Property Concept Words in Six Amazonian Languages

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Abstract

This master's thesis focuses on comparing and contrasting Property Concept Words (PCWs) in six Amazonian languages. PCWs are usually referred as 'adjectives' in Indo-European languages, words that have a semantic denotation of properties or features. However, they vary in different languages regarding whether they belong to a morphosyntactically distinct word class or not. In other words, whether these PCWs should all be included in an adjectival class (if exist) or some may be categorized in subclasses of nouns or verbs.

In my sample of six Amazonian languages: Panare, Hup, Karajá, Jarawara, Kwaza and Cavineña, PCWs are found behaving differently in each language. When discussing whether adjectives should be classified as a separate syntactic class or not, semantics is quite often involved. Moreover, the introduction of copula clauses complicates this discussion.

Payne & Payne (2013) argues for a separate word class of AD-forms instead of adjectives in Panare to represent words that are usually characterized as either 'adjectives' or 'adverbs' in Indo-European languages. However, AD-forms are quite similar to nouns in Panare. Epps (2008) agrees on a closed set of adjectives in Hup that is quite similar to verbs regarding their TAM-marking, and similar to bound nouns when occurring postnominally. According to Ribeiro (2012), Karajá lacks an independent part of speech for 'adjectives' where PCWs are considered a subclass of nouns without much difference from other types of nouns. Dixon's (2004) grammar distinguishes a small closed class of adjectives from other word classes in Jarawara and at the same time argues that PCWs can also be expressed through possessed nouns and stative verbs. In Kwaza, Van der Voort (2004) claims that it is unnecessary to exhibit a distinct class of adjectives whereas PCWs behave quite similar to verbs. Lastly, Guillaume (2008) introduces two distinct subclasses of adjectives, predicative and attributive adjectives in Cavineña, where the former function as copula complements and the latter are postnominal modifiers.

The six languages vary in whether adjectives should be identified as a distinct word class or not. Even though these analysis may be of different approaches, PCWs show certain similarities across languages: they can both modify nouns and function in predicative constructions; they usually can take TAM-markers; the noun-modifier construction most likely parallels possessive construction. In a nutshell, these Amazonian languages are different from prototypical Indo-European languages regarding the syntactic distribution of PCWs. However, within Amazonian languages, syntactic variability of PCWs is large but possibly limited.

Keywords: Amazonian languages, Property Concept Words, adjectives, semantic types, copula clauses, stative verbs, and bound/possessed nouns.

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Abbreviations

CC	copula complement
CS	copula subject
NP	noun phrase
P&P	Payne, Thomas E. & Doris L. Payne
PC	property concept
PCW	property concept word
PN	possessed noun
PoS	part(s) of speech
RC	relative clause
SA	South America(n)

Grammatical abbreviations

A	agentive
ABL	abilitative
AD	AD-forming suffix
ALWS	always
AN.INVIS	animate demonstrative pronoun, invisible/distal, singular
AN.PROX	animate proximate specifier
APPL	applicative
ASF	adjective suffix
ASSOC	associative
ATTR	attributive
AUG	augmentive
AUX	auxiliary
BM	boundary marker
CAUS	causative
CL	classifier
COP	copula
CTFG	centrifugal direction
CTPT	centripetal direction
DAT	dative
DECL	declarative
DEP	dependent marker
DI	dependent initial
DIR	direct past-perfective participant situation
DL	dual
DS	different subject
DTR	detransitivizer
DYNM	dynamic
ERG	ergative
EX	existential
EYE	eyewitness
F	feminine
FACT	factitive
FM	formative
FOC	focus
FRUST	frustrative
FUT	future
GNO	gnomic time reference
HC.SIM	high continuity, simultaneous action
IMP	imperative
IPFV	imperfective
IMPIMP	immediate positive imperative
INCH	inchoative
INCL	inclusive
INFR	inferential
INSTR	instrument nominalizer
INT	interrogative
INTENS	intensifier
INTR	intransitive marker
INV	inverse
IPST	immediate past
ITG	intangible
LIG	ligature
M	masculine
NARR	narrative
NEG	negative
NEW	newly-learned knowledge (mirative) information value
NEYE	non-eyewitness
NMLZ	nominalizer
NSPEC	non-specific aspect
NPF	noun prefix
NSG	non-singula
O	object
PART.PST	past participle
PFV	perfective

PL	plural
POSS	possessive
PPFV	past-perfective aspect
RECIP	reciprocal
RED	reduplication
REL	relativizer, relational, or linking, prefix
REP	reportative
RESP	respect marker
RPST	recent past
SG	singular
SS	same subject
TR	transitive
VBLZ	verbalizer
1	first person
2	second person
3	third person

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1. Introduction

There has been a long-lasting debate on whether all the world's languages have the same word class system or not. The flexibility and rigidity of word classes, also referred to as 'part(s) of speech' (henceforth PoS), differ across languages. Robins (1990) proposes that PoS are universal, saying that all languages have a PoS system that is invariably alike those of the Latin or Ancient Greek type.

Even though the degree of rigidity of PoS bears variances across the world's languages, the distinction between nouns and verbs, the former generally as argument and the latter as predicate, is quite clear in most languages of South America (Derbyshire 1979).

When it comes to adjectives, however, the picture is not as clear. The most prototypical adjectives are those semantically identified as 'Property Concept Words' (henceforth PCWs) by Thompson (1988), which exist to various extents in South American (henceforth SA) languages (Dixon & Aikhenvald 2004, Beck 2006). Dixon (2010) and Hajek (2004) argue for the existence of a universal adjectival class but Beck (2006) casts doubt on such a theory since PoS should be analyzed syntactically, instead of semantically. In other words, if a word class is also analyzed according to PCW, then this PoS is no longer defined based on the structure of the language, but simply on the meaning that has been expressed through lexemes. As a result, even though PCWs are expressed mostly through a syntactic adjectival class in Romance and Germanic languages, this does not imply an existence of such an equivalent syntactic word class in SA languages.

The actual nature of PCWs is said to differ syntactically when languages differs in terms of flexibility of word classes. Hengeveld (1992: 69) introduces different types of PoS systems, where verbs, nouns and adjectives may either be rigidly different or cannot be easily distinguished. Hengeveld additionally proposes an implicational hierarchy of PoS, where verbs are most likely to be identified as a separate word class, followed by nouns, and then adjectives, whereas adverbs are the least likely to be identified. Hengeveld further specifies that in the hierarchy of 'verbs > nouns > adjectives > adverbs', only adjacent terms can merge into and be serviced by a single PoS.

Hengeveld's analysis is quite problematic. Even though different degrees of flexibility are presented for most languages, his analysis excludes those languages, in which adjectives are traditionally categorized as a subclass of verbs (or just behave extremely similar to verbs). Unfortunately, in Hengeveld's approach, adjectives are hierarchically more distant from verbs than from nouns. This is to say, in languages where adjectives appear in almost identical environments as verbs, when nouns are distinguished from verbs, adjectives can no more be a subclass of verbs because they are not adjacent to verbs. Under this assumption, it is only possible for adjectives to occur as a distinct word class. On the other hand, when adjectives behave similar to nouns, there are both possibilities of adjectives as a subclass of nouns or as a distinct word class. In short, Hengeveld's implicational hierarchy does not treat adjectives evenly qua their relation to nouns versus verbs.

Another issue concerns the unclear classification of the different PoS systems. For example, when language A only differentiates nouns and verbs, it is quite ambiguous where PCWs are expressed. For another language B, where verbs are identified as a word class and the semantic combination of noun-adjective as another, it is clear that PCWs occur in similar

environments as nouns. Then, Hengeveld's unclear classification of language A leaves a chance for PCWs to also show a similar behavior as nouns, and this differentiation of language types is too superficial.

