

## A corpus-based study on the morphosyntactic functions of Waray substantive lexical items

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### Abstract

This study examines the morphosyntactic functions of Waray substantive lexical items and seeks to answer whether they are categorized, pre-categorical, or variable.<sup>1</sup> The issue of “parts of speech” in Philippine languages is discussed in a larger context. It involves a review of the weaknesses of the absolute category and pre-categorical positions. A presentation of data on the validity of the variability position using induction by simple enumeration (qualitative evidence) supports the review. Key terms such as substantive lexical items, absolutely categorized, pre-categorical, variables are defined. A corpus study informed by Dixon (2010) is the quantitative data of this study, which establishes the variability of Waray substantive lexical items. The data consisting of Waray roots undergo a pilot test and adjustments to determine the final data pool of Waray roots. Three independent auditors conduct data validation. Statisticians plot the data on a multidimensional scale (MDS) and triangulate the results. The researcher analyzes and interprets the data. The study shows that Waray roots are variable. Meaning, that a Waray root could be strongly predicative and weaker in membership in the modificative and referential clusters. Or, a Waray root could mostly be utilized as a reference and occasionally as a predicate or modifier as observed in their actual usage in the corpus. The results entail a new scheme in the organization of word classes first articulated by Dixon (2010). This study entails a new model for tagging Waray roots, inflected forms, and those with stem-forming affixes doing away with traditional part-of-speech tags such as noun (n.), verb (v.), adverb (adv.), and adjective (adj.).

**Keywords:** *Philippine languages, clause structure, variationist approach, lexicography, POS tagging*

**ISO 639-3 language codes:** war

## 1. Introduction

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<sup>1</sup> Abbreviations employed in Waray examples are the following: 1EXCL 'First person plural exclusive'; 1SG 'First person singular'; 2SG 'Second person, singular'; 3SG 'Third person, singular'; 3PL 'Third person, plural'; ABS 'Absolute case'; APPL1 'Applicative 1' (Locative or recipient applicative, *-an*); APPL2 'Applicative 2' (Benefactive or transferred item applicative, *-i-*); CAUS 'Causative'; CTRL 'Controlled mood'; COHORT 'Cohortative mood'; NOW 'Completive particle'; DCD 'Decided mood'; DEL 'Deliberate mood'; DEMO 'Demonstrative pronoun/adjective'; DET 'Determiner'; ERG 'Ergative case'; EXIST 'Existential particle'; GEN 'Genitive case'; IMP 'Imperative'; INCOMP 'Imperfective'; INF 'Infinitive'; INTR 'Intransitive'; IR 'Irrealis'; LK 'Linker'; MOD 'Modifier'; NEG 'Negative'; OBL 'Oblique'; P 'Personal name'; PL 'Plural'; Q 'Quantifier'; R 'Realis mood'; RED1 'Partial (#CV-) reduplication'; SG 'Singular'; SUP 'Superlative'; HAP 'Happenstantial mood'; and TR 'Transitive'.

Morphosyntactic function refers to the role performed by a full word or phrase in a sentence—that is, predicative (traditionally known as V), referential (traditionally known as N), and modificative (traditionally known as adjectives and adverbs) (Payne, 1997).\*

A substantive lexical item is a word that expresses rich semantic features. “Semantic features represent the basic conceptual components of meaning for any lexical item” (Fromkin, Rodman, & Hyams 2014, 578). For example, *mother* and *woman* share the common components of *human* and *female* and are, thus, part of a semantic domain of gender. They differ in terms of having or delivering a child, which gives each its separate meaning. Substantive lexical items contrast with grammatical morphemes, such as tense, aspect, modality, and case, which express very narrow meanings. Traditionally, substantive lexical items consist of nouns, verbs, adjectives, and adverbs.

Word classes, or part-of-speech (POS), are a contentious topic that has its roots in the usage of the terms noun (N), verb (V), adjective (Adj.), and adverb (Adv.) (see Wierzbicka, 2000; Vogel and Comrie, 2000; Anward, 2000; Croft, 2000; Haspelmath, 2007; Lehmann, 2008). This controversy has long been present in the study of Philippine languages (see Müller, 1882; Scheerer, 1924; Capell, 1964; Bloomfield, 1917; Lopez, 1937; Schachter & Otones, 1972; Lemaréchal, 1982; Himmelmann, 1987, 1991; Gil, 1993, 2000; and Naylor, 1995 as cited in Himmelmann, 2008).

In Waray, Sanchez (1711), Ezguerra (1747), Figueroa (1872), Sanchez de la Rosa (1878; 1895; 1914), Romualdez (1908), Unruh (1993), Tramp (1997), Makabenta & Makabenta (2004), and Abuyen (2005) suggested that all roots in this language are categorized into nouns (N), verbs (V), adjectives, adverbs, and several minor classes. In the meantime, Foley (1998) put up the precategoriality hypothesis, which holds that roots cannot be classified. Put another way, precategorial roots “are not preclassified in the lexicon for the syntactic functions of N and V” (Bisang, 2008, 568).

Based on Dixon (2010), this study refuses to be drawn into the categoriality or precategoriality debate and chooses to align itself with the variability position by providing a different solution to the word class problem to tackle the challenge of part-of-speech (POS) tagging. Root variability refers to the tendency of Waray roots to serve particular functions; a significant portion of their usage in the corpus is more likely to fulfill referential roles, a smaller portion is more likely to fulfill predicational roles, and a smaller portion is more likely to fulfill modificational roles.

Rather than starting with individual words and their translations into other languages, the work began with a large corpus of Waray in use <[www.corporaproject.org](http://www.corporaproject.org)>.

### **1.1. Absolute categoriality vs. precategoriality positions**

There are six positions on the issue of word categories in Philippine languages. This study grouped the issue into two opposing categories since its aim is mainly to inform Waray's lexicographic decisions.

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The first position is the categorial hypothesis. The categorial position is divided into three strands: (1) the categorial/absolute/traditional hypothesis; (2) Austronesian nominalism; and (3) the Amsterdam Model of Parts of Speech System (AMPSS).

The second is called the precategoryal hypothesis, and it can also be divided into three strands: (1) Foley's (1998) root precategoryal hypothesis; (2) Himmelmann's (1991) complete word precategoryal hypothesis; and (3) Gil's (1993) open syntactic class hypothesis.

### 1.1.1. Absolute categoriality position

Let's take a closer look at the first position, the categorial/absolute/traditional hypothesis. The categorial/absolute hypothesis refers to the Scheme I described by Dixon (2010), which means that roots are strictly bounded.

Austronesian nominalism argues that all roots, including those considered prototypically event-denoting, appear to denote entities on the surface (Himmelmann 2008; Cena 1977). This idea may be traced back to Scheerer (1924) and Capell (1964), leading them to contend that "Tagalog verbs are nouns" (Starosta, Pawley, and Reid, 1982; Himmelmann, 2008).

The AMPSS argues that roots have an inherent argument structure (Croft, 2000; Hengeveld, 1992). Meaning, entity-evoking words when used referentially are not marked; i.e., the root has no affixes or syntactic markings; attribute-evoking words used as modificatives are unmarked, and event-evoking words, when used as a predicate, are not marked.

### 1.1.2. Precategoryal position

In contrast, the precategoryal position views things differently, this position breaks into (1) the root precategoryal hypothesis by Foley (1998); (2) the full word precategoryal hypothesis by Himmelmann (1991); and (3) the open syntactic class hypothesis by Gil (1993).

In the precategoryal hypothesis by Foley (1998), and some others (Müller, 1882; Scheerer, 1924; Capell, 1964; Bloomfield, 1917; Lopez, 1937; Schachter & Otnes, 1972; Lemaréchal, 1982, 1989; Himmelmann, 1987, 1991; Gil, 1993, 2000 and Naylor, 1995 as cited in Himmelmann, 2008), it is suggested that roots are precategoryal. It proposes that all roots have no grammatical category until inflected with voice.

Similarly, the full-word precategoryal hypothesis argues that full words and not only roots are precategoryal because "the classification [i.e., of full words] into major categories is impossible" (Himmelmann 1991, 24; Cf. Hengeveld & van Lier, 2008).

The open syntactic class theory, which maintains that "anything can go anywhere," (Gil 1993, 394) is in the same boat.

## 1.2. The problem with the categorial/absolute/traditional hypothesis

Contrary to the categorial/absolute/traditional hypothesis, roots, however, in Philippine languages do not behave like the canonical Scheme I outlined by Dixon (2010), where the words do not deviate from their respective categories in grammatical usage. A noun root is never utilized in a modificative or predicative function; it only serves a referential function. The same is true with a verb root, which always functions predicatively and never for referential or modificative use.

Other languages in the Philippines provide evidence that contradicts the absolute categoriality position. These examples below show that Waray and other Philippine languages allow lexical elements to cross categories (De Guzman, 1996) even though they are taken in a different context. Take a look at the following instances:

Predicate	Absolutive													
<table style="border: none; border-collapse: collapse;"> <tr> <td style="font-size: 3em; vertical-align: middle; padding-right: 10px;">{</td> <td style="padding-right: 10px;">Háyop</td> <td>animal</td> <td rowspan="5" style="font-size: 3em; vertical-align: middle; padding-left: 10px;">}</td> <td rowspan="5" style="padding-left: 10px;">ang=lalaki=ng iyan NOM=man=LNK that</td> </tr> <tr> <td>Ma-bilis</td> <td>STA-speed</td> </tr> <tr> <td>Ako</td> <td>1S.NOM</td> </tr> <tr> <td>Nasa=kalye</td> <td>PREP=street</td> </tr> <tr> <td>T&lt;um&gt;a~takbo</td> <td>&lt;AV:BEG&gt;IMPRF~run</td> </tr> </table>	{	Háyop	animal	}	ang=lalaki=ng iyan NOM=man=LNK that	Ma-bilis	STA-speed	Ako	1S.NOM	Nasa=kalye	PREP=street	T<um>a~takbo	<AV:BEG>IMPRF~run	
{	Háyop	animal	}			ang=lalaki=ng iyan NOM=man=LNK that								
Ma-bilis	STA-speed													
Ako	1S.NOM													
Nasa=kalye	PREP=street													
T<um>a~takbo	<AV:BEG>IMPRF~run													
‘That man is an animal / fast / me / on the street / running.’														

Here in these examples above from Kaufman (2009), *hayop* ‘animal’ is typically an entity-evoking root, *mabilis* ‘fast’, basically quality-evoking, *ako* ‘I’, typically a pronoun, and *nasa kalye* ‘on the street’, which is a locative NP, all function predicatively. They differ in functionality; the inflected form *Tumakbo* expresses an event or ongoing condition. On the other hand, *Hayop*, *Mabilis*, *Ako*, and *Nasa Kalye* are stative predicates of “being,” whereas events are predicates of “doing.” Here are pieces of evidence that even modifiers, pronouns, and prepositions can also function predicatively. Another example from Gil (2009):

- a. Bata            ang        umawit.  
CHILD    TOP    AT:PFV-SING  
‘The child is the one who sang.’
- b. Umawit                    ang        bata.  
AT:PFV-SING    TOP    CHILD  
‘The child sang.’

In this example, the *bata* in (a) is functioning predicatively, and referentially in (b). Conversely, *ang umawit* in (a) functions referentially as a predicate-argument, as described by Dixon (2010). It could operate predicatively like in (b) minus the determiner *ang*.

De Guzman (1996), studying Tagalog, concluded that roots cross categories. Reid (2002) cites more examples from other Philippine languages crossing categories, like the following:

Tagalog  
Ang babae                    ang        pumasok.  
ANG WOMAN    ANG ENTERED  
‘The one who entered was the woman.’

Ilokano  
ti        áso        ti        immáy.  
TI        DOG    TI        CAME  
‘The one that came was the dog.’

Bontok  
Nan gayyam=ku                    nan        linmayáw.  
NAN FRIEND=1S.GEN    NAN RAN.AWAY  
‘The one who ran away was my friend.’

The same crossing categories appear in Ilokano and Bontok. More examples below illustrate similar constructions from other Philippine languages, such as:

Central Ivatan (Reid, 1966: 62)

Motdeh=qako.

CHILD= NOM. 1S

‘I am a child.’

Botolan Sambal (Antworth, 1979:34)

Mangongonaà hi Pedro.

FISHERMAN DET PEDRO.

‘Pedro is a fisherman.’

Mamanwa (Miller & Miller, 1976:27)

Manga lodzoq ani ini.

DET.PLRL BOLO.KNIFE BE THIS

‘These are bolo-knives.’

Kapampangan (Mirikitani, 1972: 135)

Ing estudyante ing anak=ku.

DET STUDENT DET CHILD-GEN.1S

‘My child is the student.’

Balangaw (Shelter, 1976: 151)

Haén ah Juan.

PRED.1S DET JOHN.

‘I am John.’

Central Cagayan Agta (Healey, 1960:13)

Kaluhung=ku yi Tinoy.

RELATIVE=GEN.1S DET TINOY

‘Tinoy is my relative.’

Tboli (Forsberg, 1992:52)

Ke Ting sewel yó.

LCV TING TROUSER that

‘Those trousers belong to Ting.’

Suban’on (Verstraelen, 1973: 245)

Búat Bonifacio suggéntáw.

FROM BONIFACIO THE.MAN

‘The man is from Bonifacio.’

Hiligaynon (Wolfenden, 1971:167)

Diútay nga bata si Pedro.

SMALL LIG CHILD DET PEDRO

‘Pedro is a small child.’

**1.2.1. The problem with Austronesian nominalism**

Austronesian nominalism argues that what other linguists consider verb forms restricted to the predicate position are nominal categories (including participles and verbal nouns). They are nominal categories because they occur both in argument and in predicative positions (Sasse, 2009). Their (the verbs) morphosyntactic potential (i.e., the constructional slots they occupy) and their typical denotational potential in terms of ontological categories (e.g., entities vs. events) converge (Sasse, 2009). At the root level, all roots are nominal; there are no verbal categories (Kaufman, 2009); however, categorization can happen at the phrasal level. Both entity and event-evoking roots can function predicatively and referentially, as evidenced by the “pervasive use of referential markers” such as *si*, *ni*, *nina*, *nila*, *ang*, and *sa* in Tagalog.

However, the Waray roots exhibit a category at the root level. Let us examine these homographic Waray roots below (syllables in capital letters indicate syllable prominence).

LUbad (M; fading as in a color) Cf. luBAD (V; to fade)  
 LUtaw (M; floating) Cf. luTAW (V; to float)  
 LAway (N; saliva) Cf. laWAY (V; to salivate)  
 KARag (V; to waste; to squander) Cf. kaRAG (M; wasted; lavish)  
 BALay (V; to frame) Cf. baLAY (N; house)  
 TUrog (V; to sleep) Cf. tuROG (M; asleep)  
 LAhap (V; to peel thickly) Cf. laHAP (M; peeled thickly)  
 SUnog (V; to catch fire) Cf. suNOG (M; burned)  
 TUBig (N; water) Cf. tuBIG (V; to water; to become wet)  
 KULob (M; lying in a way with the face and front of the body downward);  
 Cf. kuLOB (V; to lie down with the face and front of the body downward)  
 KUpos (M; deflated) Cf. kuPOS (V; to subside; to get flat)

The utilization of vowel length (others call it stress shift) prevents homophony (Cena, 2012), resulting in a derivational process that affects the word class of (some) roots (Himmelmann, 2008 in Empaynado, 2017).

