c. Oblique as a beneficiary:

    KnaLilamu-ita   m-Likan   **tianan**. (Text 3)
    villager-1PL.GEN   AV-cook   1PL.INCL.OBL
    'Our villagers, they cooked for us.'

    The oblique personal pronouns are free forms only. In addition, the oblique pronouns can be preceded by an optional prepositional marker *i*, as shown in (27a) and (28b).

(28) a. Uppa   jami   **suwanan**.   (Text 6)
       NEG   1PL.EXCL.NOM   2SG.OBL
       'We don't want you.'

    b. M-upan-(n)a-ku   i   **su(w)anan**. (Text 1.1)
       AV-NEG-ASP-1SG.NOM   PREP   2SG.OBL
       'I couldn't stand you.'

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[13] Except for Rukai, Formosan languages are not accusative languages. The patients in the AV sentences of Basay cannot be analogical to the patients of the active sentences of the accusative languages, since they are, in fact, the obliques of the antipassive sentences.

3. NOUNS AND VERBS IN BASAY. This section introduces the morphosyntactic criteria for nouns and verbs of languages in general. The [+N] and [+V] morphosyntactic criteria for basic nouns and verbs in Basay will be established in this section.

3.1 GRAMMATICAL CRITERIA FOR NOUNS AND VERBS. The commonly used binary features of the noun and verb dichotomy—[±N] (nominal/non-nominal) and [±V] (verbal /non-verbal)—were first developed in Chomsky's (1970) paper "Remarks on Nominalization." This feature-based approach has constituted an indispensable part of the generative framework. Based on Chomsky's concept of language universal, the feature analysis helps to define some natural classes based on clear-cut binary features for each language. Take English, for example. Chomsky (1974) proposed that nouns, verbs, adjectives, and prepositions in English can be generalized, as shown in (29).

(29)   English:

Noun:	[+N, –V]	Verb:	[– N, +V]
Adjectives:	[+N, +V]	Preposition:	[– N, –V]

English nouns, verbs, adjectives, and prepositions can be represented as complexes of two binary morphosyntactic features. Accordingly, these conceptual binary features are usually embodied by some language facts, some of which differ from language to language, while others are language-universal. For instance, [+N] and [+V] features correspond to English morphosyntactic properties, exemplified in (30) and (31), respectively (Chomsky 1970, Radford 1988).

(30)   Syntactic criteria for the [+N] feature in English:

    a. Ns (or [+N]) can take a pre-nominal determiner, such as *a dog*, ***this** girl*, ***her** house*, etc.

    b. Ns (or [+N]) can be inflected for plurality, such as *dog/dogs*, *story/stories*, *analysis/analyses*, *foot/feet*, etc.

(31)   Syntactic criteria for the [+V] feature in English:

    a. Vs (or [+V]) can be morphologically marked for tense. Examples of the third person singular forms for present/past tense are *sees/saw*, *laughs/laughed*, *goes/went*, *sings/sang*, etc.

    b. Vs (or [+V]) can take an NP complement, such as *see* [NP ***the girl***], *ring* [NP ***the bell***], *destroy* [NP ***the city***], etc.

It can be attested that [–N] and [–V] features in English do not have [+N] and [+V] properties. Consider:

(32)   Syntactic criteria for the [–N] feature in English:

    a. Vs (or [–N]) can**not** take a pre-nominal determiner, such as ****a** write*, ****this** see*, ****her** think*, etc.

    b. Vs (or [–N]) can**not** be inflected for plurality, such as *I write/* we writes*.

(33)   Syntactic criteria for the [–V] feature in English:

    a. Ns (or [–V]) can**not** be morphologically marked for tense, such as *cat/*catted* (past), *girl/*girled* (past), *house/*housed* (past), etc.

b. Ns (or [–V]) can**not** take an NP complement, such as *definition* [NP **the term**], *decision* [NP **the future**], *destruction* [NP **the campus**], etc.

Ungrammaticality helps identify the negative features, [–N] and [–V]. The lexical items that do not have [+N] and [+V] properties can be mostly taken as [–N] and [–V], as shown in examples (32) and (33), respectively.

In this paper, we follow this feature-based approach to examine Basay morphosyntactic categories. We examine various kinds of nominal constituents that are, technically speaking, constituents with the [+N] feature in Basay. The distinction between verbs in the nominalized CPs and derived nouns in Basay can be clearly distinguished by the binary feature analysis, despite their both having the same phonological realization. In addition, a higher level of explanatory adequacy can be attained through the provision of a language-universal account to categorize the natural classes in Basay to replace loosely defined terms, such as derived nouns and verbs in nominalized CPs. It should be noted, however, that we cannot gather ungrammatical sentences, since this language is extinct. Based on the grammatical data available in the corpus, we assume that the absence of [+V] features for an item α with [+N] features can help mark α as [+N, –V], and vice versa.

3.2 MORPHOSYNTACTIC BEHAVIOR OF [+N] IN BASAY NOUNS. In a traditional definition of a noun, it refers to a word that names a person, place, or thing. Generally speaking, its major meaning is to denote individuals and entities, while its usage is for reference and identification (Croft 1991). In the binary feature approach, the nouns in Basay can be defined as a natural class with features [+N, –V]. The Basay nouns show the following [+N] features.

A. **Ns can take a case marker**. The case markers in Basay are *ta* (nominative common nouns), (nominative proper nouns), *nu* (genitive common nouns), *ni* (genitive proper nouns), *u* (oblique common nouns), and *-an* (oblique proper nouns). Notice that the case markers *ta* and *u* are optional. Example (34) shows a noun preceded by a case marker.