The similar vague distinction is repeated by Rijkhoff (2000). He introduces two different cases where there is no distinct class of adjectives: "either the language does not clearly distinguish between adjective and members of other major word classes (verbs, nouns), or the language simply lacks a distinct class of adjective, in which case other means are used to express adjectival notions" (Rijkhoff 2000: 217). In Rijkhoff's interpretation, 'adjectives' refer to a more semantic aspect now commonly understood as PCWs, instead of a morphosyntactic one. Rijkhoff's statement is controversial, since, if PCWs do not behave as differently, there is no necessity in the first place to categorize a distinct 'adjective class.'

Nevertheless, Van Lier & Rijkhoff (2013) agree with the difference between lexical and syntactic flexibility proposed by Evan & Osada (2005). Both semantic shift and regrammaticalization can influence the surface form of a single word. However, they illustrate different types of flexibility, the first one being lexical and the second syntactic. In terms of lexical flexibility, there are two possibilities: either new properties are added to a word when functioning as a different PoS, or the word independently makes different selections when surfacing in different syntactic positions. This lexical perspective can alternatively be understood as a word, a lexical flexible item, entering into a grammaticalization process which specifies its category. Consequently, Rijkhoff summarizes that "the disagreement on the universality of word classes is due to the different assumptions about lexical or syntactic categories in various grammatical theories" (Van Lier & Rijkhoff 2013: 7). Generativists insist that verbs and nouns are universally postulated categories, but typologists regard them to be more language specific.

The pragmatic problem relating to this is how we should identify verbs and nouns. Should they be defined at the level of lexical roots, the morphological level of word formation, or the syntactic phrase level? This may relate to the possible semantic shift of lexemes. Whether such a shift is understood purely due to lexical flexibility or as a result of regrammaticalization by zero morphemes would need close scrutiny in each language. In addition, it is said that in some languages it is difficult to establish whether adjectives are flexible or rigid, when variation may appear both in the lexemes and in syntactic structures (Floyd 2014: 1501). If there is a recategorization process, also sometimes referred to as 'conversion,' it is considered irrelevant to the semantics of a group of lexemes. Under such circumstances, Croft (2010: 791) indicates that it is difficult to decide whether these lexemes belong to a single word class or subclass of certain word classes.

Before looking at my sample of six Amazonian languages, sections 1.1-1.5 introduce several concepts that are essential to our discussion. Sections 1.1-1.3 discuss relations between PCWs and different word classes: nouns, verbs and adjectives as well the semantic categorization of PCWs. Section 1.4 introduces copula clauses and section 1.5 provides a few criteria to distinguish adjectives from verbs and nouns. These fundamental concepts and theories discussed throughout sections 1.1-1.5 give us a theoretical basis to explore the syntactic functionalities of PCWs in the sample of six Amazonian languages introduced in section 1.6.

1.1 PCWs and their relation to nouns and verbs

It is well known that two lexical items with the same meaning may belong to different PoS in different languages (Anward et al. 1997: 169). For example, the same lexical item in Tongan may have a wider range of syntactic function than corresponding Swedish words. Similarly, lexical items with the same inflections in a single language may still belong to different PoS.

Evans & Osada (2005: 357) indicate the following categories for the syntactic flexibility of adjectives:

(1) a. either explicit semantic compositionality for both argument and predicate uses;
b. or distributional equivalence with a bidirectional relation;
c. or exhaustiveness since specific semantic subclasses do not occur as predicates.

Dixon (2010) and Hajek (2004) base such a classification of adjectives on empirical evidences, rather than on theoretic postulations. Dixon (2010: 72) argues that adjectives are usually found in four different situations according to their relation to verbs and nouns:

(2) a. adjectives show grammatical properties similar to those of verbs;
b. adjectives show grammatical properties similar to those of nouns;
c. adjectives may function, like verbs as in type (2a), as head of an intransitive predicate and also similar to nouns, when functioning within an NP as in type (2b);
d. the grammatical properties of adjectives are different from those of nouns and verbs.

In types (2a) and (2b), it is quite controversial whether adjectives should be classified as a subclass (of verbs or nouns) or as a separate word class that functions similar to other word classes (i.e. verbs or nouns). Dixon's perspective is quite relaxed regarding this controversy by saying that it is identically appropriate to classify adjectives as a subclass or as an independent word class when only looking at a single language (Dixon 2010: 67). Quite naturally, this leads to the possibility to identify adjectives as a separate word class in any language, since Dixon will always classify adjectives distinctively even if they may behave almost identically to other word classes.

Beck (2006) criticizes Dixon's classification, which always postulates a separate word class for adjectives. He argues that theoretical word classes should always be based on two criteria (Beck 2006: 112):

(3) a. theoretical utility: given that a part of speech is essentially a label applied to a set of words which specifies their distributional and other morphosyntactic properties;
b. typological generalizability: definition should be such that it creates an appropriate (and constrained) set of expectations about the class of words it is applied to in every language which is claimed to have them.

In Beck's view, Dixon's classification of adjectives as a separate word class is neither theoretically useful nor typologically generalizable. The additional word class may not be necessary since it may share most of its characteristics with other word classes. At the same time, since the primary function of PoS is to categorize morphosyntactic properties of words, any newly proposed word class should have a designated syntactic function that differs from

other word classes that have already been established. Beck notices that Dixon's adjective class does not contribute additional syntactic properties to the languages; instead the classification is purely semantic which could already be characterized simply by PCWs (Beck 2006: 116). In other words, the universally distinctive status of 'adjectives' is actually more semantic than syntactic, including in those languages where Dixon forces a separate adjectival class.

1.2 PCWs and their relation to adjectives

Where PoS may be determined phonologically, morphologically or syntactically, PCWs only describe the semantic meaning of the lexemes which has no implication on what PoS each word belongs to (Anward et al. 1997: 173).

As for PCWs, there are three sets of semantic types which are considered universal (Dixon & Aikhenvald 2004: 4-5):

Set A: core semantic types A-D with both large and small adjective classes:

A. DIMENSION— for example: 'big', 'small', 'long', 'tall', 'short', 'wide' and 'deep';
B. AGE—for example: 'new', 'young' and 'old';
C. VALUE—for example: 'good', 'bad', 'lovely', 'atrocious', 'perfect', 'proper', 'real', 'odd', 'strange', 'curious', 'necessary', 'crucial', 'important', and 'lucky';
D. COLOR— for example: 'black', 'white' and 'red';

Set B: types E-G with medium-sized or small adjective classes:

E. PHYSICAL PROPERTY—for example: 'hard', 'soft', 'heavy', 'wet', 'rough', 'strong', 'clean', 'hot', 'sour', 'well', 'sick', 'tired', 'dead' and 'absent';
F. HUMAN PROPENSITY—for example: 'jealous', 'happy', 'kind', 'clever', 'generous', 'cruel', 'proud', 'ashamed' and 'eager';
G. SPEED—for example: 'fast', 'quick' and 'slow';

Set C: types H-M as adjectives in some languages:

H. DIFFICULTY—for example: 'easy', 'difficult', 'tough', 'hard' and 'simple';
I. SIMILARITY—for example: 'like', 'unlike', 'similar', 'different' and 'other';
J. QUALIFICATION—for example: 'definite', 'true', 'probable', 'possible', 'likely', 'usual', 'normal', 'common', 'correct', 'appropriate', 'sensible'';
K. QUANTIFICATION—for example: 'all', 'many', 'some', 'few', 'only' and 'enough';
L. POSITION—for example: 'high', 'low', 'near', 'far', 'distant', 'right', 'left' and 'northern';
M. CARDINAL NUMBER—for example: 'one', 'two' and 'three'.