Moreover, the use of morphosyntactic constraints inhibits homophony. Take the Waray root *tubod*; it has two senses: (i) a spring; water flowing; and (ii) burnt. In (i), it refers to an entity, while in (ii), it refers to an attribute. Notice that when speakers of Waray use this root to perform a modificative function—this function indicating-morphosyntax is necessary:

*tubod* + nga + N      *Ikadi an tubod nga kan-on.*  
 ‘Bring here the burnt rice.’

On the other hand, if the same root will perform a referential function, a different function-indicating morphosyntax is required, as shown below:

*may/an* + *tubod*  
 as in  
*Kitàa an timba kun may tubod.* ‘See if the well has water.’

The behavior of the Waray roots above indicates that they belong to a category aside from being referential. The above two-syllable roots can fit into:

- Class I: Those that are attribute-evoking with prominence on the first syllable, and entity-evoking with prominence on the second--LUbad, LUtaw, LIpong. .luBAD, luTAW, liPONG
- Class II: Those that are entity-evoking with prominence on the first syllable and event-evoking with prominence on the second--TUbig, LAway, TUhod. .tuBIG, laWAY, tuHOD
- Class III: Those that are event-evoking with prominence on the first syllable, and entity-evoking with prominence on the second--BALay, BItay. .baLAY, biTAY
- Class IV: Those that are event-evoking with prominence on the first syllable and attribute-evoking with prominence on the second--KARag, TUrog, LAhap, SUNog . .kaRAG, tuROG, laHAP, suNOG
- Class V: Those that are attribute-evoking with prominence on the first syllable and event-evoking with prominence on the second--KUlob, KUpos, Unat. .kuLOB, kuPOS, kuNAT
- Class VI: Those that can belong to different categories without changing prominence: tuBOD, kiLI-Kili (armpit; also an indigenous tree, *Artocarpus rubrovenia Warb*), BUtong (to pull; to buy; also Cf. buTONG, mature green coconut fruit); kaRAS (small crab; one of the processes in preparing a rice land).

All these examples above invalidate the claim that Philippine roots are nominal. But as the last example shows, roots are categorially distinct and do not allow just any semantically appropriate derivation. One may say *ginsirákan* (exposed to the sun; root *sirak* sunlight), *ginpasirákan*, (was exposed to the sun by somebody), *sumirak* (the sun came out), *násirak* (the sun is shining), *nagsirak* (the sun shone), but never \**ginsirak* (lit. sunned).

### 1.2.2. The problem with the Amsterdam Model of Parts of Speech System (AMPSS)

Using Croft's (2000) examples based on the AMPSS framework, inherently, roots have an argument structure by being unmarked. See these examples in English:

- vehicle (unmarked for reference)→ vehicular (marked for modification)→ **be a**  
vehicle (for predication)
- white (unmarked for modification)→ whiteness (marked for reference)→ **be** white  
(marked for predication)
- destroy (unmarked for predication)→ destruction (marked for reference)→  
destroying/destroyed (marked for modification)

Similarly, in Waray, roots seem to be unmarked in their “default” or inherent morphosyntactic function. However, these roots may also change their morphosyntactic function based on the three different markers or function-indicating morphosyntax (Croft 2000)—inflectional affixes for V; modifying affixes, reduplication, and linker *nga* for M; and pre-nominal case markers for N. Take this illustration of the root *pula* below.

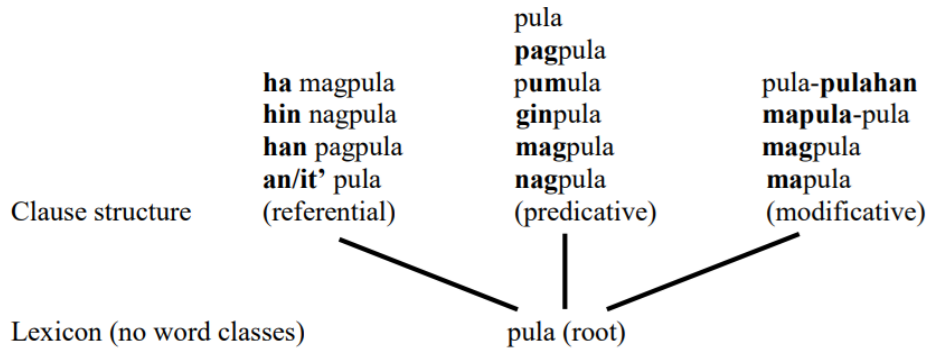


Figure 1. Scheme in the organization of word classes following the AMPSS principle

Notice in the illustration above that the root *pula* ‘red’ has to take “further measures” (to use Hengeveld’s (1992) term) by employing the inflectional affixes for predication, as in, *nagpula*, *magpula*, *ginpula*, *pumula*, *pulahon*, *pulaha*, and *pulahi*, to function as the predicate. Suppose the lexical item has to shift its function to identificational or referential (N). In that case, it has to “take another measure” by utilizing *an/han/hin/ha/it*’ before it as in *an nagpula* (see also (1)). Most Waray roots can also take any modificative affixes like *ma-*, *-án*, *-ón*, and *reduplications* to mark a modificative function. There are so many ways to derive N, V, and M from roots. It would be impractical to enumerate them here. Following the AMPSS principle, *pula* ‘red’, an attribute-evoking root, should not be marked in its modificative function. However, as we can see in Figure 1 above, the root *pula* takes “further measures” in all three morphosyntactic functions except when functioning as a predicate of “being,” as in examples (2) and (3) below.

- (1) An mapula an kuhaa. ‘[You] get the reddish one.’  
 kuha-a  
 ABS. REDDISH ABS. GET-TR.IR.
- (2) Pula an bádò. ‘The dress is red.’  
 RED ABS. DRESS
- (3) Pula an dágat. ‘Red is the sea’.  
 RED ABS. SEA
- (4) Mapula-pula nga humubas an mapula nga dágat.  
 ma.RED2-pula  
 SUP.RED LK EBB ABS. MOD.RED LK SEA  
 ‘The red sea reddishly receded’.
- (5) An pula an nakúha. ‘The red one was the one that was picked.’  
 na-kuha  
 ABS. RED ABS. TR.R.HAP.-GET
- (6) Ginpapula niya an dágat. ‘He/She lets the sea become red.’  
 gin-pa-pula  
 TR.R-CAUSE.RED ERG. ABS. SEA



(7) Nagpula                    an    dágat. ‘The sea turned red.’  
       na-g-pula  
       INTR.R.CNTRL-RED    ABS. SEA

Other examples (one event-evoking root, one entity-denoting root, and one attribute-evoking root) patterned after Hengeveld (1992) and Croft’s function-indicating morphosyntax (1991) provide a further demonstration of how AMPSS holds with Waray. Consider these:

kuha (*get*, event-evoking root; also as an imperative)  
 → **an pagkuha**; **an** kuha (marked for reference)  
 → **nagkuha** (marked for predication)  
 → **kuha-kúhà** (marked for modification or attribution)

abogado (*lawyer*, entity-evoking root)  
 → **pag-abogado**; **an** abogado (marked for reference)  
 → **nag-abogado** (marked for predication)  
 → abogad**ohon** (marked for attribution)

**an** pula **nga** X (pula *red*, attribute-evoking root)  
 → **ginpapula** (marked for predication)  
 → **an pula** (marked for reference)

Based on these examples, these Waray roots do not fit in the AMPSS because, in the Waray language, a lexicon marks for function-indicating morphosyntax (Croft, 1991) at the clause level. Waray roots are not absolutely categorized but exhibit what Lehmann (2008) calls “lower category determinacy” because “the functional flexibility of a lexical class that may occur in various syntactic slots prevents it from manifesting morphologically based subclasses” (Hengeveld, Rijkhoff, & Siewierska, 2004; Helgeveld & Valstar, 2010; see also De Guzman, 1996).

### 1.3. Problems with precategory position

According to Foley (1998), if roots have no argument structure, then roots are precategory. That is, they get their status as N and V only as used in constructions.

In other words, the event-evoking root *kaon*, for example, in Waray is not a verb because it has no argument structure (actor, patient, beneficiary) (Rijkhoff, 2003). However, because the words *kumaon*, *ginkaon*, and *ikaon*, for example, have inflectional affixes, are verbs because they now have an argument structure:

kumáon “eat” (actor)  
 ginkáon “eat” (actor, patient)  
 ikáon “eat” (actor, patient, beneficiary)

Let us test another root, this time an entity-evoking root *balay* ‘house’. This root does not evoke an event or action in the mind of a speaker. However, once inflected with voice, it gives structure to the word, as in:

ginbalay “built a house” (actor, patient)  
 ibalay “built a house” (actor, patient, beneficiary)

ginbalayan “built a house” (actor, patient, location)

The proposition that roots have no argument structures, however, collapses with the existence of Waray roots that shift their syntactic category with the use of vowel length (or stress shift as previously discussed above). This behavior of Waray roots is consistent with Himmelmann’s (2008) position that roots in Philippine-type languages are not precatatorial but “belong to different morpho-lexical classes” (p. 15).

### 1.3.1. The problem with Gil’s (1993), and Himmelmann’s (1991) positions

If “the classification [i.e., of full words] into major categories is impossible,” and “anything can go anywhere”. Then, any root, including property concept words (examples 1 through 7, especially (2) and (3)), particles (ex. 8), demonstratives (ex. 9), and interrogative pronouns (ex. 10), *may* serve a predicational function when affixed with verbal inflectional morphology.

- |      |  |               |                   |                  |                              |
|------|--|---------------|-------------------|------------------|------------------------------|
| (8)  | Ginlala<br>Gin-RED1-la<br>TRANS.-IMERF-ATTEN   | mo<br>2sg.erg | la<br>ATTENUATIVE | ito.<br>Dem.ABS. | ‘You’re underestimating it.’ |
| (9)  | Nákadto<br>RED1-kadto<br>INTR-R-IMPERF-there.  | hi<br>ABS.    | Nanay<br>p.MOM    |                  | ‘Nanay was there.’           |
| (10) | Nag-áano<br>Nag-a-ano<br>INTR.DEL-IMPERF-what? |               | ka?<br>2SG.ABS.   |                  | ‘What are you doing?’        |

We can also see that the full-word precatatorial hypothesis and open syntactic class hypothesis are not the case for Waray. For example, if the particle *la* can take a predicative function for (8), other particles such as *pa*, *na*, *man*, *ba*, *ngahaw*, *daw*, *unta*, and *lagi* cannot. Perhaps, this example, given that it is limited to only a few particles, is “triggered not only by the convenience of using just a word rather than a phrase but also by a desire to create a more expressive, colorful, metaphoric construction needed for a given situation” (De Guzman, 2005, p. 303). Payne (2019) gives a rather clinical description of this phenomenon as coercion of the lexical item into functioning another morphosyntactic function in the right discourse context.

Notice, that affixes are “word class-selective” (Haspelmath 2021, 2023), which means that there are sets of affixes that are particular to each syntactic function: the transitivity-modality affixes for the predicative function, and the modificative affixes for the attributive function. These make the categorization of lexical items possible.

One cannot also align with the precatatorial position because the crossing of categories may not necessarily indicate precatatoriality. For Sasse (2009), roots are not pre-categorial, only that there is a weak noun-verb distinction in Tagalog.” Cruz et al. (2018) offered counter-evidence to the precatatoriality in Philippine languages. They studied the simulative constructions in four Philippine-type languages, namely, Kapampangan, Mandaya, Poroanon, and Tagalog. Simulative refers to a noun case used to indicate likeness, resemblance, or similarity. Cruz et al. (2018) concluded that “word classes” cannot be used as parameters in most simulative construction types of the languages studied. In other words, they indicate that roots, indeed, belong to specific categories.

#### 1.4. Ontological semantic characteristics vs. morphosyntactic functions

This study does away with searching for the *a priori* categories of nouns, verbs, and adjectives, which correlate with entity-evoking words, event-evoking words, and attribute-evoking words, respectively (Hengeveld, 1992; Croft, 2000). *Entity-evoking roots* refer to those roots that evoke images of time-stable entities in the minds of speakers, e.g., *balay* ‘house’, *dágat* ‘sea’, or *bato* ‘stone’. *Event-evoking roots* refer to those that evoke events in the speaker’s mind such as processes, states, and actions, e.g., *lakat* ‘walk’, *lingkod* ‘sit’, or *sakay* ‘take a ride’. And *attribute-evoking roots* refer to those that evoke attributes in the minds of the speaker, e.g., *dákò* ‘big’, *gutí* ‘small’, or *busag* ‘white’ (Cf. Kaufman, 2009).

Morphosyntactic functions for purposes of this study are predicative (traditionally known as V), referential (traditionally known as N), and modificative (traditionally known as adjectives and adverbs) (Payne, 1997). Referential functions are ways of mentioning things or people such as *balay*, *bato*, and *nanay*, while predicative functions are ways of saying something about things or people. Moreover, modificative functions add additional information to clarify or amplify any syntactic unit, be it a predicate, clause, noun, or verb (Payne & Oyzon, in prep.).

The present paper aims to elaborate on the relationship between these two domains of linguistic behavior via a quantitative, discourse-based study.

## 2. Methodology and results

This study utilizes a corpus-based descriptive-correlative research design because the only way to test the study’s hypothesis is through quantitative analysis of a large corpus of natural language use. This particular design fits this study’s purpose—to investigate a correlation among the three morphosyntactic functions of substantive words based on actual usage and test the two other competing hypotheses, namely, the traditional and precategorial positions. None of the previous approaches to word-class membership to date has attempted such an analysis.

There exists a searchable corpus (corporaproject.org) in Waray of naturally occurring texts uniquely suited to this kind of study. The study selected thirty roots at random in their basic and inflected forms and correlated each root with their morphosyntactic functions. If the traditional approach is correct, we expect each form to express one and only one function. If the precategoriality hypothesis is correct, we would expect no correlation between a root and any particular morphosyntactic function. Because of the task’s immensity, the number of sample roots is limited to 30.

### 2.1. How roots are chosen

The investigator selects each root through the following steps:

Step 1 (a) The corpus is divided into three (3) strata: high frequency (041 as the lower limit and 579 as the upper limit); intermediate frequency (580 as the lower limit-1307 as the upper limit); and low frequency (1308 as the lower limit-89579 as the upper limit). (b.) Random selection in high and intermediate strata is limited to substantive lexical items only—meaning, particles, pronouns, pre-nominals, and other non-substantive lexical items are not included in random selection.

Step 2 Random Selection of High-Frequency Roots (a) The lower and upper limits are determined (substantive items ranked 041 through 579); (b) Three (3) three-digit random numbers are generated using the free software online. Each generated number corresponds to a root in the

corpus; and (c) Step 2 is repeated to randomly select sample roots for N, V, and M, consecutively, for a total of nine (9) roots.