(34)   Mə-zuwaLes   [NP **ta**   pusaLum].   (Text 1.2)
        AV-many   NOM   aborigines
        'The aborigines are many.'

B. **Ns can take a possessive personal pronoun**. Possessive personal pronouns are bound and always attached to the head noun. Below are the examples:

(35) a. tina-**ku**   'my mother'   (Text 5)
        mother-1SG.GEN

      b. apun-**su**   'your venison'   (Text 5)
        venision-2SG.GEN

C. **Ns can take a demonstrative**. The demonstratives in Basay are postnominal modifiers and can be linked with their head noun by an optional ligature, as shown in (36).

(36) a. voŋvoŋ   a   **tsuwai**   'that awn'   (Text 8)
        awn   LIG   that

      b. sapal   **tsuwai**   'that plank'   (Text 2)
        plank   that

D. **Ns can be reduplicated for plurality**. In Basay, Ca- or CV- partial reduplication can indicate the plurality of nouns, as shown in (37a) and (37b), respectively.

(37) CV- partial reduplication for nouns:

    a. **ta**-toqoqa   'chickens'   (Text 12)
       RED-chicken

    b. **le**-lesau   'trees'   (Text 2)
       RED-tree

In all the texts, there are only two examples of reduplication. This is because Basay normally does not use this morphological marking to make a distinction between singular and plural nouns. Notice that the usage of Ca- and CV- partial reduplication patterns carry some emphatic functions in discourse other than plurality.

3.3 MORPHOSYNTACTIC BEHAVIOR OF [+V] IN BASAY VERBS. A verb, in general, refers to a word that names an action or state. Its major function is to denote an event or action for the purpose of predication (Croft 1991). Some languages have verbs and adjectival verbs under one part of speech (verbs), while others can have verbs as well as adjectives in two parts of speech (verbs and adjectives, respectively). Basay is one example of the first type of language. In Basay, "true" adjectives do not exist. As a result, all words that carry semantic meanings similar to that of an adjective fall into the category of verbs and possess the [+V] feature. Basay [+V] lexical items can be characterized by the following morphological and syntactic properties.

A. **Vs can take a voice marker**. In Formosan languages, a set of voice markers affixed to verbs signals the semantic role of the nominative case-marked argument of the sentence, as shown in (38).

(38) a. Actor voice:

    M-ati   **ta**   vutsutsa   ø-tsap[ə{a].   (Text 1.1)
    AV-go   NOM   Chinese   AV-approach
    'The Chinese goes to approach (the Stone God).'

    b. Patient/Locative voice:

    Anu   pase   klat-**an**   u   vav ui-na.   (Text 6)
    then   maybe   bite-P/LV   OBL   boar-ASP
    'Then, maybe (he) was bitten by a boar.'

B. **Vs of different voice marking require specific case marking on certain arguments**. The case marking for the argument(s) of an AV sentence is different from the one for the arguments of a P/LV sentence, as illustrated in (39).

(39) a. AV construction:

      AV-Verb   <u>NOM   NP</u>   <u>OBL   NP</u>
                 (agent)   (patient)

    b. P/LV construction:

      P/LV-Verb   <u>GEN   NP</u>   <u>NOM   NP</u>
                  (agent)   (patient)

The agent of the AV verb is assigned a nominative case, while the patient is assigned an oblique case marking, as shown in (40a). As for a P/LV sentence, the agent takes a genitive case and the patient a nominative case, as shown in (40b).

(40) a. AV sentence:

    K<um>an-**isu**   **u**   **vaútn-ja**[14]. (Text 1.1)
    eat<AV>-2SG.NOM   OBL   fish-3SG.GEN
    'You eat his fish.'

    b. P/LV sentence:

    Qatots-an-**i** **a**   **ta**   **qa liva-(j)aku**[15]. (Text 11)
    take.off-P/LV-3.GEN   NOM   clothes-1SG.GEN
    'He took off my clothes.'
    (lit. 'My clothes were taken off by him.')

C. **Vs can host a bound personal pronoun**. In Basay, there are two sets of bound personal pronouns: nominative and genitive. The genitive personal pronouns attached to the verbs can only refer to the agent of an action (or event), not the possessor of an entity or object, as evidenced by *-ku* (the agent of the action mat in 'to get up') in (41a) and *-aku* (the agent of the action *spaL* 'to spread a mat') in (41b).

(41) a. -mat in-na-**ku**. (Text 11)
    AV-get.up-ASP-1SG.NOM
    'I got up.'

    b. ' SipaL-i   maw,' nisu.   SpaL-an-**aku**.   (Text 9)
     lay.a.mat-IMP wish say.2SG.mother lay.a.mat-PV-1SG.GEN
    'You said, "Spread the mat!" And I spread the mat.'

D. **Vs can take a tense/aspect marker**. Every Basay verb is able to take a TAM. Basay verbs that occur with the irrealis TAM *-pai* are exemplified in (42).

(42) Irrealis: *-pai*

    m-atai-**pai**   'will die'   (Text 7)
    AV-die-FUT

    tsapə -au-**pai**   'will be approached'   (Text 7)
    appraoch-P/LV-FUT

We do not adopt the realis/past event marker *-na* as a [+V] criterion because *-na* is extremely extensive in use, and has homophones, as discussed in Section 2.2.4. Therefore, it is not effective to use *–na* as a diagnostic test for [+V].