Scholars from the past decades vary in analyzing the syntactic function of PCWs in SA languages. Previous typological studies by Dryer (2007, 2013) show certain universal variations in PCWs:

(4) a. grammatically defined as a distinctive adjective class;
b. as a subclass of verb or noun;
c. or of both;

d. or sometimes only recognized as (reduced) relative clause (henceforth RC).

More complicatedly, a mixture of these four scenarios can co-occur for different PCWs in a single language (Dixon & Aikhenvald 2004). Dixon (2010) also introduces implicational relations regarding PCWs when they do not occur as adjectives in a language. For example, type E: PHYSICAL PROPERTY may occur as verbs whereas type F: HUMAN PROPENSITY may function as either verbs or nouns (Dixon 2010: 76).

However, it is questionable whether adjectives should be identified semantically as PCWs. Specifically speaking, when considering the semantic span of PCWs and prototypical adjectives (especially those we learned from Germanic and Romance languages), there does not really exist an argument showing whether the two have similar semantic ranges. In other words, adjectives may cover more concepts than what is included in PCWs.

1.3 Semantic functions of PCWs

Whether an adjective word class is universal is still to be discovered and under scrutiny. The fact that adjectives were not categorized as a distinct word class until much later in Latin seems to parallel Dixon's transition from denying a universal adjective class (Dixon 1977) to forcing a universal one in recent publications (Dixon & Aikhenvald 2004, Dixon 2010). It is quite feasible to set up an adjective class in a particular language but whether this would be necessary or contributive is still the question.

Dixon & Aikhenvald (2004) introduce four functionalities that are generally associated with adjectives in the world's languages. Here, I would rather attribute these functionalities to PCWs, leaving aside whether they should be characterized as a distinct word class or not. Nevertheless, descriptions of the four canonical properties can be analyzed from a semantic perspective, as shown below (adapted from Dixon & Aikhenvald 2004: 28):

(5) PCWs have two canonical functions:
   a. in a statement that something has a certain property;
   b. as a modifier to a noun;
   PCWs can also have one or both of the two following properties:
   c. as the parameter of comparison;
   d. as a modifier to a verb.

All four functionalities exist in English and are mostly linked to the adjective class, besides (5d) which functions more like adverbs in English. However, languages differ in whether they bear all four functionalities or not and whether these functionalities are coded similarly or differently. In two Cariban languages of SA, Hixkaryana (Derbyshire 1979) and Tiriyo (Meira 1999), PCWs bear all functionalities but (5b), i.e. they cannot directly modify noun phrases. In Macushi (Cariban; Abbott 1991), however, adjectives are divided into two subcategories based on their different morphological processes related to the functionalities. This thesis will delve into examining the two canonical functions (5a) and (5b) in the 6-language sample of SA Amazonian languages and discuss what similarities and differences they share. Typological similarities and differences from nouns and verbs are discussed as criteria to examine whether PCWs should be categorized as a subclass, a separate word class, or something else.

1.4 Introduction to copula clauses

Besides the two main clause types, transitive and intransitive clauses, many linguists have now shown the existence of a third clause type, copula clauses, in various languages (Dixon & Aikhenvald 2004: 6). Copula clauses are predicated by a copula verb (may be invisible) and take two core arguments, copula subject (henceforth CS) and copula complement (henceforth CC) (Dixon & Aikhenvald 2004: 6). Dixon & Aikhenvald (2004: 14-5) suggest that adjectives can occur in two different situations:

(6) Two situations that adjectives can occur in (Dixon & Aikhenvald 2004: 14-5)
   a. as an intransitive predicate that takes some or all morphological processes and syntactic modifiers which can apply to a verb when it functions as an intransitive predicate (verb-like adjective);
   b. as the complement of a copula clause (non-verb-like adjective).

Aside from these two types of clauses, Dixon also postulates an obvious correlation between the type of a language and the functionality of adjectives in that language. Languages are categorized as four types: predicate-marking, NP-marking, a mixture of both or neither of the two (Dixon 2010: 96). Predicate-marking and NP-marking are referred to, in Dixon & Aikhenvald's (2004: 33) publications, as head marking and dependent marking. Dixon states that a non-verb-like adjective class tends to be found in languages with NP-marking at clause level, whereas a verb-like adjective class is found in predicate-marking languages. However, this correlation is quite circular. When a language is NP-marking, clauses are understood as copula clauses by Dixon, under which assumption the only place an adjective could occur in the clause structure would be as a CC. The same postulation also goes for predicate-marking sentences. In other words, Dixon's terms, NP-marking versus predicate-marking, non-verb-like versus verb-like adjectives, copula versus intransitive clauses, are all describing the same phenomenon: PCWs can behave more similarly to verbs in some languages and more to nouns in others. However, this has no implication as to which word class PCWs belong to and whether the language allows a distinct adjective class or not. As already discussed, proposing a separate adjective class would never lead to typological problems since one can always specify in a language different functional possibilities that may occur in a word class. Then, for us, the practical question would not be whether we can propose an adjective class or not, but rather whether such a separate class would contribute more to our understanding of the structure of a language, the theoretical utility discussed in (3a) (Beck 2006).

For example, many languages allow constructions like [Mary beautiful]. This sentence can either be understood as a copula clause or an intransitive one. When the sentence is viewed as a copula clause, the copula predicate is not overtly expressed but implied in the clause structure with 'beautiful' functioning as CC; when interpreted intransitively, 'beautiful' itself functions as the core intransitive predicate which does not need an argument as its complement. Theoretically speaking, PCWs functioning as predicates are typologically allowed in intransitive clause constructions, besides typical verbal predicates (Dixon & Aikhenvald 2004: 6). Then, the distinction between whether classifying 'adjectives' as CCs or intransitive

predicates lies in what kind of morphological, syntactic or lexical features they have in common with other elements that can take the same position.

Moreover, Hajek (2004: 351) introduces a few criteria to differentiate intransitive clauses from copula clauses. These criteria include: how negations are marked, how reduplication results in recategorization, whether adjectives can function as the head of an NP, whether the class of adjectives is closed or open, whether adjectives can only be used attributively or not, etc. Most of these criteria are used to reanalyze the clause types regarding PCWs in my sample of six Amazonian languages.

1.5 Criteria to differentiate adjectives from verbs and nouns

Since adjectives can be either verb-like or noun-like as discussed in (2a-d) in section 1.1, to establish a distinct word class for adjectives, Dixon & Aikhenvald (2004) use the following criteria to distinguish adjectives from verbs and nouns when the adjectives are used as PCWs in the two canonical functions (5a,b):

(7) Distinguishing 'verb-like' adjectives from verbs (Dixon & Aikhenvald 2004: 15-20)
   a. they may have different possibilities regarding their occurrence in the predicate slot;
   b. their possibilities to be transitive or intransitive may differ;
   c. they may be different when modifying nouns within an NP.

(8) Distinguishing 'noun-like' adjectives from nouns (Dixon & Aikhenvald 2004: 22-6)
   a. they may have syntactic differences as modifiers in NPs;
   b. they may be different regarding gender, case, and other morphological inflections.

The criteria discussed above in (7) and (8) are relatively abstract. In my sample, specific morphosyntactic markings are introduced regarding the status of PCWs and adjectives in individual languages.

1.6 Language sample and research goal

To explore the roles of PCWs and syntactic functionalities of 'adjectives' in SA languages, I have chosen a sample of six Amazonian languages that have been published after the discussion on PCWs had been raised: Panare, Hup, Karajá, Jarawara, Kwaza, and Cavineña. Though the language sample is relatively small to make an overall generalization for all Amazonian languages, the wide genetic and geographical spread of these languages does present various situations regarding PCWs and 'adjectives' in the Amazonian area. It is important as well to mention that I have intentionally chosen different languages in that some languages confirm and some deny the existence of a distinct adjective class. Opinions also vary regarding the status of copula clauses and copula predicates. In a way, the sample of six languages is quite comprehensive when it relates to different views on PCWs.