Step 3 Random Selection of Intermediate Frequency Roots (a) The lower and upper limits are determined (substantive items ranked 580 through 1307); (b) Twelve (12) three-digit random numbers are generated using the free software previously mentioned. Each generated number corresponds to a root in the corpus; and (c) Step (ii) is repeated to randomly select sample roots for V and M, consecutively, for a total of eighteen (18) roots. All in all, the study had ten (10) prototypically event-evoking roots or (V), ten (10) prototypically entity-evoking roots or (N), and another ten (10) prototypically attribute-evoking roots or (M), for a total of 30 roots.

Table 1. Selected Waray roots used in the study.

<b>high-frequency roots</b>	<b>entity-denoting(N)</b>	<b>event-evoking (V)</b>	<b>attribute-evoking (M)</b>
	anak (offspring)	siring (to say)	dákò (huge)
	nánay (mother)	upod (to tag along)	niyan (later)
	táwo (human)	sugad (to do something as demonstrated)	tanán (all)
	balay (house)	dalágan (run)	dámò (many)
<b>intermediate frequency roots</b>	<b>entity-denoting(N)</b>	<b>event-evoking (V)</b>	<b>attribute-evoking (M)</b>
	patron (fiesta)	abot (to reach)	pira (how much)
	báso (drinking glass)	palit (to buy)	permi (always)
	pádî (priest)	sakay (to ride)	búrod (pregnant)
	bato (stone)	dáop (to go near)	kilalá / kilála (famous)/
	pálad (palm)	tawa (to laugh)	tádong (straight/rightful)
	gab-i (night)	hátag (to give)	siyahan (first)

## 2.2. How syntactic functions of each root are determined

From the inputs above by Foley (1998), Croft (2000), and Payne & Oyzon (in prep.), search parameters for function-indicating morphosyntax for referential (N), predicative (V), and modificative (M) functions are generated.

According to Lehmann (2008), there are four grammatical categorization levels, namely, root, stem, word form, and phrase. “The roots and stem are the lowest levels at which a linguistic sign can be categorized in terms of language-specific structure” (p. 1). However, “the final categorization of a sign is determined by the syntactic function it has to fulfill in the sentence” (Lehmann 2008, 4); since “the major parameter for the distinction of different lexical categories in *Waray* is a morphological one” (italics is Tagalog in Himmelman 2008, 15).

As stated, when a form comments on things or people, it functions predicatively. In other words, a predicate describes situations or expresses ideas of being. A Waray sentence most of the time follows this pattern (Payne & Oyzon, in prep.):

(MOD LK) + PREDICATE + ERG. + ABS. + (OBLIQUE)

Also, a form has a referential function if it mentions things or people (a.k.a. referring expression, RE; also, as a noun phrase, NP). The following formula describes an NP; the optional elements are in parentheses (Payne & Oyzon, in prep.):

DET (DEMO) (PL) (Q) (MOD1 LK) HEAD (LK MOD2)

The head noun is the main part of the noun phrase, and the determiners (DET) such as *an*, *it'*, *ha*, *hin*, *han*, which may be followed by a demonstrative (DEMO), a pluralizer (PL), a quantifier (Q), a modifier + a linker (MOD1 LK) such as *ka* or *nga*, tells you what the role of the NP is in the larger structure. That is, as an absolutive role, an ergative role, or an oblique role. All these roles are occupied by a referring expression (RE). Because of this, the case determiner (e.g. *an*, *it*, *han*) is what makes a phrase or construction referential and therefore must be considered the head of a noun phrase (Nolasco, 2023 November 12; Cf. Dixon, 2010).

Corollary to this, a consistent method of identifying the morphosyntactic function of lexical items in the corpus is needed. Open and close parentheses ( ) are utilized to indicate the morphological processes involved in each form. Bracket [ ], on the other hand, indicates lexical, morphosyntactic constraint, or function-indicating morphosyntax (Croft, 1991; 2000; Himmelmann, 2008).

### 2.2.1. Identifying Referential Function

If the form is the head of a phrase initiated by a pre-nominal particle, it functions referentially. For example: *it' mga bata*; *an duha nga bata*, *han mahúsay nga bata*, etc. A seemingly V or M that falls in this nominal or referential position are entities and not events or qualities (De Guzman, 1996). The following are the search parameters in the corpus for the referential function:

[modifier + linker + root]  
 [pre-nominal particle (X) word-form]  
 [Waray particle + nominalized V]

The frequency of occurrence of each form with the referential function is tabulated.

### 2.2.2. Identifying Predicative Function

If the form has Transitivity-Modality (TM) marking (i.e., inflection) and is not the head of a phrase initiated by a pre-nominal particle, it is predicational (see Payne & Oyzon, in prep. for discussions on Transitivity-Modality (TM) affixes in Waray). For example: *Ginbúro niya an saging*. 'S/he picked the banana.'; *Nagsaka hiya*. 'S/he climbed.'; *Umuli na ako*. 'I went home'; *Kináon ko an tinapay* 'I ate the bread.'

A bare form at the beginning of a clause is also predicational. For example: *Táwo hiya ni Mayor* 'He is the mayor's man.'; *Pula an dágat* 'The sea is red.'; *Lakat ikaw* 'You go.'

The following are the three conditions for search parameters in the corpus for the predicative function.

**Condition a.** function-indicating morphology -- the presence of TM marking. Syntax -- not preceded by a pre-nominal particle or *tig-asoy*:

~∃ pre-nominal particle (X) TM + root

**Condition b.** function-indicating morphology -- the absence of TM marking. Syntax -- followed by an absolutive RE):

~∃TM + root, Absolutive Referring Expression

**Condition c.** function-indicating morphology--relative clauses embedded in a referring expression (RE):

(RE) + [nga] + root with TM affixes + [han; hin; ha]/[nga]

These conditions enumerated and their corresponding function-indicating morphosyntax serve as a basis for examining each sentence and its lexical entry function.

### 2.2.3. Identifying Modificative Function

If the form is part of a phrase initiated by a pre-nominal particle but is not the head (noun phrase or, predicate phrase) and is preceded or followed by the linker *nga* (or the possibility of *nga*), it is functioning modificatively. As in (Payne & Oyzon, in prep.):

(DEMO) DET (PL) (Q) (MOD1 LK) HEAD/PRED. (LK MOD2)

The following are the modificative function-indicating morphosyntax:

[(*word form*) + [linker *nga* or 'n, or *ka*]  
[adjectivizing affixes + root]  
[TM affixes + root + [linker *nga*]]

With these restrictions in mind, including the function-indicating morphosyntax for Waray modifiers, the sentences are examined individually on how each lexical entry functions. The frequencies of occurrence for the modificative function are recorded.

### 2.3. Audit Trail

After the investigator tabulates the data, two English language teachers with master's degrees and another English language faculty member (without a master's degree) were hired to audit the raw data, essentially validating the researcher's frequency count. They are faculty members of the English and Literature Unit of the Leyte Normal University. The audit follows the following process: **Step 1.** From the 30 roots, three roots (10% of 30) are randomly selected. **Step 2.** On each root (that is, from the three (3) roots), forms based on a proportion of existing and non-existing forms in the corpus per category are further randomly selected. Meaning, these formulas determine the number of forms for existing and non-existing forms as a rule of standard in pilot testing: number of existing forms x 10%= number of samples; number of non-existing forms x 10%= number of samples. **Step 3.** Autonomous counting of frequency by each auditor. Each auditor does his/her review independently of each other. **Step 4.** Consensus Building. The results are tallied with the study's results. Differences in scores are discussed and settled consensually.

### 2.4. Multidimensional scale (MDS)

MDS is a model family where the structure of a set of data is represented graphically by the relationships between a set of points in space. MDS is used to detect meaningful underlying dimensions that allow the investigator to explain observed similarities or dissimilarities (distances) between the investigated objects. MDS could also plot and help visualize the clustering and

dispersal of Waray roots, thereby confirming or disconfirming the precategoriality hypothesis; and determining the primary morphosyntactic function of roots. “The important notion here is that, in clustering, there is no requirement for identity. Being very similar is enough for two points to end up in the same cluster” (Nordhoff, 2008,7).

**2.5. Actual results of MDS**

The Multi-Dimensional Scale (MDS) diagram in Figure 2 below clearly shows the “clustering” of each type of root around each function. If roots were truly precategorial, the colored words would be scattered randomly throughout the diagram. If roots were inherently categorized, there would be exactly three overlapping groups of words – one for all entity-evoking roots serving referential functions, one for all event-evoking roots serving predicative functions, and a-third for all attribute-evoking roots serving modification functions.

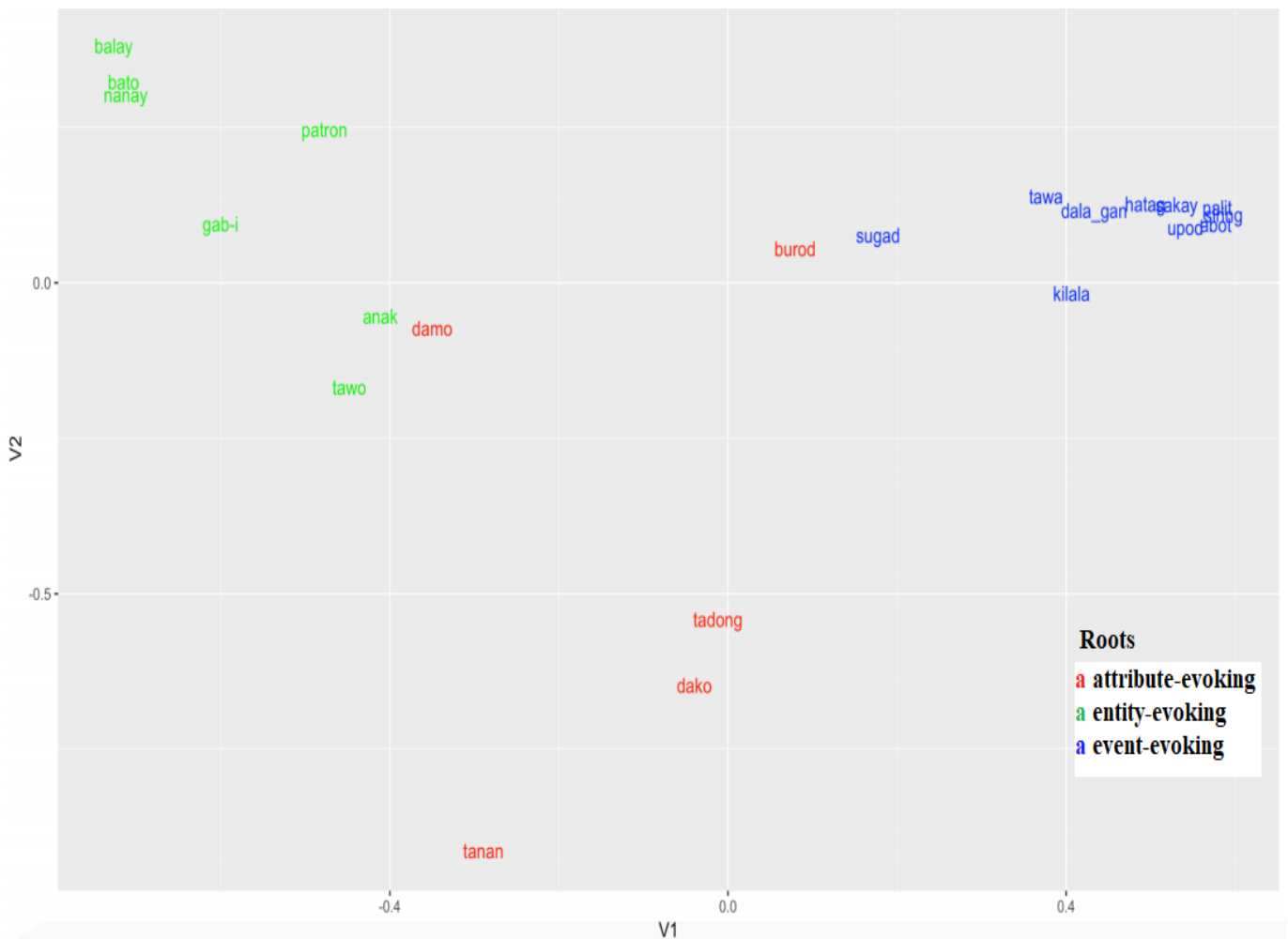


Figure 2. MDS representation of entity-evoking roots, event-evoking roots, and attribute-evoking roots

Instead, what one gets is the clustering of the three semantic groups around each of the three functions. There is a clear preference for entity-evoking roots to serve referential functions, event-evoking roots to serve predicational functions, and attribute-evoking roots to serve modification functions, though no root is constrained to serve only one function.

“A cluster is a set of vectors that share the property of being more similar among themselves than they are similar to other vectors” (Norhoff, 2008, p. 8). The shorter the distance between two points, the greater their similarities; the more significant the distance between points, the greater their dissimilarity. Take, for example, the metric distance between the root *balay house*, at the upper left side of the MDS above, and the root *tawa* located at the upper right side of the MDS. The root *balay* is relatively closer to *dámò* ‘many’, or *anak* ‘offspring’ than to the root *tawa* ‘smile’. In other words, the roots *balay*, *dámò*, and *anak* tend to share a more referential morphosyntactic function than the root *tawa*, which tends to be more predicative.

The MDS above shows three morphosyntactic clusterings of roots. Each of these clusterings points to which roots have similar morphosyntactic functions. In other words, roots that share morphosyntactic features tend to gather in one area, graphically revealing that these roots hold similar structures. Each cluster indicates a grouping or a category.

Therefore, these roots belong to specific categories, and, in this case, they are [1] the upper right side, colored green with referential function as its centroid; [2] the upper left side, colored blue with predicative function as its centroid; and, [3] the lower center side, colored red with modificative function as its centroid. The centroid of a root shows its strong membership.

Note that the labels *attribute-evoking*, or adjective (roots in red), *entity-evoking* or, noun (roots in green), and *event-evoking*, or a verb (roots in blue) hinge on the traditional tagging of these roots in existing Waray dictionaries. However, “the clusterings,” as shown on the MDS above, “cannot be equated with the classical notion of parts-of-speech” (Norhoff, 2008, p. 5). Since “the clusters do not denote classes with clear boundaries, but rather sets of lexemes that are more similar to each other than to other lexemes outside the set” (Norhoff, 2008, p. 25). The clusters simply “describe the probable behavior of a lexeme.”

Using each root's frequencies in the corpus, the MDS did graphically show, without considering their identities or previous labels, which behave in a very similar way to morphosyntactic functions. For instance, roots in the color green in Figure 2 above may have predicative, and modificative functions in the Waray language; however, they are strongly referential as the MDS suggests. Meaning, they are mostly utilized as a reference and occasionally as a predicate or modifier. On the other hand, the blue roots are strongly predicative and weaker in membership in the modificative and referential clusters. This result is consistent with the observation of Thompson (1988) that adjectives in English conversations are usually 68% in the predicative function as opposed to being used as a modificative function (32%).