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[14] Asai did not explain about this diacritic marker. According to Paul Jen-kuei Li's personal comment, it is an acute accent indicating a syllable with a high pitch. This can be evidenced by For instance, *baut* 'fish' in Kavalan is a disyllabic word and the high pitch (or stress) falls on the second syllable.

[15] The greve marker below the segment *i* and *j* seems to indicate the segment becomes a glide. However, Asai did not provide any notes about this diacritic marker.

E. **Vs can be reduplicated for aspect and intensification**. Basay verbs can take reduplicated forms to function as an aspect marker (i.e., progressive and habitual) or intensifier. But the reduplicated form of verbs can never indicate plurality.

(43) Sikùz   ŋajau,   semmaŋna **Lasə**-Laseq-an. (Text 1.1)
      back.yard   front   usually   RED-sweep-P/LV
      'The front of the back yard, (the old man) usually sweeps.'

4. DERIVED NOUNS IN BASAY. Derived nouns refer to nouns that are derived from verbal elements by means of affixation. This word formation is called morphological nominalization (Chomsky 1970, Grimshaw 1990, and Spencer 1991). The affixes used for nominalization are the so-called nominalizers. The Basay nominalizer is the suffix -*an*. The examples of Basay derived nouns found in the corpus are all listed in (44).

(44)   Bare verb root   Derived nouns[16]

       i(j)ip   'to sleep'   **ka-ip-an**   'bed/bedroom'
       kan   'to eat'   **kan(n)-an**   'food'
       tuLnij   'to play nose flute' **tuLnij-an**   'nose flute'

Based on the distributional criteria for the Basay [+N] and [+V] features built in Section 3, we shall proceed to examine the morphosyntactic behavior of these derived nouns.

4.1 ARE THE DERIVED NOUNS [+N]? The derived nouns fit the first two [+N] criteria as follows.

A. **The derived nouns can take a case marker**. The derived nouns can be preceded by a case marker, such as the nominative case marker *ta* in (45).

(45)   Po:nel   **ta**   kannan-i ja. (Text 4)
       abundant   NOM   food-3SG.GEN
       'His food is abundant.'

B. **The derived nouns can take a possessive personal pronoun**. The possessive personal pronouns can be suffixed to the derived nouns. In (46), the possessive personal pronoun -*i(j)a* 'his' attached to the noun *kaipan* 'bed' indicates a possessor of the bed.

(46)   Pzaj-an-i(j)a   kaipan-**i(j)a**. (Text 3)
       put-P/LV-3.GEN   bed-3.GEN
       '(She) is put on her bed by him.'

As for the other two [+N] criteria, no relevant data are available in the corpus.

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[16] The verb stems in the derived nouns are slightly different from the bare roots. These deviations are due to Asai's discrepancy of the transcription. The verb stems within the derived nouns and their bare roots should be identical.

4.2 ARE THE DERIVED NOUNS [+V]? The derived nouns do not match the [+V] features, as demonstrated below.

A. **Do the derived nouns take a voice marker or a nominalizer**? Each example of the derived nouns in Basay is consistently composed of a verb root suffixed with *-an*. The suffix *-an* looks identical to the P/LV *-an*. There are two possibilities for this suffix: (1) the nominalizer; and (2) the voice marker.

In the Philippine and Formosan linguistic literature, there is a debate over these two possibilities. Starosta (2002) treated the voice morphology in the relation between nouns and verbs as derivation. Based on this point of view, the voice markers should be categorized as derivational morphemes that create new lexical entries (or new words) by changing the parts of speech. Before Starosta's (2002) claim, the inflectional point of view had been favored by many Philippine and Formosan linguistic studies, such as McKaughan 1958, Wolff 1973, McFarland 1976, Ramos and Bautisa 1986, Ho 1990, Ceña 1993, Huang 1993 and De Guzman 1997. A major distinction between inflectional voice morphology and derivational voice morphology is based on whether a stem inflected with a voice marker creates a new word (derivational morphology) or a new form of the same word (inflectional morphology). Debates on whether the voice morphology in Austronesian languages is derivational or inflectional continue without having reached an agreement.

Based on the corpus, we propose that *-an* represents two homonyms, referring to a P/LV marker and a nominalizing suffix, respectively. According to Comrie and Thompson's (1985) study on lexical nominalization, the Basay nominalizers *-an* and *ka-...-an* are involved with participant nominalization to help derive a nominal to represent the thematic roles of the arguments (e.g., *teacher* for the agent, *employee* for the patient, and *cooker* for the instrument). The derived nouns in the Basay corpus consist of two types of participant nominalization—patient and location nominalization, as shown in Table 4.

TABLE 4. **Nominalizers in Basay**

Participant nominalization	Marker	Example
agent	---	---
patient	-an	kan 'to eat' > kann-an 'food'
location	ka ... an	iip 'to sleep' > ka-ip-an 'bed, bedroom'

Our reasons supporting the conclusion that *-an* has two homonyms are as follows. First, both AV and P/LV markers in Basay can apply to the same verb stem. In (47), the whole set of voice marking, AV *ma-* and P/LV *-an*, can apply to the verb stem *kiaLa* 'to pick'.