Of the six languages, five belong to different genetic groupings and one is still regarded as an isolate. The six languages are arranged geographically from north to south on an approximate scale, since most of these languages have a relative spread on the map and cannot be exactly pinpointed. Map 1 shows an approximate geographical distribution of these six languages.

Map 1. Geographical distribution of the six Amazonian sample languages

(map implemented on http://www.mapmaker.nationalgeographic.org/)

The remainder of this thesis is structured as follows. Section 2 discusses a Cariban language, Panare, spoken in the central lowland plains of Venezuela. This analysis is based on Thomas E. Payne & Doris L. Payne's (2013) publication: *A typological grammar of Panare*. Payne & Payne (henceforth P&P) introduce the category of AD-forms to avoid the ambiguity to either name the word class 'adjective' or 'adverb'. PCWs can be realized as both nouns and AD-forms in Panare and the essential discussion differentiates AD-forms from nouns in Panare.

Section 3 introduces Hup, a Nadahup language spoken around the border between Brazil and Colombia. The analysis refers to Patience Epps' (2008) publication: *A grammar of Hup* which is an updated version of Epps' (2005) dissertation. In Hup, adjectives belong to a distinct word class that can function both predicatively and attributively. Both functionalities are morphologically marked and could be differentiated from verbs and nouns.

Following Hup, Karajá, a Macro-Jê language spoken in central Brazil is introduced by Eduardo Rivail Ribeiro's (2012) dissertation: *A grammar of Karajá*. Ribeiro argues for the lack of an 'adjective' class in Karajá where PCWs are realized by abstract nouns.

Section 5 discusses an Arawá language, Jarawara, spoken in the state of Amazonas in Brazil. This analysis is based on Dixon's (2004) publication: *The Jarawara language of southern Amazonia*. Dixon introduces the class of adjectives and differentiates it from PNs and stative verbs.

Kwaza, introduced in section 6, is considered a language isolate spoken in the state of Rondônia in the southwest of Brazil. This analysis is based on Hein van der Voort's (2004) publication: *A grammar of Kwaza*. Van der Voort argues there is no necessity to establish a distinct class for adjectives and that PCWs are expressed through bound verbal roots.

The last language in this sample is Cavineña, a Tacanan language of northern Bolivia in section 7. Antoine Guillaume's (2008) publication: *A grammar of Cavineña* states that there are two subclasses of adjectives: predicative adjectives and attributive adjectives. The two subclasses have different morphosyntactic functions and adjectives are distinguished to be either predicative or attributive.

Section 8 concludes this discussion of PCWs in Amazonian languages.

2. Panare

Panare is a Cariban language spoken in the central lowland plains of Venezuela (Payne & Payne 2013: 1). The discussion of 'adjective' in this section is based on *A typological grammar of Panare* by Thomas E. Payne and Doris L. Payne (2013). It is stated that there is "no grammatically distinct class of adjective" in Panare (2013: 21). Instead, the term 'AD-form' is introduced for stems that "refer to properties, rather than things or events, and that function grammatically as do adjectives and adverbs in many other languages" (2013: 21). Even though P&P state that modification is a function, not a syntactic class, the AD-form is indeed introduced as a word class whose main function is to modify other elements (2013: 119).

2.1 PCWs as both nouns and AD-forms in Panare

Property Concepts (henceforth PCs) in Panare are realized through three items: by syntactic nominals, by stative, irrealis, habitual or participial verbs (possibly through nominalization), and by AD-forms (2013: 119). P&P try to remain neutral regarding whether this third type of realization for PCWs should be named 'adjectives' or 'adverbs', thus the term AD-forms is used. However, at the same time, a syntactic category of adverbs has also been put forward. The reason that AD-forms are still distinguished from nouns and verbs is due to the fact that these forms are unable to express any inflectional category that has been expressed by nouns or verbs, and the fact that AD-forms are distributed in noun phrases and clauses in unique ways (2013: 119).

Besides base roots in the AD-form class, AD-forms can also be derived from other word classes, most frequently from nouns. P&P argue that AD-forms function in different morphological environments than nouns. However, it is quite difficult in some cases to AD-forms from nouns in Panare. In the following examples, it is important to notice that *karya* 'good' is introduced as a nominal root (2013: 125). Both the nominal root *karya* in (12) as well as the AD-suffixed forms are shown in the following sentences. In all cases, these words occur as modifiers, regardless of whether they are translated as 'adjective' or as 'adverb' in English.

(9) *e'ñapa t-amo'ka-ñe* *mnëj* *mo* *i-jpi'* ***karya-pe***
people GNO-work-NMLZ.A REL.AN EX 3-garden good-AD.NEW
'The people who work have **good** gardens.' (Payne & Payne 2013: 124)

(10) *n-ama-yaj* *Paco peraka* ***karya-pe***
3DIR-make-PPFV Paco house good-AD.NEW
'Paco made the house **well**.' (Payne & Payne 2013: 126)

(11) *oj* *maanë-ñe* *yu* ***karya-pe***
manioc.beer prepare-NSPEC.TR 1SG good-AD.NEW
'I'm going to prepare **well** the manioc beer.' Or: 'I'm going to prepare **good** manioc beer.' (Payne & Payne 2013: 131)

(12) *oj* *ch-áwa-ñe* *yu* ***karya***
manioc.beer TR-DI.prepare-NSPEC.TR 1SG good
'I'm going to prepare the **good** manioc beer.' (Payne & Payne 2013: 125)

(13) o*j* *ch-áwa-ñe* *yu* ***karya-pe***
manioc.beer TR-DI.prepare-NSPEC.TR 1SG good-AD.NEW
'I'm going to prepare **well** the manioc beer. [preferred interpretation; but clearly implied that 'good manioc beer' will result].' (Payne & Payne 2013: 125)

(14) ***kara-pe****-putu* *y-apopë-sa'* *t-aparentya* *amën* *amen*
good-AD.NEW-AUG TR-record-PART.PST GNO-learn you now
'You may learn very **well** now what has been recorded (i.e., on a cassette tape).' (Payne & Payne 2013: 125)

(15) *oj* *maana-ñe* *yu* ***karya-pan***
manioc.beer make-NSPEC.TR 1SG good-AD.purely
'I'm going to make **completely good** manioc beers. (Payne & Payne 2013: 127)

Examples (9)-(15) above show different semantic interpretations and morphological occurrences of *karya* and its derived forms AD-suffixes. Among all, *-pe* is the most ubiquitous AD-form suffix, which has the mirative meaning 'new or surprising knowledge,' annotated by AD.NEW (2013: 124). Besides *-pe, -pan* is another AD-forming suffix which expresses that "a property holds completely or purely" as shown in example (15) (2013: 127). (12) is the only example in this group that appears in the bare nominal form *karya* which is interpreted as an attributive nominal modifier instead of a head noun. Example (14) is also included in this set based on my assumption that *kara* is an allomorphic variation of *karya* in Panare.

In both (9) and (10), *karya-pe* occurs postnominally. If this AD-suffixed modifier is interpreted internal to the noun phrase [*i-jpi' karya-pe*]$_{NP}$ as in (9), *karya-pe* is then regarded as an attributive modifier of the head noun, which is then translated as an adjective in English. However, example (10) shows the second possibility, where this word is understood as modifying the whole clause of 'making the house' and is translated as an adverb 'well'.