Dixon (2010) said that *rain* and *thunder* function as nouns in one language, and verbs in another, or—as in English—they may relate to both classes. There are languages with no specific lexeme for *rain*; one just has to say *waterfalls*. Waray illustrates this best by the roots *dámò* ‘many’, and *búrod* ‘pregnant’ in Figure 5; typically, people think of these roots as modifiers or adjectives. However, traditionally adjective-tagged roots such as *búrod* tend to be primarily predicative in their function as shown in the MDS, while the traditionally adjective-tagged root, *dámò*, tends to function primarily as a reference. These tendencies are not unusual for attribute-evoking roots, or modifiers, since they are situated in between the neatly separated referential cluster and predicative cluster as shown in the MDS.

However, some roots are excluded from the plot because of zero frequency in one of the three functions. These roots include *báso*, *pádi*, *pálad*, *dáop*, *niyan*, *pira*, *permi*, *siyahan*, and *abot*. The root *báso* is 100% used as a reference; *pádi* is utilized primarily for reference (95.12%) and secondarily as a predicate (4.88%) with no modificative function indicated in the corpus. The same pattern is true with the root *pálad*, which has 96.1% usage as a reference and 3.9% usage as a



predicate with no modificative usage. The root *dáop*, on the other hand, has 11.76% usage as a reference and 88.24% usage as a predicate without usage for modification. The root *niyan* as an attributive-evoking root has 95.4% usage as a modifier and 4.6% as a predicate, and no referential function in the corpus. The same is true with the two other attributes evoking roots, *pira* and *permi*. *Pira* has 89.63% usage as a modifier and 10.37% utilization as a predicate but no referential function results. *Permi* has 95.66% modificative use and 4.34% predicative with no referential usage in the corpus.

The absence of usage of some sample roots is attributed to the corpus size, as corroborated in the pilot test. For instance, the root *báso* has absolute (100%) referential usage per sentence where it appears in the corpus. However, this is not entirely true because the root *báso* may function predicatively, as in the clause: *Báso ini. Basóha* or *basóhi* is even possible. The same root may be utilized modificatively as in the phrase: *bináso nga takos*. Moreover, the affixes *ma-* and *-on* are the common modificative affixes. Theoretically, forms such as *maának*, or *maánakon* (fecund); *padión* or, *mapadión* (possessing the quality of a priest; candidate for priesthood); *madaúpon* (fond of asking for help from others) or, *daupón* (approachable, vs. the predicative *daúpon*, to approach); *patrónan* (purposely for the fiesta, as in *patrónan nga baboy*), *mapatron* or, *mapatrúnon* (festive vs. the predicative *mápatron*, will celebrate a fiesta); *mapálad* (fortunate); and, *madalaganon* (the one who retreat—that is, a coward) are possible.

Lastly, a form may also function modificatively when it describes clauses as in *malipáyon nga tawo*, *malipayon* describes *tawo*. A modifier provides a description either in the predicate or in the NP. However, the corpus does not capture these forms, but this does not necessarily mean they do not exist in the Waray language.

## 2.6. Tables exemplifying the morphosyntactic functions of Waray roots

Nolasco (2011, p. 13) argues that “part-of-speech (POS) membership is much clearer when we see the roots in action, in actual usage” (i.e., when they have their affixes or their use in phrases and sentences) (Bhat 2000). As Croft (2000) puts it, “Syntactic categories are language particular and defined by constructions” (p. 86). In other words, morphosyntactic features and not semantic features define Vs, Ns, and Ms.

Tables 2 through 31 below exemplify, where each root demonstrates its different morphosyntactic functions. These sample sentences containing each root, with or without affixes, were extracted from the corpus. They are not made-up sentences. Limited editing is observed, such as the capitalization of proper nouns, punctuation, italicization of each item or root, and correct spelling. Notice that some sentences may sound incomprehensible or incomplete due to a loss of context. However, that is beside the point of this study. We are after to show their different morphosyntactic functions or crossing of functions or categories in actual usage from the corpus (Cf. De Guzman 1996).

Table 2. Sample sentences illustrating the variable morphosyntactic functions of the root *nánay*

Morphosyntactic Function	Sample sentences
referential	1. (H)ala gad nga baga nakauli na an <i>nánay</i> nakadungog hiya nagtitiuok an iya anak. <i>Alas, when the mother arrived home, she heard her child crying.</i> 2. Labot la nga aatamanon hi Dindin para diri hiya gutumon ngan para diri na hiya mag-araba kinahanglan gud ngay-an nga maibalik hiya ha <i>nánay</i> nira Utoy. <i>Aside from taking care of Dindin so that she does not go hungry and she won't cry of hunger, it is really important that [he/she] be returned to Utoy's mother.</i> 3. Nagsarit anay hira ha <i>nanay</i> niya para hangkupan ngan sumatan hiya kun ano nira kahigugmaon hi Bopsy. <i>They asked permission from [his/her] mother if they could hug and tell him/her how much they loved Bopsy.</i> 4. Amo adto hi <i>nánay</i> nagmata. <i>That's why Mother woke up.</i> 5. Amo 'ton it' <i>nánay</i> ni Anne. <i>That is Anne's mother.</i>
predicative	1. <i>Nánay</i> ka na. <i>You are a mother now.</i>
modificative	1. Amo baya ini an <i>nánay</i> nga halas. <i>This one is the mother snake.</i> 2. Bilnga an <i>nánay</i> nga karabaw. <i>Look for the mother carabao.</i>

Table 2 above shows the different morphosyntactic uses of the root *nánay* extracted from the corpus <corporaproject.org>, which is statistically significant at p-value = 0.000. Referentially, entity-evoking roots are marked by noun markers such as *ha*, *han*, and *hin*. In our examples in Table 1, this is exemplified by the noun markers *an*, *it*, *ha*, and the prenominal *hi*. The prenominal and other particles are dropped in predicative use. Interestingly, there is only one sample for predicative usage for this particular root in the corpus. However, this does not mean other forms do not exist in the language. Modificatively, functioning as a modifier, it is followed by a linker such as *nga*. Modifiers could be part of a predicate phrase or a noun phrase (NP).

Table 3. Sample sentences illustrating the variable morphosyntactic functions of the root *táwo*

Morphosyntactic Function	Sample sentences
referential	1. Di liwat pwede sumakob it' <i>táwo</i> . <i>People cannot enter as well.</i> 2. May sobra tulo ka milyon nga <i>táwo</i> ha sinirangan bisayas. <i>There are more than three million in Eastern Visayas.</i> 3. Ha takna nga an us' nga <i>táwo</i> umabot ha kalibutan nawawaray na hiya. <i>The moment man arrives in this world, he ceases to be for himself.</i> 4. Sanglit iya gintabog ngadto ha gawas an <i>táwo</i> . <i>So, he shoos the person away.</i> 5. Tutulo man ka klase an <i>táwo</i> nga ginhatag ha aton han mahal nga hadi nga Ginoo. <i>Three kinds of men were given to us by our loving God.</i>
predicative	1. <i>Natáwo</i> na an bata. <i>A child is born.</i> 2. Hiya <i>natáwo</i> ngan tumubo hini nga naglabay nga trese ka tuig. <i>[He/she] was born and has been growing up for the past thirteen years.</i> 3. Iini usa nga <i>matáwo</i> ha akon balay amo an magigin akon sumuronod. <i>The one who is born in my house becomes my heir.</i> 4. Ha tawo nga may gatos na an edad <i>matátáwo</i> ba iton usa nga anak? <i>Would a man who is a hundred years old beget a child to be born?</i> 5. <i>Táwo</i> an naghuhulma han pinulongan. <i>Man makes the words.</i>
modificative	1. Nakilal-an an nasabi nga <i>táwo</i> nga hi X nga nakita nga makuri hidakpan antis han gindumara nga malinampuson nga buy-bust operation dida han nakalabay nga duha ka-

adlaw. <i>X, who previously eluded capture, was identified in the successful buy-bust operation in the past two days.</i>
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Table 3 displays the different morphosyntactic uses of the root *táwo* (p-value= 0.000). Referentially, this root is marked by the noun markers, in this case, exemplified by *an* and *it'*. For the root *táwo* to function predicatively, it has to take the inflectional affixes like *na-*, *ma-*, or, without the noun marker at the beginning of the clause (as in sentence 5). Modificatively, the root *tawo* follows the general modificative indicating-morphosyntax *modifier + linker + N* pattern as *tawo nga + N*.

Table 4. Sample sentences illustrating the variable morphosyntactic functions of the root *anak*

Morphosyntactic Function	Sample sentences
referential	<ol style="list-style-type: none"> <li>1. Nakadto hi Jun, an iya ulitawohay nga <i>anak</i>. <i>Jun, his adolescent offspring, was there.</i></li> <li>2. Usa la hiya nga <i>anak</i> nga lalaki. <i>He is the only male offspring.</i></li> <li>3. Dadayawon nira usa nga masinugtanon nga <i>anak</i>. <i>They will praise the obedient child.</i></li> <li>4. Nakaasawa an <i>anak</i> han <i>anak</i> nira dida. <i>Their child married that kid from there.</i></li> </ol>
predicative	<ol style="list-style-type: none"> <li>1. <i>Gin-anak</i> hi Kristian ngan gintagan hiya hin agnay nga bata. <i>Kristian was born, and they nicknamed the child.</i></li> <li>2. Nakit-an ko hi Papa Jesus nga gin-aanak pa la hiya. <i>I saw Papa Jesus, and he was just born.</i></li> <li>3. <i>Igin-anak</i> na iton nga usa nga lalaki nga bata. <i>Then he was begotten, and that son was born.</i></li> <li>4. Saho na la kun anak ka hin manunulay basta ha imo gumikan an kalipayan. <i>I don't care if you are the son of the devil himself, as long as you are the source of happiness.</i></li> </ol>
modificative	<ol style="list-style-type: none"> <li>1. Ini kay han tikaiha na kay tungod iton nga an ira problema iton usa nga <i>anak</i> nga kabayo. <i>Eventually, the problem came to the fore because one of the offspring was a horse.</i></li> </ol>

Table 4 demonstrates the different morphosyntactic uses of the root *anak* (p-value =0.000). Aside from the noun marker *an*, the pattern *modifier + nga + N* indicates that *anak* is the noun phrase's head. Like most roots, for *anak* to function predicatively, it has to take the inflectional affixes as in *gin-*, *igin-*, or without the noun marker at the beginning of the clause (as in sentences 4 and 5). Modificatively, the root *anak* may function as such. For instance, the form *maának*, as in *maának nga baboy*, does exist in the language as a modifier; however, it is not in the corpus.

Since these sentences are extracted from the corpus, thereby losing context, there ensued "confusion" or contention about whether they function as modifiers. We grapple with this since our operational definition of a modifier is:

*Modifier + linker + N, or N + linker + Modifier*

In other words, the computer program has to identify something that follows these patterns automatically. These are modifier constructions that we have elected to classify the first constituent as the modifier, and the second constituent as the head, or modified with a caveat.

Table 5. Sample sentences illustrating the variable morphosyntactic functions of the root *siring*

Morphosyntactic Function	Sample sentences
referential	1. Waray ako pag-aringasa para batunon ko an <i>ginsiring</i> ni Mano Kenny. <i>I kept silent and did not respond to what Mano Kenny was referring to.</i> 2. Hin-o an <i>nasiring</i> ha imo? <i>Who told you that?</i>
predicative	1. <i>Masisiring</i> ta nga an mga magsiriday han DYVL labi na an mga batan-on waray pa ngani ada makabasa kan Lucente, Makabenta, o Rebadulla. <i>We could say that the poets of DYVL, especially the younger ones, may not have read Lucente, Makabenta, or Rebadulla.</i> 2. <i>Sisidngon</i> ko na la hi Baying nga kumadto hiya ha iyo balay, padi. <i>Padi, I will tell Baying to go to your house.</i> 3. An diyos <i>siniring</i> an tuna magpapaturok hin banwa, mga tanom nga may ada binhi. <i>God ordered the soil to grow a weed with grain.</i> 4. <i>Ginsidngan</i> hiya nga nabibido ako nga waray mo kami ig-upod ha lista han im gin-announce. <i>[She/he] was told that I was offended for not having been included in the list that you announced.</i> 5. An surat <i>nasiring</i> nga didto ha iba nga ginhadian may ada didto babayi. <i>The letter says that there is a woman in the other kingdom.</i> 6. <i>Ginsisiring</i> gihap nga mahilig hira mangaun hin mga kabataan. <i>It was also said that they prefer eating children.</i>
modificative	Ito hiya an <i>ginsisiring</i> nga may-ada healthy lifestyle. <i>[She/he] is the one said to live a healthy lifestyle.</i>

Table 5 confirms the different morphosyntactic uses of the root *siring* (p-value=0.000). This root is usually inflected when used for reference and is nominalized by the noun marker *an*. This root takes the inflectional affixes to function predicatively, as exemplified by *ma*, *-on*, *-in-* and *gin-*. Modificatively, the root *siring* follows the *Modifier + linker + N* pattern.

Table 6. Sample sentences illustrating the variable morphosyntactic functions of the root *upod*

Morphosyntactic Function	Sample sentences
referential	1. Kapiraw an <i>upod</i> nga ha akon nag-aabyog. <i>Drowsiness came and lulled me to sleep.</i> 2. An bugto ni Kim nga hi Mandy asya ini an <i>upod</i> nira ha bakasyon. <i>Kim's sibling, Mandy, came with them on that vacation.</i> 3. An asawa hito an <i>upod-upod</i> ni Mana. <i>[His/her] spouse was Mana's companion.</i> 4. An agaron ha panagat an <i>upod</i> hadto ni tatay. <i>The sailing master was with Tatay during that time.</i>
predicative	1. Kun susunugon ta ini sigurado nga <i>maupod</i> an mga kahoy nga diri angay masunog. <i>If we burn this/ these, surely the other wood that does not have to be burned will be included.</i> 2. <i>Mag-upod</i> an beggar ngan han prinsesa. <i>They were together, the pauper and the princess.</i> 3. <i>Pagnaupod</i> ako nauli ako dayon. <i>Whenever I join, I return home quickly.</i> 4. <i>Naupod</i> man' la gihap' ak' ha im'. <i>I go with you, still.</i> 5. Ako liwat <i>naupod</i> ako ha downtown. <i>I also joined to go downtown.</i> 6. An <i>upod</i> hi Grace. <i>The companion is Grace.</i>
modificative	1. Hi Atenas, may'da <i>upod</i> nga upat nga pulis. <i>Atenas is accompanied by four cops.</i> 2. Dida han nagawas hiya nga iba an <i>upod</i> nga mga lalaki nababaraka hiya. <i>When [he/she] stepped out, accompanied by different male companions, [he/she] was worried.</i>

<p>3. Mayda hit' nim' upod nga teacher o, hi ikaw la it' pagkadto ha Vietnam? <i>Are you accompanied by a teacher, or are you going to Vietnam by yourself?</i></p> <p>4. Didto kanra inay an hinatag two hundred nga hin mayda pa upod nga chocolate. <i>There at my mother's, I was given two hundred and some chocolates.</i></p> <p>5. An bata sige an pagkinita ha iya nga may'da upod nga mga hiyom. <i>The child was intently staring at [him/her] with a smile.</i></p>
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Table 6 above illustrates the different morphosyntactic functions of the root *upod* (p-value=0.000). Referentially, this root is mostly marked by *an* in the corpus. Predicatively, it mainly takes the inflectional affixes as represented by *ma-*, *mag-*, *pag-*, and *na-*. Modificatively, the root *upod* is marked with the usual modificative indicating-morphosyntax *modifier + linker + N* pattern.