(47) a. Awi-ta,   **ma**-kiaLa-ita.   (Text 8)
          go-1PL.INCL.NOM   AV-pick-1PL.INCL.NOM
          'Lets go! We pick (bishopwood fruit).'

      b. Anu   " kiaLa-**(a)n**-imu   u?"   (Text 8)
          then   pick-PV-2PL.GEN   Q
          'Then, (the aborigine asked,) "do you pick (the fruit of bishopwood)?"'

If Basay voice markers can function as nominalizers at the same time, an AV marker should be able to create a derived noun and occur in an argument position. However, no derived noun with an AV marker could be detected in our data. Take (48), for example. The infix *-um-* attached to the *tuLani* 'to blow with nose' in (48a) is an AV marker. No *t<um>uLani* can function as a nominal in the corpus—neither with a nominalized action meaning 'blowing with nose' nor a participant nominal meaning 'blower with nose'. In (48b) the suffix *-an* on the lexical item *tuLnijan* 'nose flute' is not a voice marker but a nominalizer, since the voice of the whole clause is carried by the null AV marker of the verb *vlai* 'to give'.

(48) a. Ma:saŋ   wanakk   a   saqaLaqalavejan   t<**um**>uLani.   (Text 4)
        past   child   LIG   whole.day   blow.with.nose<AV>
        'In the past there was a child who played his nose flute all day long.'

   b. " Mai-mu   -vlai   kuanan   **tuLnijan**,   ma-taay   takna."   (Text 4)
        not-2PL.NOM   AV-give 1SG.OBL   nose.flute   AV-die   1SG.want
        '(The child cried and said,) "If you don't return my flute, I will die."'

Second, the suffix -*an* attached to the derived noun is not a voice marker because its variation *ka ... an* in *kaipan* 'bed/bedroom' is not a voice marker in the Basay voice-marking system. If the *ka ... an* were a voice marker in Basay, it should be able to occur in a verbal position. However, in the entire database the *ka ... an* derived nouns occur only in an argument position.

Based on the above facts, we propose that Basay voice markers and nominalizers should be treated as two separate morphemes (affixes) despite the fact that they share an identical phonological shape. The marking attached to the Basay derived nouns is a nominalizer, not a voice marker. Notice that we do not imply that the Basay voice system supports inflectional morphology or derivational morphology, because we do not examine grammatical phenomena related to this intriguing issue.

B. **The derived nouns do not take a tense/aspect marker, except for -*na*, which indicates a change of current state**. The derived nouns always appear in an argument position in Basay. It is impossible for them to take a TAM as other verbal elements do. One exception is a bound -*na*, which marks a change of current state, as evidenced in (49).

(49)   [ILapus-i-ja-**na**   tuLnijan-(i)ja]   -**na**.   (Text 4)
            discard-P/LV.IMP-3.GEN-ASP   nose.flute-3.GEN   -ASP
          'His nose flute will be discarded by him.'
          (lit. The fact that his nose flute will be discarded by him will happen.)

The first -*na* attached to the verb *iLapus* 'to discard' is a realis marker. We propose that the second -*na* ostensibly attached to the derived noun *tuLnijan* 'nose flute' is actually a marker attached to the whole clause. Its function is to mark a change of the current state of the whole event. Though such a phenomenon is unique in Formosan languages, it happens in other languages of the world. Take Mandarin Chinese, for example. The aspect marker *le* ( ), which indicates the change of the current state, can attach to either the phrasal level or the clausal level. In the meanwhile, the same morpheme *le* is also a realis marker. Like the case in (49), Chinese allows the co-occurrence of both *le*'s, the perfective and the aspect markers, as shown in (50).

(50)   Chinese:

        [Ta   kan   **le**   ta   de   haizi]   **le**.
          3SG   see   ASP   3SG   GEN   child   ASP
        'He has seen his child.'
        (lit. 'The fact that he has seen his child happened.')

In (50) the *le* after the verb *kan* 'to see' is the realis marker, while the *le* in the sentence-final position indicates the change of the state of the whole event, implying 'he took action to see his child finally'. It is evident that the realis marker attaches to a verbal element, and the aspect marker to the proposition (or the whole clause). Therefore, the derived noun *tuLnijan* 'nose flute' suffixed with -*na* does not possess a [+V] feature as the verb *ilapus* attached with -*na* does in (49).

C. **The derived nouns cannot host a bound personal pronoun except for a bound genitive indicating a "possessor."** The genitive bound pronoun can attach to a noun and refers to the possessor of the noun.

(51)   Derived noun attached with a bound genitive pronoun:
      lave-na   ' supaL-i   maw   kaipan-**ta**,'   spaL-an-aku.   (Text 9)
      night-ASP   lay.mat-PV.IMP PART bed-1PL.INCL.GEN   lay.mat-P/LV-1SG.GEN
      'At night, (you said), "Please spread a mat on our bed," and I spread it.'

The genitive personal pronoun *-ta* can only be interpreted with the possessive meaning 'our' in (51), which is supposed to co-occur with a nominal element. Example (51) proves that the derived nouns carry the [+N] feature, not [+V] features.

D. **The derived nouns do not require specific case marking on its co-ocurring arguments**. The derived nouns are used as other canonical nouns. They do not take any voice marker or argument. Accordingly, they have no need to require any specific case marking of arguments to collocate with.

As for the last [+V] property of reduplication for aspect and intensification, our database contains no relevant data.

4.3 RECAPITULATION. Based on the above discussion, the featured properties of the derived nouns are shown in the following table. (Note: The symbol ✓ shows that the item examined fits the criterion, while the symbol × shows that the item examined does not meet the criterion.)