This ambiguity of *karya-pe*, whether it should be interpreted as a modifier of a noun phrase or of a clause also occurs when the head noun has been moved out of the object position and occurs pre-verbally. "Nominal objects have much more freedom of movement than nominal subjects" to occur pre-verbally, displaying a variation between OVA versus VAO order (2013: 255). These pre-verbal nominal objects usually "are contrastively focused, questioned, stand as the answer to an information question, or are in other presuppositionally or pragmatically marked contexts" (2013: 255). In the case of example (11), the head noun *oj* 'manioc beer' is emphasized by occurring pre-verbally. Even though the AD-modifier, *karya-pe*, is no more adjacent to the head noun *oj*, the modifier can still ambiguously receive interpretation either as modifying the noun phrase or as modifying the entire clause. The two translations: 'prepare well the manioc beer' and 'prepare good manioc beer' in example (11) show this interpretational variation of *karya-pe*.

To avoid this ambiguity, P&P introduce a situation where the bare nominal root *karya* can also serve as a nominal modifier, leaving the suffixed form to preferably modify an entire clause. It is stated that "when *karya* is used to modify another noun, speakers appear to prefer the nominal form for a specifically adnominal modifying interpretation, while an AD-form (e.g. with *-pe*) is preferred for an adverbial interpretation" (2013: 125). Examples (12) and (13) show this contrast. In both examples, the nominal object has been moved to the pre-verbal position leaving the modifier alone at the end of a phrase. When the nominal root *karya* occurs without a suffix, it shows an adjectival interpretation; when with suffix *-pe*, it preferably receives an adverbial reading of 'prepare well the manioc beer.' In example (14), with an additional augmentative suffix, the word *kara-pe-putu* also receives an adverbial reading of 'very well.' What is more interesting about (14) is that the AD-suffixed word shows up in the pre-verbal position. Since the augmentative suffix *-pu'tu* only contributes an additional layer of meaning to the root and does not change the word class of the phrase, it is then either the root *kara* or the AD-suffix that allows the word to occur in the pre-verbal position.

However, the last example (15) shows the functionality of another AD-suffix *-pan* which adds the meaning of 'purely' or 'completely' to the root. The entire word *karya-pan* is translated as 'completely good' in the sentence, in which case the word is still interpreted as a nominal modifier but just with the connotation of 'purely' or 'completely' that has been added by *-pan*. In this case, it is quite unclear whether the suffix changes the word class of *karya* or not.

In sum, the examples in (9)-(15) show different morphological distributions and semantical interpretations AD-suffixed forms of *karya* in Panare. The ambiguity remains in a few ways:

(16)
a. when functioning as a nominal modifier, it is possible to use both the bare form of *karya* (4) and the form suffixed with *-pe*/*-pan*, as in (9) & (15);
b. even though *karya* is introduced as a nominal root, it can be interpreted as a modifier of other nouns, as in (12);
c. for *karya-pe*, even though it preferably receives a reading where it modifies the verb of the entire clause, as in (10), (13) & (14); it can still show ambiguous readings, as in (11);
d. regardless of whether morphological variations of *karya* are interpreted as nominals, adjectives or adverbs, they can all occur in postnominal and pre-verbal positions;
e. other AD-deriving suffixes like *-pan* and *-pëj* may function differently from *-pe*, since only more connotations are added to the root, which do not lead to an adverbial kind of reading; i.e. change of word class may not necessarily happen since the nominal root *karya* can modify nouns attributively as well;
f. lastly, a syntactic word class of 'adverb' does exist in Panare but it is not quite clear how that would differentiate from AD-derived nominals that receive a semantically adverbial reading.

The ambiguities and problems raised in (16) draw us to re-examine the AD-form, whether it should be classified as a word class or not, and how much it differs from other categories, especially from nouns.

2.2 Different prefixal markings on nouns and AD-forms

The noun class in Panare is differentiated from other word classes by uniqueness of its morphological features, including but not limited to case marking, possession, number marking and diminution (2013: 68). Typologically speaking, when compared to nouns, 'adjectives' (if such a word class exists in a language) tend to be both semantically and morphologically simpler than nouns (Givón 1984: 51). In Panare, besides PCs that are expressed through nominals and stative verbs, the word class that may resemble 'adjective' the most would be the AD-form class discussed above.

It is undeniable that nouns and AD-forms are found in similar morphological environments, pre-verbally and postnominally, but P&P distinguish the two word classes by the corresponding inflections on the verb root, to be more specific, on past-perfective transitive verbs (PPFV). Precisely, "when the object noun phrase does not immediately precede a transitive verb in past-perfective aspect, an *n-* '3rd person DIRECT' (DIR) prefix occurs on the verb" (2013: 70). The occurrence of DIR prefix is a method of examining whether the preverbal element is a nominal or something else. (17) rephrases the requirements for not exhibiting a DIRECT prefix for past-perfective transitive verbs:

(17) a. the pre-verbal element has to be object of the transitive verb (cannot be a subject);
b. the object has to be a nominal element: it could be an entire noun phrase or part of a noun phrase, but the element that appears in the pre-verbal position has to belong to the noun class.

Examples (18) and (19) below illustrate the restrictions on pre-verbal elements as stated in (17). Both *tësën* and *atawën* are identified as AD-roots that modify the head nouns of object noun phrases, *apoj* and *libro* respectively. In (18), "*tësën* is an AD-form meaning 'correct(ly)', 'straight(ly)' or 'direct(ly)' or 'upright(ly)" (2013: 112). The fronting of modifier *tësën-ko* is allowed because of the nominalizing suffix *–ko*, which permits the modifier to occur in pre-verbal position without a DIRECT prefix. In other words, an AD-form cannot appear in a pre-verbal position in the case of transitive past-perfective verbs without the prefix *n-* (18b), but nominalization changes the category of 'straight' and allows it to precede the verb just like other nominals. In (19), the pre-verbal AD-form *atawën* triggers the *n-* prefix and thus the phrase becomes grammatical.

(18) a. ***tësën-ko*** *pétyuma-yaj* *Toose* *apoj*
straight-NMLZ DI.hit-PPFV Toose man
'Toose hit the upright man.' (Payne & Payne 2013: 112)

b. ****tësën*** *pétyuma-yaj* *Toose* *apoj*
straight DI.hit-PPFV Toose man
*(Tom hit the upright man.) (Payne & Payne 2013: 112)

(19) ***atawën*** *n-u'-chaj* *Miguera* *Toma* *libro* *tikon-úya*
all 3DIR-give-PPFV Miguel Tom book child-DAT
'Miguel gave all Tom's books to the children.' (Payne & Payne 2013: 120)

Examples (20)-(21) below illustrate situations where the DIRECT prefix is necessary on past-perfective transitive verbs. To avoid the occurrence of such a prefix, an object nominal has to occur in pre-verbal position. When the pre-verbal element is nominal, it is possible that an inverse prefix *y-* occurs. In Panare, "an inherent topicality hierarchy is grammaticized as: 1SG > 2 > 3/1PL" (2013: 25). This *y-* prefix occurs when the object of a transitive verb is higher on an inherent topicality scale than the transitive subject. In (20a), the pre-verbal position is not filled so the prefix *nï-* '3DIR' is added to the verb; in (20b), the pre-verbal element is an AD-form, a word category other than noun which also requires the occurrence of DIR prefix. Examples in (21) further show the contrast between nominal and non-nominal pre-verbal elements. In both (21a) and (21b), [*(kën) paraaru t-ë'nï-ke*]$_{NP}$ is the object noun phrase. When the head noun *paraaru* occurs pre-verbally, the verb is prefixed with an inverse marker *y-*; whereas, when the modifier *t-ë'nï-ke* precedes, the DIRECT marker is prefixed to the verb. Based on the two contrastive examples in (21), it is possible to alternatively analyze that when a nominal modifier (not the head noun) occurs pre-verbally, an *n-* prefix is required. However, example (22) votes against this alternative analysis. Example (22) also consists of a [head modifier]$_{NP}$ structure but the major difference is that the modifier *onkono* 'alive' is considered a noun in Panare. When it precedes the verb (22b), the inverse prefix *y-* is used instead of the DIRECT prefix *n-* in (21b). This corroborates the previous statement (17b) that the pre-verbal element itself has to be nominal regardless of whether it is a head noun or a modifier.