Table 7. Sample sentences illustrating the variable morphosyntactic functions of the root *sugad*

Morphosyntactic Function	Sample sentences
referential	<p>1. Ordinaryo na la an mga balod diri na an <i>nasugad</i> hin bukid kadagko. <i>The waves are ordinary now, no longer as tall as mountains.</i></p> <p>2. Damo an <i>sugad</i> hini nga naghihisgot hin pamatasan ha 'Tinipigan' nga libro ni X. <i>There are several discussions on this trait in the book Tinipigan by X.</i></p> <p>3. Ini an <i>sugad</i> han Presidente. <i>This is like the president.</i></p> <p>4. Kay siyempre dinhi ha tuna an naasenso la an <i>sugad</i> ha akon nga maaram maghunahuna. <i>Of course, on this earth, the ones who succeed are those who think like me.</i></p> <p>5. Nagkuan l'at ngani sadto si ma'am nga siya an <i>masugad</i> san kapital. <i>Back then, Maam said that she could provide the capital.</i></p>
predicative	<p>1. <i>Sugad</i> la kadako hin kulo han imo tudlo an radyo. <i>It was about the size of the nail on your finger, that radio.</i></p> <p>2. Kun karuyag mo gihapon, madi, <i>masugad</i> hini--adlaw-adlaw ka la magsinarusaka han bukid samtang may tinukdo ka nga us' kabulig nga saging. <i>If you like it, Madi, it will go like this -- will have to go up and down the mountain with a big bunch of bananas atop your head.</i></p> <p>3. Ada kun <i>sugaron</i> ta hiton nga paagi puydi iton magkaada hin sayop ngan mag-uuro-utro la kita. <i>If we do it that way, there are many rooms for error, and we will end up repeating the process again and again.</i></p> <p>4. <i>Ginsugad</i> siya ni San Pedro nga diri ka angay dinhi sa langit kay pusong ka. <i>Saint Peter told him that he does not belong in heaven because he is a fool.</i></p> <p>5. Takay magawas na kamo pagtutdo, dapat diri na hira <i>magsugad</i> hiton. <i>Soon you will go out there to teach; [he/she] should refrain from behaving that way.</i></p>
modificative	<p>1. Didto ha Samar, may'da gihap urusahon nga <i>sugad</i> hito. <i>In Samar, there are plenty of strange sightings like that.</i></p> <p>2. An akon Ginoo nagyakan hin mga pulong nga <i>sugad</i> hini. <i>My Lord spoke of words like this.</i></p> <p>3. An iya pako nga <i>sugad</i> katarom hin kutsilyo. <i>[His/her] wings were sharp like knives.</i></p> <p>4. Nalipay an opisina ha mga kapolisan nga nagkamay-ada <i>sugad</i> nga aktibidad. <i>The office of the police was glad that there was an activity like this.</i></p>

Table 7 expresses the different morphosyntactic uses of the root *sugad* (p-value=0.000). Referentially, this root is marked as epitomized by the noun marker *an* and is pervasive in N. Samar dialect evidenced by the use of *sa* and *han*. For the root *tawo* to function predicatively, it

has to take the inflectional affixes as typified by *ma-*, *on-*, *gin-*, and *mag-* or without the noun marker at the beginning of the clause. Modificatively, the root *sugad* follows the general pattern *modifier + linker + N pattern*.

Table 8. Sample sentences illustrating the variable morphosyntactic functions of the root *dákò*

Morphosyntactic Function	Sample sentences
referential	1. Liro ha butnga han kabukiran harayo han kadam-an amo an lugar nga akon ginseserbisyohan harayo kaupay han akon <i>gindakóan</i> . <i>A whirlpool in the mountains, away from the crowd, is the place I am serving, far from where I grew up.</i>
predicative	1. <i>Dákò</i> na gud man an gin-bag-uhan han mga tawo. <i>A big change happened to the people.</i> 2. <i>Dákò</i> an nahibulig han mga sarakyan kay pinaagi hini nakakadto-an nira an tay-aw nga mga lugar. <i>A big help came from the automobiles because through these vehicles they were able to reach the far-flung areas.</i> 3. Yana nga <i>dako</i> na hi Lolo Perding, nakakatawa nala hiya hadto nga panhitabo. <i>Now that Grandfather Pedring is all grown, he just laughs about those events.</i> 4. <i>Gindádákò</i> ko nga malipayon ako ngan an kwarta nga akon nakuha mahingangadto ha mga kaayaman. <i>I make a big point about the fact that I am happy and that the money I got will go to the dogs.</i> 5. <i>Dináko</i> ako nga waray kag-anak nga nag-alaga. <i>I grew up without parents who cared for me.</i> 6. Kun ano <i>kadakó</i> an butones sugad man an <i>kadako</i> han ohales. <i>The size of the buttons dictates the size of the buttonhole.</i>
modificative	1. Siyahan dida han gutiay hasta han ikatulo nga <i>dako</i> nga balod. <i>First on the small wave until the third big wave.</i> 2. Ini mahihimo nga <i>dako</i> nga pitad diri la para ha nasud kundi pati na gihapon ha internasyonal nga mga nagdo-domestic-helper. <i>This will be a big step not only for the country but also for those who are abroad as domestic helpers.</i> 3. Iya gindikit an tauyon nga puthaw ha likod han daan nga <i>dako</i> nga sarakyan. <i>[She/ he] placed the rusty iron at the back of the big old truck.</i> 4. An usa nga bata nga babayi nga an ngaran hi Becky usa na nga <i>dako</i> ngan moderno nga edukado nga tawo. <i>That one little girl called Becky is now a grown, modern, and educated woman.</i> 5. Ini nga gutiay nga libro hin mga patigo ug darahunon <i>dako</i> nga bulig agud maipaangbit ha aton kabatan-onan an kinaagi ug kinaadman han nauna ha aton nga mga Waraynon. <i>This small book of riddles and proverbs is an immense contribution to spreading to the younger generation the history and knowledge of those Waraynons who came before us.</i>

Table 8 indicates the three morphosyntactic functions of the attribute-evoking root *dako* (p-value=0.000). The common noun markers *an* and *han* precede the root in the referential use. Even though the derivative *gindakoan* is inflected, since the noun marker *han* precedes it, one can say that it is functioning referentially. Predicatively, the root may function as such when immediately followed by a particle *na*, as in *dako na*. It may take inflection affixes *gin-* and *-in-* or without the noun marker at the beginning of the clause. Modificatively, this root usually follows the *modifier + linker + N pattern*.

Table 9. Sample sentences illustrating the variable morphosyntactic functions of the root *damo*

Morphosyntactic Function	Sample sentences
referential	<p>1. An <i>kadamo</i> han iya mga siday nga aanhi hini nga libro an magpapamatuod han iya kamaduroto ha pagsurat. <i>The number of poems in this book are proofs of his/her assiduous writing.</i></p> <p>2. Inabat ko an ira kinasingkasing nga pagkarawat ngan pagkilala ha akon kahuman han <i>damo</i> nga tuig nga naglabay. <i>I felt their earnest acceptance and recognition of me after the many years that passed.</i></p> <p>3. Mabubuhat ko an <i>damo</i> nga mga butang kun akon ibubutang an akon kusog ha ira. <i>I can do many things if I put my strength into them.</i></p>
predicative	<p>1. <i>Kadamo</i> han iya kamanokan. <i>Plenty of chickens are his.</i></p> <p>2. <i>Gindidinamo</i> ni Notnot. <i>Multiplying them, Notnot does.</i></p> <p>3. An ira mga suki nga mamaralit mas <i>dinamo</i> pa han panmukad han mga sunflowers nga iya igintanom palibot han koral. <i>Their regular buyer increased when the buds of the sunflowers [he/she] planted by the fence opened.</i></p> <p>4. <i>Madamo</i> na ako magtinguha lday nga mapara ka na kunta sinin panumduman. <i>Many times, I have hoped, lday, that you would vanish from my memory.</i></p> <p>5. Mapalit ako hin payong; <i>dadamuon</i> ko la--usa it' para hit' kat-sirak, usa it' para hit kat-uran. <i>I will buy umbrellas, a lot of them--- one for the sunny days, one for the rainy days.</i></p> <p>6. Kun magkasal. mas <i>madamo</i> kuno it' handa. <i>If it's a wedding, there will be a bigger feast, they say.</i></p>
modificative	<p>1. Linalauman an <i>damo</i> pa nga LGUs ug iba pa nga regulatory offices an makonekta ngada han sistema. <i>It is hoped that more LGUs and other regulatory offices will be connected into the system.</i></p> <p>3. Hi X an gintutudlok nga responsable hin <i>damo</i> nga human rights violations. <i>X was identified as the one responsible for the many human rights violations.</i></p> <p>4. An CEDAW ug an convention on the right of the child ginkakaurusahan han <i>pinakamadamo</i> nga mga nasyon. <i>The CEDAW and the Convention on the Rights of the Child is supported by most nations.</i></p>

Table 9 shows the three morphosyntactic functions of the attribute-evoking root *damo* (p-value=0.000). This root is preceded by the common noun markers as embodied by *an* and *han* when used referentially. Predicatively, the root may function as such with the use of inflectional affixes such as *gin-*, *-in-*, *ma-*, and *-on*. The particle *mas* and following the *modifier + linker + N* pattern mark the roots modificative function.

Table 10. Sample sentences illustrating the variable morphosyntactic functions of the root *palit*

Morphosyntactic Function	Sample sentences
referential	<p>1. Akon ihahatag an <i>palit</i> han uma. <i>I will give the sale proceeds from the farm.</i></p> <p>2. Sumige na la; waray anay manhuhuhuna nga barato la an <i>palit</i> ha ira. <i>[He/She] agreed; without thinking first that they were giving in at a low selling price for themselves.</i></p> <p>3. Adto an <i>ginpalit</i> namon ni papa pero diri itom an kolor. <i>That one was what Papa and I bought but the color was not black.</i></p> <p>4. Nagkatatawo ha iya balay adton mga <i>pinalit</i> hin salapi han dumuruong. <i>Those who were bought by the sea merchant were born in his house.</i></p> <p>5. Bumalik na an <i>pumalit</i> han beer. <i>[He/she] came back, the one who bought beer.</i></p>

predicative	<ol style="list-style-type: none"> <li>1. <i>Tipalit ak hin sapatos. I am about to buy shoes.</i></li> <li>2. <i>Ginpalit ko kamo ngan an iyo mga tuna. I purchased you and your lot.</i></li> <li>3. <i>Ginpapalit hiya niya nanay hin kape. [He/she] is going to buy coffee as instructed by her mother.</i></li> <li>4. <i>Didto han tabo ha Palo an ak' tawgi napalit mo intawon. There in the bazaar in Palo, you bought my tawgi, instead.</i></li> <li>5. <i>Kun mapalit kamo gusto ko pumalit hin pancit canton. If you will buy it, I would like to buy a pancit canton.</i></li> </ol>
modificative	<ol style="list-style-type: none"> <li>1. <i>Ta, kay an bucket an am' ginpalit nga tag-80 di na la nam' babaydan. Ta, we bought the bucket that costs P80 we won't pay for it then.</i></li> <li>2. <i>Waray hiya ginpalit nga obra kay waray ha iya nakaagaw hin interes labot la kan Adela. He didn't buy any artwork because nothing caught his attention except that of Adela.</i></li> <li>3. <i>Ginsisiguro na daw nga sayod an mga transaksyones hini nga organisasyon ngan magin tangkod an mga palakat han mga papaliton nga mga ekipahes ug mga materyales. It is being ensured that all the transactions of this organization are transparent and that the process of procurement of equipment and materials is honest.</i></li> <li>4. <i>Nagplaplano an magbugto kun ano an ira papaliton nga regalo para han kaadlawan hit' ira hinihigugma nga iroy. The siblings are planning what to buy as a gift for their beloved mother on her birthday</i></li> <li>5. <i>Adi na la 't'ak' papaliton nga sabon kay waray man didi an ak paraliton nga sabon. I will buy this soap instead because my regular brand is not available.</i></li> </ol>

Table 10 demonstrates the three morphosyntactic functions of the event-evoking root *palit* ( $p$ -value=0.000). The root functions referentially when preceded by the noun marker *an*; and even without such as in *mga pinalit* and *an pumalit*. The root is in the predicative function with the inflectional affixes *ti-*, *gin-*, *na-*, and *ma-*. Then it becomes modificative in the function indicating-morphosyntax *modifier + linker + N* pattern.

Table 11. Sample sentences illustrating the variable morphosyntactic functions of the root *hatag*

Morphosyntactic Function	Sample sentences
referential	<ol style="list-style-type: none"> <li>1. <i>Karawta nanginginyupo ako ha imo inin akon hatag nga gindara nganhi ha imo. I beg you to please take this present that I brought here for you.</i></li> <li>2. <i>Gintugunan nga maghirot hiya ha tanan nga oras ngan permi sul-uton an takgong nga iya hatag. [He/she was] instructed to be careful at all times and to always wear the belt that [he/she] gave.</i></li> <li>3. <i>Ira gindara ha balay ha iya an hatag nga nakada han ira kamot. They brought to the house to [him/her] the present that was in their hands.</i></li> <li>4. <i>Ginoo an naghatag ha imo hin gahum pagbuhat hini nga mga bagay. God gave you the power to do this act or thing.</i></li> <li>5. <i>Uyagan an ginhatag ni Santa Claus para ha akon. A toy was given by Santa Claus to me.</i></li> </ol>



<p>predicative</p>	<p>1. <i>Ginhatag</i> han pangulo an mao nga kadungganan hadton Martes didto han yellow room. <i>The president gave this particular honor last Tuesday there in the yellow room.</i>                  2. <i>Ginhatag</i> man adto ni sir. <i>That was given by Sir.</i>                  3. <i>Ini mahatag</i> ha imo hin mga katunukan. <i>This will give you thorns.</i>                  4. An kinada-adlaw nga pagbasa han siday ha radyo <i>naghatag</i> hin iwag ha mga magsusurat basi mahibatian. <i>The daily reading of poems on the radio provided a space for the writers to be heard.</i>                  5. An Plan Philippines <i>humatag</i> hin 1000 ka sako hin bugas. <i>Plan Philippines gave 1000 sacks of rice.</i></p>
<p>modificative</p>	<p>1 Nagpasalamat kan P-noy an Capiz governor han mga <i>ginhatag</i> nga mga hinabang ngan mga proyekto. <i>The Capiz governor thanked Pnoy for the assistance and projects given.</i>                  2. Sugad ni Secretary X maaram kami nga an <i>ginhahatag</i> nga kwarta dako nga bulig sa pag-undong san adlaw-adlaw nga panginahanglan san mga pobre nga pamilya sa nasud. <i>Secretary X said that they are aware that the money given is a big help for the poor families in the country to meet their daily needs.</i>                  3. Dungan niyo nga paghahap-iron an tuna nga <i>mahatagon</i>. <i>Together you will tend this giving land.</i>                  4. Orasyon para han gindarahugan ha dughan an <i>hinatag</i> nga orasyon kan Buboy han iya tiya nga tambalan. <i>A prayer for someone cursed in the heart, was the prayer given to Buboy by his aunt, who is a healer.</i>                  5. Kay baga't imo ginpapamukha ha ak' nga nakukulangan ka 't'ak' <i>hatag</i> nga kwarta ha im'. <i>It's as if you convey to me that the money I am sending to you is insufficient.</i></p>

Table 11 establishes the three morphosyntactic functions of the event-evoking root *hatag* (p-value=0.000). This root is referential in function in the presence of possessive markers like *akon*, *iya*, and the noun marker *an*. The root has a predicative function when used with inflectional affixes *gin-*, *ma-* *nag-* *um-*. *Hatag* takes a modificative function in function indicating-morphosyntax *modifier + linker + N*.