TABLE **5. Morphosyntactic properties of derived nouns in Basay**

Basay derived nouns				
[+N] criteria		**[+V] criteria**		
a) [+N] can take a case marker.	✓	a) [+V] can take a voice marker.		×
b) [+N] can take a possessive personal pronoun.	✓	b) [+V] can take a TAM. (It does include *-na* used to indicate a change of current state.)		×
c) [+N] can take a demonstrative.	na	c) [+V] can host a bound personal pronoun. (It does not include a bound possessive personal pronoun.)		×
d) [+N] can be reduplicated for plurality.	na	d) [+V] of different voice marking requires specific case marking on certain arguments.		×
		e) [+V] can be reduplicated for aspect and intensification.		na

Table 5 shows that the Basay derived nouns possess the morphosyntactic features of [+N, –V]. The derived nouns fit the criteria of [+N] features, while the absense of [+V] morphosyntactic behavior helps to identity their [–V] property.

5. VERBS IN NOMINALIZED CLAUSES. The syntactic structure of a nominalized CP is composed of a D (determiner) followed by a CP (clause) (Abney 1987). In some languages, verbs in the nominalized CPs retain their verbal properties, such as Spanish (Picallo 2002), while verbs become nominalized verbs and carry both verbal and nominal properties in some languages, such as Quechua (Lefebvre and Muysken 1988).

In Basay, a nominalized clause takes the sequence of a nominative case marker followed by a clause, as illustrated in (52).

(52)   maun-isu   [DP **ta**   [CP **t<m>avəli kuwanan tsoŋan**]] ? (Text 1.2)
      why-2SG.NOM   NOM   throw<AV> 1SG.OBL   in.the.river
      'Why did you throw me in the river?'

The clause *t<m>avəli kuwanan tsoŋan* is preceded by a nominative case marker *ta*. In addition, the nominalized CPs behave like an argument and occur in an argument position. In our corpus, most of the nominalized CPs occupy the subject position of an equational construction, as shown in (52). Notice that Basay's subject CPs provide an argument against Stowell's (1981) CP Resistance Principle. This principle states that a subject CP without a head noun cannot occur intrasententially in its canonical position, where it can be assigned case. The subject CPs in Basay can be assigned a nominative case. Because this problem is not part of our endeavors, we do not explore the mechanism of case assignment on the subject CPs. We just note this and leave it for further study.

There are two language-specific characteristics related to Basay nominalized CPs, not shared by other Formosan languages. First, all the nominalized CPs in the entire database are found in the sentences with the predicate *maunu* 'why'. In other Formosan languages, the interrogative pronouns corresponding to the meaning 'why' do not occur in the predicate position of an equational sentence. The 'why' interrogative pronouns manifest diversified patterns across Formosan languages. Typologically, they can be divided into two major types. In the first type, the why interrogative pronouns can be a verbal element, as in Bunun (Zeitoun 2000:93–95), Kavalan (Chang Yung-li 2000b:161–63), Paiwan (Chang Hsiu-chuan 2000:123–34), Seediq (Chang 2000a:126–30), Rukai (Zeitoun 2000:112–13) and Tsou (Zeitoun 2000:126–28). In the second type, the 'why' interrogative pronoun can be an adverbial element, as in Amis (Wu 2000:119–23) and Puyuma (Huang 2000:158–61). The Basay interrogative pronoun *maunu* 'why' stands alone as a third type, in which the interrogative pronoun *maunu* is the predicate of an equational sentence. The predicate function of *maunu* is supported by the fact that a bound personal pronoun in the subordinate clause, such as *-isu* in (52), can be attached to it, a [+V] characteristic. On the other hand, no 'why' interrogative pronoun in other Formosan languages occurs in the predicate position of a nominal construction.

The other language-specific characteristic of the Basay nominalized CPs is that no extra marking (i.e., a nominalizer) occurs in the nominalized CPs. Because of this, the verbs of the nominalized CPs in Basay can be analyzed as follows: (a) they remain as pure verbal elements in the clauses with [–N, +V] features; and (b) they are nominalized verbs with [+N, +V] features. These two possibilities for a verb of a nominalized CP are plausible hypotheses. Our major task in the rest of this section is to examine the morphosyntactic properties of a verb in a nominalized CP based on the morphosyntactic criteria presented in Section 3, in order to determine what feature is associated with those verbs.

5.1 ARE THE VERBS OF THE NOMINALIZED CPs [+N]? The verbs of the nominalized CPs do not fulfill the first two [+N] criteria. No data available to test the other two [+N] criteria.

A. **The verbs of the nominalized CPs do not take any case marker**. The verbs of the nominalized CPs are preceded by a case marker, such as *ta* in (52).

(53) a. maunu   **ta**   [_{CP} **tina-ku**   t<um>avu   taje] ?   (Text 5)
      why   NOM   mother-1SG.GEN   wrap<AV>   shit
      'Why did my mother wrap shit?'

    b. maunu   **ta**   [_{CP} **mia**   m-akai   Amut(t)a] ?   (Text 2)
      why   NOM   NEG   AV-return   NOM   Amuta
      'Why doesn't Amuta return?'

Because Basay is a verb-initial language, the linear order of (52) might mislead us to conclude that the case marker *ta* is for the verbal element *tmavəli*. The examples in (53) prove that the case marker is attached to a clausal level, not to the verb within the clause. The verb of the nominalized CP *t<um>avu* in (53a) is not preceded by any case marker. In (53b) it is impossible for a negator to be case-marked. The

evidence in (53) supports the conclusion that the nominative case marker *ta* is attached to the whole clause, not to a phrasal level.