(20) a. *nï-pa-yaj* *kën* ***piya-pan***
3DIR-feed-PPFV AN.INVIS big-AD.purely
'He fed the purely big ones.' (Payne & Payne 2013: 128)

b. ***piya-pan*** *nï-pa-yaj* *kën* *(tikon)*
big-AD.purely 3DIR-feed-PPFV AN.INVIS (child)
'He fed the purely big (children).' (Payne & Payne 2013: 128)

(21) a. *paraaru y-ə́nï-yaj* *kën* ***t-ë'nï-ke***
chicken INV-DI.eat.meat-PPFV AN.PROX GNO-taste-AD.have
'He ate the tasty chicken.' (Payne & Payne 2013: 129)

b. *t-ë'nï-ke* *n-ënï-yaj* *kën* *paraaru*
GNO-taste-AD.have 3DIR-eat.meat-PPFV AN.INVIS chicken
'He ate the tasty chicken.' (Payne & Payne 2013: 129)

(22) a. *wëiki* *y-új-chaj* *Rusiyana* *kamonton-úya* ***onkonó***
deer INV-DI.give-PPFV Luciano 3PL-DAT alive
'Luciano gave them live deer.' (Payne & Payne 2013: 284)

b. ***onkono*** *y-új-chaj* *Rusiyana* *kamonton-úya* *wëiki*
alive INV-DI.give-PPFV1 Luciano 3PL-DAT deer
'Luciano gave them live deer.' (Payne & Payne 2013: 285)

Similar to *onkono*, *tujkinken* ‘red’ in example (23) is also considered nominal in Panare which triggers the *y-*. It is noticeable that in this case there are no other nominal elements remaining post-verbally. We can either interpret *tujkinken* as the head noun or assume that the head which *tujkinken* modifies has been omitted. In any case, example (23) shows that semantically ‘adjective-like’ words can occur in pre-verbal position as the only overt element of an object noun phrase in a sentence.

(23) ***tujkinken*** *y-áma-yaj* *kën*
red INV-DI.throw.out-PPFV1 AN.INVIS
‘He threw out the red ones.’ (Payne & Payne 2013: 102)

**Tujkinken namayaj kën*. (Payne & Payne 2013: 102)

Example (24) below turns to be a bit more complicated. P&P analyze the distribution of *kara-pe* in this phrase as “sentence-initial verb modification” (2013: 131). However, morphosyntactically speaking, since the pre-verbal element is an AD-form rather than a noun, it triggers the *n-* prefix. The semantic reading of this phrase could be a separate issue. The reading could either be the way P&P translate, where *kara-pe* is considered a verbal modifier; or, *kara-pe* can be viewed as part of the object noun phrase which would lead to the translation of ‘shotgun shot a good thing’.

(24) ***kara-pe*** *n-ó’mo-yaj* *kapucha*
good.thing-AD.new 3DIR-shoot-PPFV shotgun
‘The shotgun fired well. (Payne & Payne 2013: 131)

This insight is due to the fact that only past-perfective transitive verbs would exhibit DIRECT prefix marking. Since the 3DIR prefix appears in (24), it would be reasonable to assume that the verb root *ó’mo* is transitive. A transitive verb requires two argument. It is possible to postulate that *kapucha* is the subject, then unavoidably, *kara-pe* has to be regarded as an object that appears pre-verbally in an AD-form with corresponding *n-* marking.

The preceding examples (18)-(24) succeed in drawing differences between AD-forms and nouns based on the corresponding prefixes that appear on past-perfective transitive verbs. However, this does not necessarily lead to a final conclusion that AD-forms and nouns are two well-established distinct word classes. P&P’s classification is one possible solution regarding the attributive use of AD-forms, but alternatives may as well be reasonable: AD-forms may be a subclass of nouns that exhibit certain differences from other nouns like *tikon* ‘child’; or, AD-forms belong to a word class other than nouns but may be invariable from other non-nominal elements. To further explore the grammatical classification of AD-forms and their relation to nouns, we have to consider other issues that relate nouns to AD-forms. Among all, the predicative use of both nouns and AD-forms is worth to have a look at.

2.3 Copula clauses

Section 2.1 shows that both nouns and AD-forms can function as descriptive modifiers that “co-refer to the same referent as the pragmatic head noun” (2013: 281). Besides these attributive uses, “predicate nominals” and “predicate adjectives” are also introduced in Panare (2013: 377),

even though 'adjectives' are not defined as a word class, but AD-forms are (2013: 281). Predicative uses of nouns and AD-forms are realized by copula constructions. The basic structure for all copula clauses is shown in (25):

(25) X (COP) NP

X may be a noun phrase or an AD-phrase which is considered the predicate in a copula construction (2013: 303). The COP represents a copula which may be a specifier, an auxiliary verb or frequently an element not overtly realized in the phrase. P&P state that "any AD-form can function as a predicate in predicate-nominal-like clauses" (2013: 187). Since there is no transitive 'action' verbs, methods discussed in (17) cannot differentiate predicate nouns from AD-forms in copula constructions as shown in (26)-(28):

(26) ***të-purú-ke*** *këj*
GNO-black-AD.have AN.PROX
'He is dirty (black)'. (Payne & Payne 2013: 187)

(27) ***t-awaarén-chen*** *këj* *e'ñapa* *y-o-t-achíma-npan*
GNO-sing-NMLZ.ABL AN.PROX people 3-INTR-DTR-dance-HC.SIM
'The people sing while dancing.' (Payne & Payne 2013: 231)

(28) ***majturu*** *këj* *Toose*
teacher AN.PROX Toose
'Toose is a teacher.' (Payne & Payne 2013: 305)

Examples (26)-(28) share the same copula, an animate proximate specifier *këj*. The predicate of example (26) is a derived AD-form overtly marked by the suffix *-ke*, whereas for (27) and (28), the predicates are nominals, the former marked by the nominalizing suffix *-chen*, and the latter by a noun root, *majturu*.

2.4 AD-forms and nouns in NPs

Even though P&P characterize two distinctive syntactic properties of nouns, occurring in 'post-verb-phrase position' and occurring as 'predicate nominal' (2013: 73), these two syntactic properties also show up for AD-forms. AD-forms can occur in predicate position where the morphological marking is not different from nouns; they can occur post-verbally as well. As for the latter property, nouns and AD-forms are alike since they both function as modifiers of nouns. P&P argue that noun phrase may primarily be a semantic unit which is simply comprised of elements in apposition to each other (2013: 267). In other words, even though nouns are classified as a word class in Panare, it is not necessarily true that 'noun phrase' is a well-established syntactic term in the language. In other words, different modifiers may contribute to a noun but all combined (noun head and modifiers) may not form a phrase-level constituent.

Nominal modifiers are flexible in two aspects. First, they have a flexible ordering when modifying nouns. P&P show no restrictions of the number, type, or order of descriptive modifiers that head nouns can have (2013: 268). Even though it would be quite unusual to have

such a long string of modifiers, example (29) below shows a random ordering of nominal modifiers:

(29) *mono këj Rosa michi* ***asa' tosen tëpurúken jaripï wa'se***
EX AN.PROX Rosa cat two big black bad fierce
'Rosa has two big black bad fierce cats.' (Payne & Payne 2013: 268)

In example (29), the head noun *michi* 'cat' is modified by five postnominal elements, all five but *asa'* 'two' are nominals. This phrase is still grammatical even though multiple nominals and non-nominals co-occur to modify another noun. The second flexibility lies in the possibility to move any of the modifiers or the head noun to the pre-verbal position. The discontinuity between head noun and its modifiers brings another level of difficulty to view the head noun and its modifiers altogether as a single constituent, a noun phrase.