Table 12. Sample sentences illustrating the variable morphosyntactic functions of the root *tawa*

Morphosyntactic Function	Sample sentences
<p>referential</p>	<p>1. An iba nagtikang paghikatawa ngan <i>tawa</i> nga nakakabungol. <i>The others started laughing, a deafening laugh.</i>                  2. Nakikit-an man ha iya mga <i>tawa</i> nga hinigugma hiya han iya kag-anak. <i>It is visible from his smile that he is loved by his parents.</i></p>
<p>predicative</p>	<p>1. <i>Matawa-tawa</i> la it hiya pero kun yaang-yaangan, agi daw, kay napuag. <i>He is a smiling fellow, but if you mess with him, he'll punch you.</i>                  2. Hi Marie nagtinawa pero maaram ako diri hiya ha akon natawa. <i>Maries was laughing, but I know it wasn't about me.</i>                  3. <i>Nagtinawa</i> ako. <i>I was laughing.</i>                  4. <i>Nagtitinawa</i> kami han pasalida nga amon ginkita. <i>We were laughing at the movie we saw.</i>                  5. Kay ano ito <i>gintitinawaan</i> niyo? <i>Why are you laughing at that?</i></p>
<p>modificative</p>	<p>1. <i>Matawa-tawa</i> nga tatap-on ni Anton hi Nonoy san-o dumeretso paglakat. <i>With a smile, Anton will meet Nonoy, before the trip.</i>                  2. Ginbibiniling na iton hit' iya nanay, an <i>nagtitinawa</i> nga sagdon ni Lando. <i>[His/her] mother is looking for [him/her], Lando advised laughingly.</i></p>

Table 12 establishes the three morphosyntactic functions of the event-evoking root *tawa* (p-value=0.000). This root takes on a referential function when it is the head of an NP like *tawa nga nakakabungol*. The inflectional affixes *ma-*, *nag-*, and *gin-* attached to the root give it a predicative function. The function indicating-morphosyntax *modifier + linker + N* pattern turns *hatag* into a modificative form.

Table 13. Sample sentences illustrating the variable morphosyntactic functions of the root *burod*

Morphosyntactic Function	Sample sentences
Referential	1. It' ayon hit' aswang it' <i>burod</i> nga tipag-aranak na kay naruruyag it' aswang hit' fetus nga ada hit' kanan <i>burod</i> tiyan. <i>Aswangs like those pregnant women that are about to give birth, because aswangs like the fetus in the pregnant one's womb.</i> 2. Pananglitan, an mga <i>burod</i> basi diri hira malabtan binubutangan nira hin mga lasona ngan apog iton ira mga purtahan ngan mga bintana. <i>So it goes, that the pregnant ones, to keep themselves protected, put garlic and lime on their doors and windows.</i> 3. Nakada it' hira hit' atop hit' balay kun diin puyde nira makit-an it' usa nga <i>burod</i> . <i>They stay on the roofs of houses, where they will look out for a pregnant one.</i>
Predicative	1. <i>Burod</i> ka ha iya. <i>You are pregnant by him.</i> 2. <i>Nagburod</i> an nanay. <i>The mother got pregnant.</i> 3. <i>Nagbuburod</i> pa hiya ha hospital. <i>She was on her pregnancy in the hospital.</i> 4. Delikado ito; <i>mabuburod</i> niya hi Charlie. <i>That is dangerous, [he/she] will impregnate Charlie.</i> 5. Kay it' babayi <i>nabuburod</i> man; it' lalaki kay diri. <i>Because women get pregnant, but men don't.</i>
Modificative	1. Nakabati ka na han <i>burod</i> nga lalaki nga baboy? <i>Have you heard about the pregnant male pig?</i>

Table 13 displays the three morphosyntactic functions of the root *burod* (p-value=0.000). The root achieves referential function through the noun markers *it'*, *an*, and by the pluralizer *mga*. Predicatively, the same root may be used without inflection; and in other instances, it takes the inflectional affixes *nag-*, *ma-* and *na-*. The function indicating-morphosyntax *modifier + linker + N* pattern turns *burod* into a modificative form.

Table 14. Sample sentences illustrating the variable morphosyntactic functions of the root *kilála*

Morphosyntactic Function	Sample sentences
referential	1. Tungod hit' iya kahusay ngan kabuutan damo nga <i>kakilála</i> nira it' nadayaw ha iya. <i>Because of her beauty and goodness, many of their acquaintances praise [her/him]</i>
predicative	1. Didto man niya <i>kakilála</i> hi Lee ha Air Force. <i>[He/she] met Lee there at the Air Force.</i> 2. <i>Ginkilála</i> naman ni Valte nga diri gud magpapapreho an panan-aw han nga tanan para han EDSA People Power. <i>Valte recognizes that there will be different opinions from everyone on the EDSA People Power.</i> 3. <i>Kinikilála</i> niya an pag-ultan han iya hunahuna <i>[He/she] acknowledges the limits of [his/her] mind.</i> 4. Ma-under ngani ak ha iya, <i>kikilálaon</i> ada ak' hiton? <i>If I am under [her/him], maybe [she/he] will recognize me?</i>

	5. Makarawod man it' maghusay na yana diri na <i>nakikilal-an</i> dayon. <i>It is a shame, those who are pretty now, weren't identified right away.</i>
modificative	<p>1. Ginagamit liwat ini pag-himo han mga pagka-on nga <i>kilala</i> ha mga waraynon nga linupak. <i>This is also used to make a delicacy known to the Waraynons as linupak</i></p> <p>2. Ginsurat san <i>kilála</i> nga academician ngan yana Philippine Permanent Representative to the Asean. <i>Written by the famous academician and now Philippines Permanent Representative to the ASEAN.</i></p> <p>3. Ginlalauman han BIR an pipira ka mga <i>kilála</i> nga book suppliers dinhi ha rehiyon nga tumabong han mao nga book bazaar. <i>The BIR hopes that the some of the popular book suppliers in the region will attend this said bazaar.</i></p> <p>4. Waray pa opisyal nga sistema hin pagsusurat nga <i>ginkikilála</i> han nga tanan upod ini iton orthography. <i>There is no official system of writing recognized by everyone including an orthography in it.</i></p> <p>5. Samtang adton <i>kinikilála</i> nga salad bowl hadton Pilipinas nga kun diin kadak-an hini an mga utanon an ginbabiligya didto ha Luzon. <i>Meanwhile, the recognized salad bowl of the Philippines, where a majority of these are vegetables sold in Luzon.</i></p>

Table 14 displays the three morphosyntactic functions of the attribute-evoking root *kilála* (p-value=0.000). This root seldom takes a referential function, evidenced by the low sample. This root has numerous samples in the predicative function where it is used without inflection; and in other instances, it takes the inflectional affixes *gin-*, *-in-*, and *on-*. The function indicating-morphosyntax *modifier + linker + N* pattern turns the root *kilala* into a modificative form.

Table 15. Sample sentences illustrating the variable morphosyntactic functions of the root *gab-i*

Morphosyntactic Function	Sample sentences
referential	<p>1. Linalantaw han mga taga-katundan an pagkinaturog han bug-os nga <i>gab-i</i> komo usa nga puasa. <i>Those from the Western side view sleeping the whole night as fasting.</i></p> <p>2. Ha adlaw nag-antos ako han kapaso ngan ha <i>gab-i</i> han kahagkot. <i>During the day I endured the heat and then the cold at night.</i></p> <p>3. Kay baga alas diyas na han <i>gab-i</i> it' nga padi baga urusahon kay ano nga nakadto hin alas diyas. <i>It was about ten in the evening and a bit curious why that priest was there at ten o'clock.</i></p> <p>4. Dida han <i>tikagab-i</i> na maghiyom-hiyom, magtawa-tawa dayon magkurukwenta pira an aton gana. <i>When it was getting dark, there were smiles, and laughter than the accounting of our profits.</i></p> <p>5. Ha mga <i>gab-i</i> nga sugad hini kinugukos ko hiya ha akon mga butkon. <i>On nights like this, I carried [him/her] in my arms.</i></p>
predicative	<p>1. Bahala ka dida; <i>gab-ihon</i> ka dida. <i>It's up to you, you might end up staying out late</i></p> <p>2. Hapit na <i>magab-i</i> inin langit, matin-aw, mapawa. <i>It's almost evening the sky is clear, and bright.</i></p> <p>3. <i>Nagab-ihan</i> na naman inin pagbalik ni Francis. <i>It was a late return for Francis.</i></p> <p>4. Bisan man waray klase nakadto ha eskwelahan tapos <i>nagagab-ihan</i> na pag-uli. <i>Even if there was no classes, [that one] goes to school then returns late.</i></p>
modificative	<p>1. Harayo na gud ngay-an an ak' ginkaturugan <i>kagab-i</i> nga salida. <i>I slept and missed a big part of last night's movie.</i></p>

Table 15 exhibits the three morphosyntactic functions of the entity-evoking root *gab-i* (p-value=0.000). Referentially, this root has a high frequency of usage; however, it manifests only in

its bare form. The root *gab-i* is predicative with the inflectional affixes *-on-*, *ma-*, *na-*. The function indicating-morphosyntax *modifier + linker + N* pattern turns *gab-i* into a modificative form.

Tables 16 to 31 are sample sentences of roots that exhibited only one (1) or two (2) morphosyntactic functions. These are roots *niyan*, *tanán*, *pira*, *iban*, *permi*, *siyahan*, *tádong*, *sakay*, *dáop*, *pálad*, *báso*, *pádi*, *bato*, and *balay*, where a statistical test is not possible. In place of quantitative evidence, the study resorts to qualitative evidence. Consider Tables 16 through 31 below.

Table 16. Sample sentences illustrating the variable morphosyntactic functions of the root *niyan*

Morphosyntactic Function	Sample sentences
referential	-
predicative	1. <i>Niyan anay; mayda pa sumakay nga kuan. Wait a bit; a kuan took a ride.</i> 2. <i>Niyan na kay gingugutom pa ak'. Later, because I am still hungry.</i> 3. <i>Niyan la mapalit ako hin sura. Wait here; I will buy a viand.</i> 4. <i>Niyan pa kuno ini. This is for later.</i> 5. <i>Niyan gad, Auntie, niyan, niyan, naka-stock na ngadto it' hugasan. Wait gad, Aunti, later, later the dishes are stocked in the sink.</i>
modificative	1. <i>Niyan, o buwas mag-iiba an im' pulong. Later, or tomorrow your words will change.</i> 2. <i>Ibalik ta ini niyan, ha. Let us return this later, ha.</i> 3. <i>Masakay kita niyan hin kuliglig. We will ride a kuliglig later.</i> 4. <i>Niyan isusumat ko gud ikaw. I will tell on you later.</i> 5. <i>Mapalit ak' niyan hin baligya nga manga. Later, I will buy those mangoes for sale.</i>

The root *niyan* never manifested a referential usage in the corpus, which means that it is not its centroid to referential category. Interestingly, the phrase *an niyan* is found and has established use in the referential function. The root often functions predicatively and modificatively. However, it is followed by aspectual particles such as *na*, *pa*, or *la* when used predicatively. *Niyan* as a modificative is never the head of the predicate, as in 1 above. Here, *niyan* modifies *mag-iiba*, *ibalik*, *masakay*, *isusumat*, and, *mapalit*.

Table 17. Sample sentences illustrating the variable morphosyntactic functions of the root *tanán*

Morphosyntactic Function	Sample sentences
referential	1. <i>Igintutubyan ko an tanan ha imo Bathala. I surrender everything to you Bathala.</i> 2. <i>Lumalabay la an nga tanan dinhi ha kalibutan. Everything in this world will come to pass.</i>
predicative	1. <i>Tanan kami. All of us.</i>
modificative	

The root *tanán*, in Table 17 above, has no modificative function in the corpus. It only has referential and predicative functions. Referentially, this root is preceded by the common noun marker *an*. Predicatively, the root may function as such when used at the beginning of the clause without the noun markers *an*, *it'*, *ha/sa*, *han/san*, *hin/sin*. Modificatively, this root usually follows the *modifier + linker + N* pattern in the language, despite its absence in the corpus—for example, *an tanan nga tawo*; *an tanan nga ginkasal*; *an tanan nga kahoy*. *Tanan* here functions as a modifier.

Table 18. Sample sentences illustrating the variable morphosyntactic functions of the root *báso*

Morphosyntactic Function	Sample sentences
referential	1. Han nagkakatunga na an <i>baso</i> may tumuktok dida han salaming nga bungbong. <i>When the glass was half-full, there was a knock on the glass wall.</i> 2. Gindugangan ko pagbutang hin hini ngan aluminom nga <i>baso</i> an tinidor. <i>Additionally, I added a wipe and aluminum glass to the fork.</i> 3. Pagdara ngay-an hin usa pa na <i>baso</i> . <i>By the way, bring another glass.</i> 4. An mga nakadto, day, mga <i>baso</i> . <i>What was there, were glasses.</i> 5. Sige, kuha ngadto (hin) <i>baso</i> ha balay. <i>Alright, get (a) glass at home.</i>
predicative	-
modificative	-

The root *baso* ‘drinking glass’ is very interesting because it has no other forms in the corpus. Perhaps, this is so because *baso* is borrowed from the Spanish *vaso*. Semantically, by its nature, it is strongly referential since there is no instance in Waray where it can function as a predicate or, even as a modifier. However, predicative and modificative functions may be allowed in the language when the communicative situation requires it. For example, the forms *binaso*, *ginbaso*, and *nagbaso-baso*, are potentially predicative, while the forms *basuhon* and *mabaso-mabaso* are potentially modificative.