B. **The verbs of the nominalized CPs do not take a possessive personal pronoun**.

(54)   **maunu**-su   ta   [_{CP} m-upan-su   kuwanan] ?   (Text 1.1)
why-2SG.NOM   NOM   AV-not.want.ASP-2SG.NOM 1SG.OBL
'Why don't you want me?'

In (54) the semantic interpretation for the second person singular nominative -*su* attached to the verb *mupan* refers to the agent of the event, not a possessor of an entity.

As for the other two [+N] criteria, no relevant data were found in the corpus.

5.2 ARE THE VERBS OF THE NOMINALIZED CPS [+V]? The verbs of the nominalized CPs meet the first four [+V] properties with no data applicable to the last [+V] property.

A. **The verbs of the nominalized CPs can take a voice marker**. The verbs in the nominalized CPs are limited to the AV in the corpus,[17] as shown in (55).

(55)   **maunu**-su   ta [_{CP} m-atai],   MutLavay?   (Text 9)
why.2SG.NOM   NOM   AV-die   MutLavay
'Why did you die, MutLavay?'

B. **The verbs of the nominalized CPs can take a tense/aspect marker**. The example in (56) shows that an irealis mood marker -*i* is attached to the verb *t<um>aŋa* in the nominalized CP.

(56)   maunu-si   ta [_{CP} mia   t<um>aŋa-**i**   kuanan] ? (Text 9)
why-2SG.NOM   NOM   NEG   open<AV>-IRR   1SG.OBL
'Why don't you open (the door) for me?'

C. **The verbs of the nominalized CPs can host a bound personal pronoun**. Verbs can take a bound personal pronoun referring to the agent of the verb. In (54) the bound nominative pronoun -*su* attached to *mupan* 'want' indicates the agent of this stative verb.

(54)   maunu-**su**   ta   [_{CP} m-upan-**su**   kuwanan] ?   (Repeated)
why-2SG.NOM   NOM   AV-not.want.ASP-2SG.NOM 1SG.OBL
'Why don't you want me?'

Notice that the subject -*su* of the nominalized CP can be doubled and attached to the predicate of the matrix clause and the verb of the subordinate clause, respectively. The pronoun doubling occurs in the nominalized CPs only a couple of times.

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[17] There are two possibilities why the verbs in the nominalized clauses are AV-marked. One is that the verbs of the nominalized clauses can only take AV-marking. The other is that the verbs of the nominalized clauses do not have such constraint but lack the P/LV marked data in the corpus.

D. **The verbs of the nominalized CPs dictate the specific case marking of arguments, as do other canonical verbs**. In an AV nominalized CP, the agent is assigned a nominative case, while the patient or the beneficiary is assigned an oblique case.

(53) b. maunu ta [_CP_ mia   m-akai   **Amut(t)a**] ? (Repeated)
          why   NOM   NEG   AV-return   NOM   Amuta
          'Why doesn't Amuta return?'

(57) a. mauni-**si**   ta [_CP_ m-upai   **kuwanan**] ? (Text 1.2)
          why-2SG.NOM   NOM   AV-hate   1SG.OBL
          'Why do you hate me?'

      b. ma-unu-**isi**   ta [_CP_ mia   t<um>aŋa-ji   **kuanan**] ? (Text 9)
          why-2SG.NOM   NOM   not   open<AV>IRR   1SG.OBL
          'Why don't you open the door for me?'

The intransitive verb *makai* 'return' co-occurs with a nominative proper noun *Amut(t)a* in (53). In (57) the agents of the transitive *mupai* 'hate' and *tumaŋa* 'open' of the subordinate clauses are attached to the predicate *maunu* in the matrix clauses, while the patient and the beneficiary *ku(w)anan* marked as oblique remain in the subordinate clauses.

5.3 RECAPITULATION. The outcome of the above discussion is summarized in Table 6. The verbs of the nominalized CPs are [–N, +V] in Basay because they do not meet any of the requirements of [+N] categories.

TABLE 6. **Morphosyntactic properties of verbs of nominalized CPs in Basay**

Verbs of the nominalized CPs in Basay			
[+N] criteria		**[+V] criteria**	
a) [+N] can take a case marker.	✗	a) [+V] can take a voice marker.	✓
b) [+N] can take a possessive personal pronoun.	✗	b) [+V] can take a TAM. (It does include -*na* used to indicate a change of current state.)	✓
c) [+N] can take a demonstrative.	na	c) [+V] can host bound personal pronouns. (It does not include a bound possessive personal pronoun.)	✓
d) [+N] can be reduplicated for plurality.	na	d) [+V] of different voice marking requires specific case marking on certain arguments.	✓
		e) [+V] can be reduplicated for aspect and intensification.	na

We now turn to the last component of this research paper, the study of headless RCs.

6. VERBS IN HEADLESS RCs. This section examines whether a verb in a Basay headless RC is nominalized. The linear structure of a headless RC is the same as that of a nominalized CP. Both structures occupy an argument position in a sentence despite the fact that each belongs to different syntactic hierarchical structures.