AD-forms and nouns are also similar regarding their morphological forms. P&P introduce vowel substitution *a>e* as one method to derive AD-forms from nominals (2013: 123). Throughout the grammar, this is basically the few cases where grammaticalization is realized by vowel substitution/change. Not only is it a bit unsystematic regarding the proposed derivational morphology, but the examples in (30) below show an additional interpretational difference between *kure* and *kura*:

(30) a. ***kura*** *këj kota ta*
much AN.PROX monkey(sp.) here
'There are a lot of monkeys here.' (Payne & Payne 2013: 123)
b. ***kure*** *(këj) kota ta*
much AN.PROX monkey(sp.) here
'What a lot of monkeys here!' (I didn't know it before). (Payne & Payne 2013: 123)

Vowel change from *a* to *e* is regarded as a change of word category from noun to AD-form (2013: 123). Though both translated as 'much' or 'many,' *kura* is regarded as a noun whereas *kure* as an AD-form. P&P have previously shown that *kure* is a non-nominal because it triggers a DIRECT prefix whereas *kura* is a nominal due to its parallelism with nominalized numerals. However, examples (30a) and (30b) do not show any different morphological marking regarding the word class that they belong to. Only a mirative distinction is shown: "*kura* indicates generic or old knowledge, while *kure* indicates new or surprising knowledge" (2013: 123). However, *kure* is semantically the same as *kura* even though the mirative difference is mentioned in the same paragraph and shown in the examples above. The interpretational difference shown in examples (30) may have to do with grammaticalization from noun to AD-form, but at the same time, the mirative distinction in the lexemes is as well undeniable. So to speak, *kura* and *kure* are potentially distinct in terms of both grammatical category and mirative aspect, where the latter has a more direct influence on the different interpretations which is shown in the translations.

From a macro-perspective, it is true that AD-forms do not exhibit the case-marking and number marking that show up on nouns, but they resembles nouns in at least two major grammatical functionalities: as attributive modifiers of head nouns both postnominally and pre-

verbally, and as predicates in copula constructions. It is never impossible to classify AD-forms as a distinct word class, but considering the scale of difference, it may be as well plausible to regard AD-forms as a subclass of nouns.

3. Hup

Hup is a Nadahup language spoken in the forest region on the Brazil-Colombia frontier (Epps 2008: 1-2). This section is based on Epps' (2008) publication: *A grammar of Hup*. Epps defines adjectives as the third major word class apart from nouns and verbs, the two other major word classes in Hup (2008: 114). Basic members of the adjective class are roots, but unlike verbs and nouns, the class of adjectives is closed. Even though in some situations lexemes can be in different word classes and other times derivational processes may not be marked by an overt morpheme, the majority of 'adjectival' roots are most likely pre-assigned to the adjective class.

The adjective class in Hup includes a wide range of PCWs that cover the majority of semantic types (2008: 442-3), including *póg* 'big'), AGE (*húp* 'new, beautiful'), VALUE (*náw* 'good, beautiful'), PHYSICAL PROPERTY (*titiʔ* 'dirty'), QUANTIFICATION (*dəb* 'many') and also COLOR ((*tɨh=)tohó* 'white'). However, COLOR terms are somewhat different from other types, because they typically (though not obligatorily) occur with the nominalizer *tɨh=*, even when functioning as predicates.

Adjectives have two functions: first, like verbs, they act as predicates in main clauses, taking TAM-related markers and verbal negations; second, similar to bound nouns, they occur as nominal modifiers which obligatorily follow the noun head (2008: 326). However, Epps still observes their differences from verbs and nouns when functioning as predicates and as nominal modifiers. The following sections discuss the relationship between adjectives and other word classes, specifically verbs and nouns.

3.1 Adjectives as predicates

Predicates in Hup, like in other Amazonian languages of this corpus, are not limited to verb roots since both nominals and adjectives can occur in a predicative environment taking TAM-morphology (2008: 771). However, when functioning predicatively, adjectives behave to a certain extent differently from both verbal and nominal predicates.

3.1.1 Boundary suffixes and their relations to predicates

Adjectives as predicates are like typical verb roots in their ability to take most verbal inflections, but differ from verbs because they can optionally occur as predicates without a 'boundary suffix' or any other bound formatives (2008: 441). The most frequent boundary suffixes related to this discussion are dependent marker *-Vp* 'DEP', declarative marker *-Vh* 'DECL' and dynamic aspect *-Vy* 'DYNM' (2008: 125). Verb roots can never appear in an uninflected predicate form thus they are minimally followed by a boundary suffix (2008: 371), but predicate adjectives are most likely to occur without such suffixes (even though boundary suffixes on predicate adjectives are possible as well). Example (31) shows a typical instance of a verbal predicate mandatorily taking a boundary suffix; (32) shows that predicate adjectives typically appear in a 'bare' form without any boundary suffix; and (33), finally, shows that predicate adjectives can optionally take boundary suffixes (all adjectives except *cɨ̋pmæh* 'small') and that the use of verbal inflection within a predicate adjective could demonstrate a change-of-state.

(31) *núw-ăn* *tɨh* *bɨʔ-**ɨ́h***
this-O 3SG make-DECL

‘He made this one.’ (Epps 2008: 128)

(32) *yúp* *tegd’uh* *póg*
that.ITG tree big
‘That tree is big.’ (Epps 2008: 444)

(33) *yúp* *tegd’uh* *póg-**óy***
that.ITG tree big-DYNM
‘That tree is getting bigger.’ (Epps 2008: 444)

Since predicate adjectives can optionally take boundary suffixes, then sometimes it is unclear to tell if a PCW-related predicate construction is realized by a stative verb or if it is an adjective that has been used predicatively. Even though Epps states that stative verb roots are easily distinguished from adjectives (2008: 375), the possibility that both stative verbs and adjectives can be attached with boundary suffixes makes it sometimes hard to make such a distinction. The difference lies in whether such a boundary suffix is obligatory or optional. (34) shows an example where *-óh* ‘DECL’ is attached to an adjective together with a valency-changing factitive prefix *hi-*, both of which can occur on predicate adjectives and stative verbs:

(34) *kamíca* *ʔăn* ***hi**-póg-**óh***
shirt 1SG.O FACT-big-DECL
‘The shirt makes me look big/fat.’ (Epps 2008: 506)

Moreover, in certain situations, a boundary suffix is required for predicate adjectives. When the perfective aspect marker *-ʔeʔ/ -ʔe-* is attached directly to predicate adjectives, a boundary suffix is required (2008: 773), as in (35).

(35) *ʔắh=tắ̆h* *pog-**ʔĕ-h***
1SG=offspring big-PFV-DECL
‘My son used to be big.’ (Epps 2008: 773)

On the other side, unlike verbs but similar to predicate adjectives, predicate nominals also take TAM-inflections but are not required to take boundary suffixes (2008: 773). Especially, in contrast to (35), even when suffixed with perfectives, there could be no boundary suffix occurring on the predicate nominal, as in (36):

(36) *[ʔắh=tắ̆h* *tɨh=pog]**=ʔeʔ***
1SG=offspring 3SG=big=PFV
‘My son used to be big.’ (Epps 2008: 774)

Examples (35) and (36) have quite similar semantic meanings, but they differ in that (35) is suffixed with declarative *-h* whereas (36) is prefixed by the 3rd person singular ‘dummy’ prefixal enclitic *tɨh=*. (36) contains a special noun-noun compounding (henceforth NN compounding) between a possessed noun (henceforth PN) head and a nominalized adjective

marked by *tɬh=* (2008: 773). This compounded NP altogether functions as a predicate nominal which takes a perfective suffix but no additional boundary suffixes. The absence of a boundary suffix in (36) shows that predicate nominals are marked differently from verbs. Qua boundary suffixes, adjectives are quite similar to predicate nouns because both categories do not require such boundary suffixes.