Table 19. Sample sentences illustrating the variable morphosyntactic functions of the root *pádi*

Morphosyntactic Function	Sample sentences
Referential	1. Pumalit hin arinola an <i>pádi</i> . <i>The priest bought a chamber pot.</i> 2. Pagkadto han <i>pádi</i> han kun baga yana sentro, pakiana hiya, doktora ano an resulta han akon ihi? <i>When the priest went to that center of sorts, he asked. Doctor what is the result of my urine test?</i> 3. Mahangad an usa nga <i>pádi</i> dida an pikoy nahapon. <i>He looked up, this priest, at the parrot perched.</i> 4. Nakadto na adto hi Samuel ha may <i>pádi</i> , tapos huna niya nga hi Isabel an umulpot. <i>Samuel was there with the priest, and he thought it was Sabel who arrived.</i> 5. Niyan may usa nga <i>pádi</i> . <i>Later on, there was a priest.</i>
Predicative	-
Modificative	-

The computer software confuses *pádi* (priest) with *padi* (from Spanish *compadre*) in the corpus. In the same corpus, the root *pádi* is mostly used referentially; however, it may be used predicatively in *nag pádi* hiya, or *Pádi an iya bugto*. The same root may have a modificative usage such as *pádion*, *magparádi* like *magparádi* nga ulitawo, or *pádion* nga tawo. However, these forms are absent in the corpus.

Table 20. Sample sentences illustrating the variable morphosyntactic functions of the root *pálad*.

Morphosyntactic Function	Sample sentences
referential	1. Han nagkakatunga na an baso may tumuktok dida han salaming nga bungbong. <i>When the glass was half-full, there was a knock on the glass wall.</i> 2. Gin-alsa mo an mga palad daw nangangamuyo. <i>You lifted the palms as if in supplication.</i> 3. Kun nadiri ka na paggakos bis palad ko na gad la it im abaton. <i>If you don't want to hug, would you at least touch my hands?</i> 4. Waray palad nga maraut, waray palad nga maupay. <i>There is no good fate, there is no bad fate.</i> 5. Aantuson ko (ini) kay palad man. <i>I will endure this because it's fate.</i>
predicative	1. Palad ko nga higugmaon ka. <i>It's my fate to love you.</i> 2. Mapalad an paghigugma ha kag-anak. <i>It is blessed to love one's parents.</i>
modificative	-

The root *pálad* has two senses: “palm” and “fate.” In the corpus, this root mostly functions in the referential form and sometimes predicatively. However, it has no modificative usage despite the form *mapálad*, as in *mapálad nga kinabuhi*.

Table 21. Sample sentences illustrating the variable morphosyntactic functions of the root *dáop*

Morphosyntactic Function	Sample sentences
referential	1. Kun may'da na nira tuyo amo na't ira <i>pagdáop</i> . <i>If they have some business, that is the time they approach.</i> 2. Tindahan it' <i>daúpan</i> . <i>The store is the gathering area.</i> 3. Kun may'da ako problema, hira 't'ak <i>nadadaúpan</i> . <i>If I have problems, I get help from them.</i> 4. Kun kanan gobyerno it' pag-canvas bisan usa la nga tindahan it' <i>daupan</i> legalisado ito kay hira na la ito it' magsasabot nga mapapirma hit' tag-iya. <i>If the government will canvass, even if it is done in just one store, it is legal because the agreement is between themselves, and the owner will sign.</i>
predicative	1. <i>Dináop</i> hira kan Noe ha sulud han arka. <i>They went to Noe inside the ark.</i> 2. Hinayhinay nga <i>gindáop</i> an iya im-im ha ak' talukap. <i>Slowly, [his/her] lips came closer to my eyelids.</i> 3. Dali, <i>dáop</i> ngadi ha ak'. <i>Hurry, come over here.</i> 4. An babayi an <i>madáop</i> ha iya. <i>The woman will approach [him/her]</i> 5. May ada lalaki nga may tinugwayan nga bata <i>dumáop</i> ngadto han nagtatraysikol nga bata. <i>A man leading a child went to the child driving a tricycle.</i>
modificative	-

Semantically, the root *dáop* is event-evoking, meaning—it often functions predicatively. Its nominalized form has TM affixes—an example of what Dixon (2010) calls predicate-argument in the form *nadadaúpan* in Table 21 above, referential morphosyntactic function, number 3. Notice that there is no sentence in the corpus where *dáop* functions modificatively. However, some modificative forms exist, such as *nadadaúpan* as in *nadadaúpan nga tawo*, or *an madaupon hin daraga*.

Table 22. Sample sentences illustrating the variable morphosyntactic functions of the root *pirá*

Morphosyntactic Function	Sample sentences
referential	-
predicative	-
modificative	1. <i>Pirá na katuig ini nga iya pandagat? How many years have you been fishing?</i> 2. <i>Pirá pa la liwat ka bulan an linmabay natindog an grupo han magsusurat dinhi ha rehiyon. Some months passed by, then the group of writers in the region was founded.</i> 3. <i>Kun pirá an tag dida asya kuno it im igbubutang. The amount on that tag, is the one you will put/write/copy.</i> 4. <i>Diri daw maaram hi Lacierda kun pirá nga tawo an maapektaran. Lacierda does not know how many people will be affected.</i> 5. <i>Pirá gud ka galon an iyo nahubas. How many gallons, really, did you finish?</i>

The roots *pirá* mostly follow the syntax *pirá* + (particles) + *ka* + *N* or, *pirá* + *nga* + *N*. So, *pirá* is mostly modificative in usage in the corpus. Moreover, *pirá* may take TM affix to function predicatively, like *nagpirá* + *determiner* + *N*, or *ginpirá* + *determiner* + *N*. However, these forms are not attested in the corpus.

Table 23. Sample sentences illustrating the variable morphosyntactic functions of the root *permi*

Morphosyntactic Function	Sample sentences
referential	-
predicative	-
modificative	1. <i>Ada liwat hi Y nga permi napasalida hin sarswela kada hunyo ha RTR plaza ha Tacloban. Then there is Y, who regularly stages a sarswela every June in Tacloban.</i> 2. <i>Hi Z akon ngaran, permi matawa-tawa. My name is Z, always smiling.</i> 3. <i>Kadak-an permi it' holiday, o wara klase ha eskuylahan. Oftentimes we have a holiday or there are no classes in school.</i> 4. <i>Permi na la hiya pa-beach-beach. A lot of times [he/she] is at the beach.</i> 5. <i>Damo permi it' mga paper works. Always a lot of paper works.</i>

The root *permi* ‘always’ comes from the Spanish *fermi* meaning ‘firm; strong’. It has been indigenized, thus its high frequency in the corpus. It mostly functions modificatively with the following syntax *permi* + (particles/determiner) + *verbal predicate with TM affixes*. However, it can be used predicatively, like in the form *nápermi*—that is, *Nápermi ako ha Catbalogan*. Alternatively, it has a referential function when preceded by determiners *an*, or *it'*. However, these are absent in the corpus.

Table 24. Sample sentences illustrating the variable morphosyntactic functions of the root *dalágan*

Morphosyntactic Function	Sample sentences
referential	1. Malaksi an <i>dalágan</i> tikadto ha ira. <i>Running fast towards their[s] [home/place].</i> 2. Kun magnipis iton aton ozone layer mababag-o an <i>dalágan</i> han klima. <i>If our ozone layer thins out, the climate system will change.</i> 3. Sugad hin kaliding inin nga kinabuhi waray hunong an <i>dalágan</i> . <i>This life is like a wheel that turns round and round without end.</i> 4. Malaksi pa gud an <i>dalágan</i> han iya sinasakyan amo waray ak' kita'n maupay ha iya. <i>The vehicle[he/she] was riding was traveling so fast, so I did not see [him/her].</i> 5. Maupay an <i>dalágan</i> han ira pakabuhi. <i>Their livelihood is doing well.</i>
predicative	1. <i>Dalágan</i> man gud an rabbit kay nakuha na man an iya tiil didto ha bato. <i>Run, the rabbit did because he got his foot free from the rock.</i> 2. <i>Dumalágan</i> hi Torey tikadto han lugar nga iya gintudlok. <i>Torey runs towards the place he was pointing.</i> 3. Ako ngani <i>nagdalagan</i> ako ta's natanggal 't'ak' butones. <i>I, too, did run, then I lost my buttons.</i> 4. Hi Abraham <i>nagdalagan</i> ngadto ha panon han kabakahan. <i>Abraham runs towards the herd of cows.</i> 5. <i>Dinalágan</i> hiya pagtapo ha iya. <i>[He/she run to meet [him/her].</i>
modificative	-

Table 24 shows the different morphosyntactic uses of the event-evoking root *dalágan*. In referential form, the common noun marker *an* precedes the root *dalágan*. In predicative form, it takes the inflectional affixes such as *-um-*, *nag-*, and *-in-* or, minus, the noun marker at the beginning of the clause. *Dalágan* as a root is event-evoking, never appearing as a modifier in the corpus. However, modificative usage may be allowed in the language as in *madalaganon nga sunoy* 'a fighting cock that retreats.'

Table 25. Sample sentences illustrating the variable morphosyntactic functions of the root *patron*

Morphosyntactic Function	Sample sentences
Referential	1. Hinumduman ini han tikang pagrisyo han bungto kay an <i>patron</i> nga hi Sr. Sto.Niño an igsasalin-urog. <i>This is a remembrance of the start of the town feasting because the patron saint Sto.Niño is to be celebrated.</i> 2. Sir, kadto na la ha am' ha Hiagsam <i>pagpatron</i> . <i>Sir, come over to our place in Hiagsam for the fiesta.</i> 3. Ano ini kuan man dinhi it' <i>patrona</i> Asuncion, pagsaka ha langit. <i>Well, the kuan, here the patron saint is Asuncion, the ascent to heaven.</i> 4. Anay daw an <i>patron</i> man ha Palo buwas; tara lugod. <i>Wait a minute, the feast day in Palo is tomorrow; let us go there.</i> 5. Kumadto kami ha <i>patron</i> ngan birthday ni papa upod hi Zhamie. <i>We went to the feast day and birthday of Papa, together with Zhamie.</i>



Predicative	<p>1. Nagtitikang han lagod han naaanaw nga tradisyon o, tikang han ira iginkahampang didto han <i>magpatron</i> ha uma. <i>Coming from the shreds of a dying tradition or from those they had a conversation with when there was a fiesta in the farm.</i></p> <p>2. Nagparapamintura kami ni mama kay syempre <i>tipatron</i> na. <i>Mama and I painted all over because it's fiesta soon.</i></p> <p>3. Min, <i>magpapatron</i> na; hi ako it' <i>Hermana</i>. <i>Min, it will be fiesta soon, and I am the Hermana (main sponsor).</i></p> <p>4. Kay nag-aro akon <i>chiffon</i> kay di ba <i>nagpatron</i> ta's pagpadara ha akon pag-abri ko pipino. <i>Because I asked for a chiffon, remember there was a fiesta, but what was sent when I opened it was a cucumber.</i></p> <p>5. <i>Mapatron</i> na ha Dulag. <i>Soon it's fiesta in Dulag.</i></p>
modificative	

Table 25 displays the three morphosyntactic functions of the entity-evoking root *patron*. In referential use, this root is preceded by a common noun marker such as *an*, *it'*, and *han*. In predicative use, the root functions together with inflectional affixes *mag-*, *ti-*, *nag-*, *ma-*. This borrowed root and its affixed forms may be used modificatively; however, such usage is rarely found in the corpus like the form *patronan* in the phrase *patronan nga báboy*.

Table 26. Sample sentences illustrating the variable morphosyntactic functions of the root *abot*

Morphosyntactic Function	Sample sentences
Referential	<p>1. <i>Uswag</i> ha mga bag-o nga <i>abot</i>. <i>Come inside, those who just arrived.</i></p> <p>2. <i>Marasa</i> ini kuya; bag-o la ini nga <i>abot</i>. <i>This delicious kuya, this just came.</i></p> <p>3. <i>Nauupod</i> la ak hadto kay ako an <i>naaabtan</i> nga sige it' pagtinawa. <i>I got included because I was the one caught laughing.</i></p> <p>4. Kay mil-syete iton it' <i>naabot</i> upod na ngada hit' pamasaha. <i>Because 1,700 is the cost including the fare.</i></p>
Predicative	<p>1. An <i>pag-abot</i> han DYVL puplonganon dida han dekada 80 an nagserbi nga kuta han Waray nga literatura. <i>The emergence of DYVL puplonganon siday in the decade of the 80's served as a space for Waray literature.</i></p> <p>2. <i>Naabot</i> gud kami han giyera. <i>We lived during the war.</i> 3. <i>Gin-abot</i> ni Emboy an iya kamot ha ak atubangan ngan gin-imbatar ak niya pakisayaw. <i>Emboy reached for [his/her] hand in front of me and [he/she]invited me to dance.</i></p> <p>4. Sigurado <i>gin-aabatan</i> hin panahon pero ginhihimo ko ito para han Amay. <i>Indeed, time is not enough, but I do these things for the Father.</i></p> <p>5. <i>Inabot</i> na an akon turno. <i>My turn has come.</i></p> <p>6. Bisan baho han bag-o nga <i>abot</i> nga pancake waray ini samok han amon maupay nga suruswerte. <i>Even the scent of the fresh pancake, couldn't match our good fortune.</i> 7. May'da <i>maabot</i> nga makusog nga bagyo ha ira lugar. <i>For there will come a strong typhoon typhoon at their place.</i></p> <p>7. Hi Z akon ngaran, <i>permi matawa-tawa</i>. <i>My name is Z, ever smiling.</i></p>
Modificative	

Table 26 presents two morphosyntactic functions of the event-evoking root *abot* in the corpus. In referential form, the noun markers *an*, and *it'* precedes this root, and takes the pattern *modifier + linker + N*. The predicative form uses the TM affixes *na-*, *gin-*, *-in-*, and nominal

predication. The corpus yielded no modificative use of this root. However, the modifier *maabuton* is possible.

Table 27. Sample sentences illustrating the variable morphosyntactic functions of the root *siyahan*

Morphosyntactic Function	Sample sentences
Referential	
Predicative	1. <i>Siyahan hiya. He is first.</i> 2. <i>An siyahan gud nga ginhihimo kasilyas. The first thing that was built was a toilet.</i>
modificative	1. <i>Nagpakakita man kami han ira siyahan nga nagpakanhi. We were able to see their first[s] [wave/group] that arrived.</i> 2. <i>pagsagka pa la (namon) han siyahan nga bukid. we climbed up the first mountain</i> 3. <i>Kahimyangan hinin akon kabuhi tikang ko ikaw makita hadton siyahan nga adlaw. My life is at peace since that day I first saw you.</i> 4. <i>Mabayad hin PhP xxx kada bulan ha siyahan nga lima ka tuig. Will pay Phpxxx every months in the first five months</i> 5. <i>Kumuha hi Bucky han siyahan nga mabiyaha tiuli para hiya makaabot dayon. Bucky selected the first [set of] travelers for home so that he can arrive soonest.</i> 6. <i>Hiya an siyahan nga older man. He is the first of the older men.</i>

The root *siyahan* has no referential function found in the corpus, except when the head that it modifies is zero. For example *Kuhaa an siyahan (nga N)*. The word order *Predicate + Reference* is used when there is a continued mention of a reference (Fox, 1985). When functioning as a reference, attribute-evoking roots, like *siyahan*, are part of an NP whose head is zero or dropped because they are apparent in the discourse. A good example of this is sentence 7 on Table 27 above: *Hi Z akon ngaran, permi matawa-tawa*. This construction is a compound sentence with *Hi Z akon ngaran* as the independent clause (with *Hi Z* as predicate, and *akon ngaran* as reference), and *permi matawa-tawa* as the dependent clause. Notice that after the predicate *permi matawa-tawa* the reference is not mentioned, or zero; the referent is identifiable, or old information, since it is mentioned previously in the independent clause.