A RC refers to an embedded clause that modifies a noun phrase. An NP modified by a canonical RC is composed of a determiner, a head noun, a RC, and sometimes, a relativizer between the head noun and the RC, such as relative pronouns (i.e., *who*, *which*, etc.) in English. A missing element (or gap) inside the RC is coreferential with the head noun, such as *the book* [_RC_ *which you choose* ___]. Furthermore, a headless relative RC indicates a RC with a generic null NP (or empty head), such as *whichever* [_RC_ *you choose* ___]. Whether it be a headed RC or a headless RC, the RC is different from a complete clause given that it contains a gap.

Basay relativization can be divided into headed RCs and headless RCs. Basay headed RCs are composed of three basic elements: a head NP, a modifying RC, and an optional ligature, as shown in (58).

(58) Basay headed RC:

ma:saŋ [_DP ø [_NP wanakk a [_RC qaLaqalavejan t<um>uLani ___]]]]. (Text 4)
past   child LIG whole.day   play.nose.flute<AV>
'Once upon a time, (there was) a child who played the nose flute all day long.'

In (58) the headed RC is head-initial. The ligature *a* between the noun head and its modifier is optional. Ligature, according to Trask (1993:160), refers to "a morpheme which in certain languages, notably Austronesian languages, is required to link certain specifiers or modifiers to a head noun within a noun phrase."

The linear order of a headless RC is almost the same as that of a headed RC except for the lack of a head noun. Consider:

(59) Basay headless RC:

nja-tsu   [_DP ta   [_NP m-atai   ___]]. (Text 1.2)
HUM-3   NOM   AV-die
'The (people) who died are three (people).'

The headless RC in (59) lacks both a lexical head and a ligature. No ligature is found between the null head and the headless RC across the database. Structurally, headless RCs are different from headed RCs. In general, a headless RC occurs in the subject position of a pseudo-cleft construction in Formosan languages, as shown in (59). The headless RC and the subject CP exhibit similar morphosyntactic behavior. First, they are directly preceded by a case marker. Second, they occupy a subject position. Third, no special marking (i.e., nominalizer) attached to the verbs within the clauses that can help identify the morphosyntactic properties of the verbs. Therefore, there are two possibilities for the internal structure of the Basay headless RC. The first is that the verb retains its verbal properties in the RC, which would suggest that the headless RC is headed by a verbal projection (just like nominalized verbs in Section 5 above). In contrast, the other possibility favors the noun-headed projection of the Basay headless RCs, in which the verb is nominalized. In order to determine the internal structure of the Basay headless RCs, the morphosyntactic properties of the verbs in the headless RCs will be identified through scrutiny of their [±N] and [±V] features, based on criteria discussed in Section 3.

6.1 ARE THE VERBS OF THE HEADLESS RCs [+N]? The verbs of the headless RCs do not fulfill the two [+N] criteria, and no data are found related to the other two [+N] criteria.

A. **The verbs of the headless RCs do not take any case marker**. Depending on their linear position, the verbs of the nominalized CPs seem to be able to take a case marker.

(60) a. u   tsa   **ta**   m-aka̲i   ___ . (Text 1.2)
         NEU   one   NOM   AV-return
         'The (person) who returns is one.'

      b. " inu   **ta**   **anu**   t<um>avl-isu   ___ ? " (Text 10)
            where   NOM   then   get<AV>-2SG.NOM
         (His son said,) 'Where is the (wife), well, that you will get (for me)?'

In (60a) the nominative case marker *ta* occurs before the verb *m-aka̲i*. The case marker might attach either to the CP or VP level. The discourse marker *anu* 'well' in (60b) suggests that the case marker is

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attached to a clausal level, since the discourse marker *anu* helps mark a constituent boundary in a Basay discourse, as evidenced in the examples in (61).

(61) a. " [_{CP} **anu**   zmakn-isu   uppa-isu   t<um>aqa-na

             then   really-2SG.NOM   not.want-2SG.NOM   roast<AV>ASP

         toqaqa-ita   u   ] ? "   (Text 12)

         chicken-1PL.INCL.GEN   PART

         "Then, do you really not want to roast our chicken?" (asked the child.)

     b. " [_{CP} m-aLa-na   kimu   [_{CP} **anu**   tsakai-na]]." (Text 1.2)

             AV-catch-ASP   2PL.NOM   then   return-ASP

         "(When) you catch (the deer), then, return." (asked the Stone God.)

The discourse marker *anu* is located at the clausal boundary for the matrix clause in (61a) and the subordinate clause in (61b).[18] If *ta t<um>avl-isu* in (60b) formed one constituent, the discourse marker *anu* could not fall between *ta* and *t<um>avl-isu*, but before or after them instead. On the contrary, the clausal-boundary marker *anu* supports the idea that the case marker *ta* is attached at the clausal level. Hence, *t<um>avl-isu* does not take the case marker *ta* in (60b).

     B. **The verbs of the headless RCs do not take a possessive personal pronoun**. They can be linked only to genitive NPs referring to the agent of the proposition.

(62)   "un   ta   k(a)n-t(i)-**imu**[19]   ___ ? "   (Text 3)

         what   NOM   eat-P/LV-2PL.GEN

         'What is the (thing) that you will eat?'

The bound genitive *-imu* in (62) refers to the agent of the verb *kan* 'eat', not the possessor of a certain object.

6.2 ARE THE VERBS OF THE HEADLESS RCs [+V]? All the [+V] properties are met by the verbs of the headless RCs except for the last [+V] property, to which no relevant data can be applied.

     A. **The verbs of the headless RCs can take a voice marker**. The verbs in the headless RCs are not confined to a certain voice. The verbs of the nominalized CPs can be marked with an AV or a P/LV, as shown in (63) and (64).