On the other hand, the word order RE (*referring expression*) functioning as a predicate + RE, or *abs + nominalized clause* is used to indicate classification. The RE functioning as the predicate is new information. Consider the difference between these two sentences:

*Siyahan hiya* vs. *Hiya an siyahan*.  
 FIRST<sub>i</sub> ABS. ABS. ABS. FIRST  
 'S/he is first.' S/he is the first placer.'

If this is a race, for example, the presupposition in *Siyahan hiya* is that everyone in the conversation knows *hiya* because the absolutive (that is, the most affected entity) "always represents old information in discourse" (Gault, 1999, p. 8); however, we do not know what his/her place in the said race is. In this sentence, *Siyahan*, which functions as a predicate, is new information to us, which linguists analyze as a specificational construction (Nolasco, 2020). On the other hand, in *Hiya an siyahan*, we know that somebody won the race, but we do not know who did. So, in this case, *an siyahan*, functioning as a reference, is an absolutive case and old information. On the other hand, *Hiya*, identified as the winner, is now the new information, which further comments on the referent, *an siyahan*, as introduced by *Hiya*. Therefore, *hiya* is the predicate.

However, one should note that there is a continuing controversy over how to analyze such constructions. The *abs + nominalized clause* shown above contradicts the analysis that Philippine-type languages are predicate-initial. Other investigators analyze this as an equational construction (Payne, 2020), specificational and identificational constructions (Nolasco, 2020) and not as predicative construction. In other words, X equals Y (that is, *Hiya* equals *an siyahan*, or *an siyahan* equals *hiya*) in this type of construction. X and Y, in identificational construction, are symmetrical. In predicative constructions, X and Y are asymmetrical. Unfortunately, this is beyond this study's scope; hence, it will not be addressed here.

Table 28. Sample sentences illustrating the variable morphosyntactic functions of the root *tádong*

Morphosyntactic Function	Sample sentences
referential	1. Cebu an <i>tinádong</i> kay tugon ni Buwaya basi 'say manulong. <i>Cebu was targeted because Buwaya instructed them to attack.</i>
predicative	1. <i>Tadong</i> la, Oddette. <i>Just straighten up, Odette.</i> 2. Gin-ayad niya ngan <i>gintádong</i> an tabon ha iya hawak. <i>[He/she] fixed and straightened the cover on [his/her] waist.</i> 3. <i>Nagtadong</i> hiya ngan, nag-asawa. <i>[He/she] changed for the better and got married.</i>
modificative	1. Nagpapakabuhi hin hinapinas pero ha <i>matádong</i> nga paagi. <i>[He] is earning a humble living but in a decent way.</i> 2. An dalan nga <i>matádong</i> ha akon paglalaktan ginsisigurado gud nira. <i>They are making sure of the straight path that I will follow.</i> 3. Umabot an takna nga nawara hiya han iya <i>tádong</i> nga dalan. <i>The time came that he went astray from his straight path.</i> 4. Mas <i>matádong</i> nga dibisyon an iya siring. <i>S/he counsels for more righteous devotion.</i> 5. Inin kabugawan, inin kabugawan marampag manahon kamakawiwili kay baga <i>magtádong</i> . <i>These pomelo trees, these pomelo trees lush with their leaves, are fascinating because they are perfect.</i>

The root *tádong* has a low frequency in the corpus, so it is not run in the Chi-square test. Table 28 displays samples of its three morphosyntactic functions as found in the corpus. Referentially, this root exists in the corpus as an inflected form preceded by noun markers such as *an*, *it'*, *ha*, *han*, and *hin*. For example, *Cebu an tinádong kay tugon ni Buwaya basi 'say manulong*. Predicatively, in the corpus, the same root may be used without inflection; and in other instances, it takes the inflectional affixes *gin-* and *nag-*. Modificatively, the root *matádong* takes modificative affixes like *ma-*, and by the function indicating-morphosyntax *modifier + linker + N*.

Table 29. Sample sentences illustrating the variable morphosyntactic functions of the root *sakay*

Morphosyntactic Function	Sample sentences
referential	1. Adto an <i>sakay</i> ginlulupad. <i>There, the passenger is being flown away.</i> 2. Tabaw la nga saging an <i>ginsakyan</i> swerte gad it nga mangirisda. <i>Rode on a banana trunk, this fisherman is indeed lucky.</i> 3. Damo nga pasahero an <i>sumakay</i> ha ira. <i>Many passengers rode with them.</i> 4. Dus-og na gad la tipakadto hirani ha driver para an <i>sumarakay</i> diri magkuri pagdinuko para la makalingkod. <i>Move towards the driver's direction so that the passengers won't have a hard time bending over to have a seat.</i>

	<p>5. Nagmata hiya han aringasa han iya <i>nasakyan</i> nga dyip. [He/she] woke to the noise of the jeep he/she was riding on.</p> <p>6. Ha kaadlawon gihap', babayi nga nakabusag an <i>nasakay</i> pero, pagkikita ha hispiho an babayi nawara na. <i>Early in the morning as well, a woman in white was riding, but upon checking in the mirror, the woman was gone.</i></p>
predicative	<p>1. <i>Ginsakay</i> ini nga bata ngadto ha harayo nga waray kahoy kay puros la bato. <i>This child was taken far to a place where there were no trees and only rocks.</i></p> <p>2. <i>Iginsakay</i> ha trak an mga chikababes. <i>The chikababes were placed in the truck.</i></p> <p>3. <i>Ginsisinakayan</i> ko la't hiya pero nagtitikaiha di na ak naayon. <i>I was just going along with him, but eventually, I didn't like it anymore.</i></p> <p>4. Mayda <i>nasakay</i> nga mahusay nga babayi. <i>A pretty woman is aboard.</i></p> <p>5. Diri ak' <i>masakay</i> hito nga kabayo. <i>I will not ride on that horse.</i></p>
modificative	

Table 29 demonstrates the two morphosyntactic functions of the event-evoking root *sakay*. Referentially, this root is inflected in form but is preceded by the common noun marker *an* or, *han*—thereby nominalizing it as in *an sakay*, *an sumakay*, *an ginsakyan*, and *han nasakyan*.

The inflectional affixes *na-*, *gin-*, *-in-*, and *ma-* attached to the root yield its predicative form. The corpus did not yield any samples of modificative use. However, the language allows the following sentences: *May ada nasakay nga mahusay nga babayi.*; *May nasakay nga bagan bangaw ta's waray pasakya kay mabaho kuno hiya.*; *Ginpabay-an ko hiya nga magdara han sarakyan han bata nga may sakay nga usa nga bata.* These examples are consistent with the function indicating-morphosyntax *modifier + linker + N*.

Table 30. Sample sentences illustrating the variable morphosyntactic functions of the root *bató*

Morphosyntactic Function	Sample sentences
referential	<p>1. Nakakita nga an <i>bató</i> ginkaliding na. <i>It was seen that the stone had been rolled away.</i></p> <p>2. Didto han <i>bató</i> nga sugad han bungkog han karabaw an kahilapad didto kadisgrasya hi Binyang. <i>On that stone as wide as a karabaw's shoulder, that is where Binyang met an accident.</i></p> <p>3. Iya gintutdoan an mga bata han pagsagitsit han <i>bató</i> ha dagat. [He/she] taught the kids how to skip the stone in the water.</p> <p>4. Saho kay kun ikaw it' <i>magbató</i>, di ka makaakos, naawa ka la hit' <i>paragbáto</i>. <i>I couldn't care less because if you gather rocks, you won't be able to do it, you are just envious of the rock-gatherers.</i></p>
predicative	
modificative	

The root *bató* exhibited a frequency below 5, so no chi-square is run on this particular root. Table 30 displays the referential morphosyntactic functions of the entity-evoking root *bató*. In referential use, the root is preceded by the noun markers *an*, *han*, and *hit'*. The corpus did not yield a predicative use for this root, as well as for the modificative function. Nevertheless, both functions are present and practiced in the language—for example, the inflectional affix *ma-*, as in *Mabató an dalan*. Modificatively, the root *bató* may also take the affix *ma-*. For example:

*Pira ka metro ha unahan, ha mabató nga tabi ha isla han Liliputan, may kakulba nga naghuhulat.* 'A few meters farther, at the rocky shore of Liliputan, worry awaits.'

Table 31. Sample sentences illustrating the variable morphosyntactic functions of the root *balay*

Morphosyntactic Function	Sample sentences
referential	1. Kadamo han ruba nga <i>balay</i> . <i>So many houses are damaged.</i> 2. Ha sapit nga <i>balay</i> may nabatian ako nga guliati. <i>In the next house, I heard screaming.</i> 3. Ha usa nga <i>balay</i> pagukoy kamo didto. <i>In the other house, all of you can live there.</i> 4. Ha kwarto han akon inuukyan nga <i>balay</i> nakaabat ako hin klasi hin kawarayan. <i>In the room of the house where I was staying, I felt a certain kind of loss.</i> 5. Pagbalik niya waray na laga an bug-os nga <i>balay</i> . <i>When he returned, there was no light in the whole house.</i>
predicative	1. <i>Balay</i> hin yatot! Hahahaha, tara, balik kita ngadto iyo <i>balay</i> . <i>House of a mouse! Hahaha, come let's go back to your house.</i> 2. <i>Pagbalay</i> na kuno kita hin tuhay kay damo naman kuno an iyo kuwarta. <i>Let us build a good house, they say; now that you have plenty of money, according to them</i> 3. <i>Nagbalay</i> ngan naghimo hin mga salapdag hi Jacob para han iya kabakahan. <i>Jacob built a house and made sheds for his cows.</i> 4. <i>Nagbalay-balay</i> kita kay kuan adto hira Marlie nangangalas man adto ha aton. <i>We made a shanty because kuan the group of Marlie was angry at us.</i>
modificative	

The root *balay* is not run on the Chi-square test like other roots, which provide below five frequencies in the corpus. This root has a referential function as its centroid. Aside from the noun marker *han*, the pattern *modifier + nga + N*, where *balay* is the head of the noun phrase, is also indicated. As in most roots, for *balay* to function predicatively, it has to take the inflectional affixes as exemplified by *-a*, *pag-*, and *nag-* in the corpus. There is no modificative sample found for this root. However, in the language, *binalay* and *iginbalay* may function as modifiers. Consider the following examples:

*May dara ngahaw maghihirok ha aton sugad hin binalay nga baktin.*

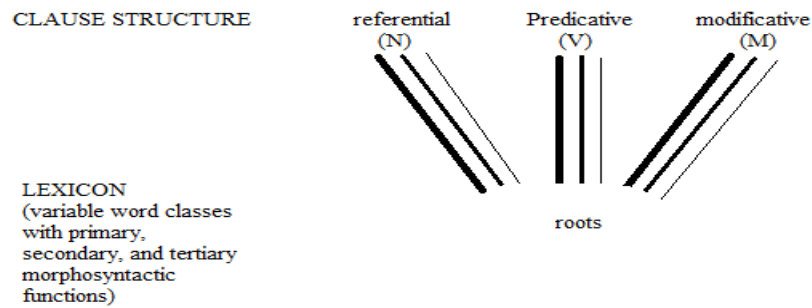
‘There is, again, another [one] that will take care of us like a pet pig.’

*Paunan-o mo iisplikar kun tikang diin an iginbalay nga kwarta.*

‘How will you explain the source of the money you used to build the house?’

## 2.6. The scheme in the organization of Waray word classes

Waray has fascinating and complex morphological processes. A root could have many forms or undergo many morphological processes. For example, an event-evoking root *palit* ‘buy’ could have a permutation of 150 plus forms (Unruh, 1993), explaining the roots’ variability. According to Dixon's (2010) proposal, this variability of Waray roots necessitates another scheme in the organization of word classes as in Figure 3.



*Figure 3. The scheme in the organization of Waray roots*

In this scheme, generally, roots may have three different clause structures. The thickest line represents the principal function, the middle line the secondary function, and the relatively thin line the tertiary function, indicating that roots are variable. Thus, in Waray, an event-evoking root could primarily function as a predicate, secondarily as a noun, and tertiarily as a modifier. While entity-evoking roots may primarily function for reference, they could also be utilized variably for predication and modification. Furthermore, attribute-evoking roots may be used primarily for modification and could also be used variably for predication and modification. The principles of Basic Linguistic Theory (Dixon 2010) posit that the internal logic and categories of a language must form the basis of its description; thus, this attempt at describing the Waray roots is consistent with these principles.

### 3. Conclusion

The ontological semantic domains of entity, event, and attribute-evoking roots have statistically been shown to correlate with the syntactic functions of reference, predication, and modification. It is evident from the Multi-Dimensional Scaling (MDS) graphic how each kind of root “clusters” around a given function. If roots were truly precategorial, the colored words would be scattered randomly throughout the diagram. If roots were inherently categorized, there would be precisely three overlapping word groups: one representing all entity-evoking roots fulfilling referential roles, another representing all event-evoking roots fulfilling predicative roles, and a third representing all attribute-evoking roots fulfilling modification roles. Instead, the three semantic groupings are grouped around each of the three functions. Though no root is restricted to serving a single purpose, it is evident that entity-evoking roots are preferred for referential purposes, event-evoking roots for predicational functions, and attribute-evoking roots for modification functions.

In other words, Waray roots belong to a category; however, they are variable. Meaning that a Waray root could be strongly predicative and weaker in membership in the modificative and referential clusters. Or, a Waray root could mostly be utilized as a reference and occasionally as a predicate or modifier, as observed in their actual usage in the corpus.

This study’s results entail a new scheme on top of the five schemes previously identified by Dixon (2010) on how languages organize their word categories.

The results of this study enable one to create and propose the following for dictionary makers for Waray:

- a. a model on tagging of Waray roots, for example:

**bato** [baTO] <1r> <2m> <3p> stone  
 1 Ginlabay ko hiya hin bato.  
 2 Pira ka metro ha unahan ha mabato nga tabi ha Liliputan han isla may kakulba nga naghuhulat.  
 3 Mabato an lugar mamara, mataputapo ngan maluntog gud pagkit-on.

- c. a model for glossing and tagging of inflected forms of the verb, for example:

**tiábot** [tiʔAbut]*int.ir.dcd.* about to reach s.t.; about to arrive [root abot]

and

- d. a model for glossing of inflected forms with stem-forming affixes. For example:

**gin-iinábot** [ginʔiiNAbut] *tr.r. del.* is continually reaching for s.t. [root abot]

It is recommended that the study be expanded to more than 30 roots in the future. This study also recommends these questions for further study: Why is the abs + nominalized clause construction allowed? What are the pragmatic motivations or communicative intents of such constructions?

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