(63)   P/LV marker:

         un   ta   k(a)n-t(i)-imu   ___ ?   (Repeated)

         what   NOM   eat-P/LV-2PL.GEN

         'What is the (thing) that you will eat?'

---

[18] The bare verb *tsakai* without a voice marker suggests that it is a nonfinite verb of the subordinate clause. Except for the imperative construction, a verb needs to take a voice marker, such as *m-akai*, when occurring in the matrix clause.

[19] The transcription of the P/LV form *k(a)n-t(i)-imu* must have been misspelled by Asai. The correct form should be *kan-an-imu*.

(64)   AV marker:

        akau! tsai-mu   ta   m-Likan ___   tianan? (Text 3)
        Oh!   who-2PL.NOM   NOM   AV-cook   1PL.INCL.OBL
        'Oh! Who are you, the (ones) who cooked for us?'

Note that the headless RC in (64) is a non-restrictive RC used as an appositive for *-mu* 'you'.

    B. **The verbs of the headless RCs can take a tense/aspect marker**. In (65) the verb of the headless RC *q<um>ulu* is attached to an irealis mood marker *-i*.

    (65)   tsai-tia   ta   q<um>ulu-**i**   ___   mijanan ? (Text 3)
        who-FUT   NOM   support<AV>-IRR   1PL.EXCL.OBL
        'Who will support us?'

    C. **The verbs of the headless RCs can host a bound personal pronoun**. The verbs can take a bound genitive personal pronoun that indicates the agent of the predicate.

    (66)   kinan   ta   katiw-an-**su**   _____ .   (Text 10)
        when   NOM   go-P/LV-2SG.GEN
        'When is the (time) in which you go?'

    D. **The verbs of the headless RCs dictate specific case marking of arguments as do other canonical verbs**. In an AV headless clause, the agent is assigned a nominative case, while the patient or the beneficiary is assigned an oblique case, as shown in (67). The P/LV pattern requires a genitive agent, as shown in (66).

    (67)   jaku   ta   ø-vatsun   ___   i   **muanan**.   (Text 1.2)
        1SG.NOM   NOM   AV-dominate   PREP   2PL.OBL
        'The (one) who dominates you is me.'

6.3 RECAPITULATION. The verbs of the headless RCs are [–N, +V] in Basay. The following table shows the results we derived from the above discussion.

TABLE 7. **Morphosyntactic properties of verbs of headless clauses in Basay**

Verbs of the headless clauses in Basay			
[+N] criteria		**[+V] criteria**	
a) [+N] can take a case marker.	✗	a) [+V] can take a voice marker.	✓
b) [+N] can take a possessive personal pronoun.	✗	b) [+V] can take a TAM. (It does include *-na* used to indicate a change of current state.)	✓
c) [+N] can take a demonstrative.	na	c) [+V] can host bound personal pronouns. (It does not include a bound possessive personal pronoun.)	✓
d) [+N] can be reduplicated for plurality.	na	d) [+V] of different voice marking requires specific case marking on certain arguments.	✓
		e) [+V] can be reduplicated for aspect and intensification.	na

7. CONCLUSION. This paper has examined the nominal constructions of Basay in detail and has identified two suspicious "nominalized" verbal elements—the verbs of the nominalized CPs and the headless RCs. The syntactic properties of the nominal constructions are established by Chomsky's (1970) binary-feature complex [±N,±V]. We showed that the derived nouns are lexicalized nominals with [+N, –V] values. In Basay, verbs in the nominalized CPs and headless RCs carry verbal properties only, being identified as [–N, +V]. We used the alternative word order (VSO and SVO) and the discourse marker (*anu*) to prove that a case marker preceding a clause is attached at the clausal level, not the verb phrasal level. It is evident that the verbs of the CPs and headless RCs are not nominalized, but that the clauses themselves are. This suggests that the internal structures for the CPs and headless RCs are headed by a null [+N] element, not a [+V] one. In contrast, the verbal elements within the nominalized CPs are projected from a [+V] head, not a [+N] head. Meanwhile, the clausal structures remain intact, with no overt syntactic nominalization marking.

Three significant points related to the Basay nominal study are worth mentioning. First, we propose that the suffix *-an* has two homonyms. One is the P/LV marker, while the other is the nominalizer. Second, the subject CPs in Basay contradict Stowell's (1981) CP Resistance Principle, which claims that the subject CP cannot be assigned any case due to being located in a caseless position. In the Basay examples, a subject CP can get a nominative case. Third, one language-specific feature of Basay was found in this study. The wh- word *maunu* 'why' occurs in the predicate position of an equational construction and takes a subject CP. In contrast, the wh- word meaning 'why' in other Formosan languages are either verbs or adverbs. They do not appear in an equational sentence, nor do they require a subject CP. We hope this study contributes to the synchronic studies that aim at better understanding the relationships among Formosan languages, as well as to diachronic research focusing on the historical development and subgrouping of the Austronesian language family.

ABBREVIATIONS

ASP	aspect
AV	actor voice
EXCL	exclusive
FUT	future
GEN	genitive
IMP	imperative
INCL	inclusive
IV	instrumental voice
LIG	ligature
NEG	negative
NEU	neutral
NOM	nominative
OBL	oblique
P/LV	patient/locative voice
PART	particle
PL	plural
POSS	possessive
PREP	preposition
RED	reduplicative
SG	singular

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tsaihsiu@hawaii.edu