Though not usually required, (37) still present a case where an NP is attached with a DECL suffix. As Epps argues, boundary suffixes can be attached to nonverbal (predicate nominal or adjective) clauses (2008: 295). It is quite obvious that 'this pencil' should be considered a predicate nominal instead of an adjective which has been overtly marked by boundary suffix *-úh*.

(37) *nɬ̌* *dápi* *núw-**úh***
1SG.POSS pencil this-DECL
'This is my pencil.' (Epps 2008: 296)

Among the three boundary suffixes, the declarative suffix *-Vh* 'DECL' is the most interesting to discuss. Like the other two, the declarative suffix is introduced as one of the boundary suffixes that obligatorily occur on verbs, optionally on predicate nominals and on predicate nouns (2008: 772). However, unlike other boundary suffixes, the declarative suffix seems to be more universal in that "predicate nominal clauses lacking the declarative marker are not usually considered grammatical" (2008: 769). Realized by the morphological marking of the declarative suffix, 'declarative clauses' are defined, which invariably include non-verbal clauses involving predicate nominals and predicate adjectives (2008: 750).

In other cases, the declarative can be optional if either the predicate nominal or the subject is a possessive construction or a personal name as in (38).

(38) *núp* *nɬ̌* *mɔ̌y(-ɔ́h)*
this 1SG.POSS house(-DECL)
'This is my house.' (Epps 2008: 769)

In (38), because of the possessive structure 'my house' in the phrase, the declarative marker could be omitted leaving the predicate nominal along with the demonstrative.

In sum, declarative and other boundary suffixes differentiate predicate adjectives and nominals from verbs, because they only optionally occur on these non-verbal predicates.

3.1.2 Copulas in predicate constructions

The verb *ni-* is considered a simple predicate meaning 'be, exist' when occurring as the only potential predicate as in (39):

(39) *ʔám=ʔíp* ***ní-íy*** *tɬ́h*
2SG=father be-DYNM 3SG
'Is your father here?' (Epps 2008: 385)

In other situations, Epps considers it a host for TAM markers co-existing with predicate nominal and nominalized predicate adjectives (2008: 775). It is important to notice that bare adjectives even functioning predicatively cannot co-occur with this copula, only nominalized predicate adjectives can function in such a way.

However, in general, the presence of a copula is not required, or even would be ungrammatical for predicate nominals and predicate adjectives when there is no TAM inflection (2008: 768). Previous examples (32) and (33) show that even with the presence of the dynamic aspectual suffix, a copula verb is not necessary in a predicate nominal or a predicate adjective construction.

Predicate adjective roots do not take a copula directly unless they have been nominalized and appear in a predicate nominal position (2008: 771). The most common nominalizer is *tɨh=* which is homophonous with the 3rd person singular pronoun in Hup. (40) and (41) show cases where *ni-* co-occurs with predicate and attributive adjectives in Hup:

(40) 'copula *ni-*'
ʔǎ́h=tǣ́h *[tɨh=pŏg]* ***ni-ʔě-h***
1SG=offspring 3SG=big be-PFV-DECL
'My son used to be big.' (Epps 2008: 774)

(41) 'verbal predicate *ni-*'
[ʔǎ́h=tǣ́h *pŏg]* ***ni-ʔě-h***
1SG=offspring big be-PFV
'My big son used to exist/ be here.' (Epps 2008: 774)

Both (40) and (41) have the perfective aspect marked on the copula *ni-* which is different from (35) and (36) where the aspectual suffix is added to the adjective. Examples (35) and (36) are good examples which show that the copula is not necessarily needed in predicate adjective (35) or predicate nominal (36) constructions.

The contrast between (40) and (41) is both morphosyntactic and semantic. Example (40) denotes a quite similar meaning to (35) and (36), but with an additional copula *ni-*. With this copula, all inflections are moved from the original predicate to the copula position. Moreover, since the restriction of an optional boundary suffix is only posed on predicate adjectives and nominals, when inflections are moved onto the copula, (40) allows the declarative suffix following the perfective marker on the copula verb *ni-* 'be'. When *tɨh=pŏg* can be considered as a nominalized predicate adjective that compounds with the PN *ʔǎ́h=tǣ́h* in (40), the alternative in (41), [*ʔǎ́h=tǣ́h pŏg*] without any nominalizer, is simply understood as a [noun adjectival-modifier] construction. *ni-* is no more a copula but the main predicate of the clause denoting that 'my big son exists'.

Such an analysis of (41) is due to its distinct semantic interpretation from (40). However, if the meaning 'my son used to be big' is still valid for (41), it is equally possible to view the [noun adjectival-modifier] NP as a similar construction to the NN-compound in (40). Unfortunately, this still gives no clue why (41) is not marked by a declarative boundary suffix because this suffix more commonly occurs on verbal predicates than on other non-verbal predicates or copulas in Hup.

Besides the copular use of the existential verb *ni-*, the demonstrative identifier *yúw-úh* is considered copula-like (2008: 768). (42) and (43) show *yúw-úh* can function like a copula as a single unit or separated by nouns:

(42) *ʔam=ʔín* *tɨh=bab'ʔǎ́y* ***yúw-úh***
2SG=mother 3SG=sibling.F that.ITG-DECL
'Your mother is his sister.' (Epps 2008: 769)

(43) ***yúp*** *məhə̌y-****ɔ́h***
that.ITG deer-DECL
'That's a deer.' (Epps 2008: 768)

Epps argues that *yúw-úh* together behaves like a copula in Hup. Especially in (43), the presence of the declarative marker serves to identify (43) as a clause rather than an NP (2008: 768). The combination of demonstrative subject with declarative suffix is frequent for both predicate adjectives and nominals. However, it is also possible to identify the declarative suffix *-Vh* to be a copula. If so, we can still analyze (42) and (43) as similar copula clauses, plus constructions like (38) can also be interpreted more systematically with DECL as a copula. Then, the question that arises would be: if DECL is regarded as a copula suffix, how could it co-occur with the overt copula verb *ni-* as in (40)? This issue regarding the status of copulas in Hup demands further exploration.

3.1.3 Nominalization of predicate adjectives

Another complication to the issue of predication is the nominalization of predicate adjectives by the proclitic *tɨh=* (2008: 772). The proclitic is homophonous with the third person singular pronoun in Hup. Epps indicates that *tɨh=* can nominalize predicate adjectives. As a result, the nominalized predicate adjectives can co-occur with copula where bare adjective roots are not allowed (2008: 771). Nominalized adjectives act syntactically as predicate nominals (2008: 771). Previous examples (40) and (41) already show this contrast between bare predicate adjectives and nominalized predicate adjectives.

However, the proclitic *tɨh=* which occurs on adjectives without other nominal elements in the NP is considered as an obligatory object marker (2008: 181). This is shown in (44):

(44) ***tɨh=pə̌g-****ə̌n* *tɨh* *túk-úy=mah*
3SG=big-O 3SG want-DYNM=REP
'He wants the big one, he says.' (Epps 2008: 181)

The *tɨh=* proclitic in (44) is viewed simply as a 'dummy' third person object marker that fills in the pre-adjectival position. However, the abstract translation of 'big' has essentially nothing to do with third person singular; neither should it be regarded as a pronoun. Since in (40), *tɨh=* is regarded as a nominalizer of adjectives that creates an NN compounding construction, we can similarly analyze *tɨh=* in (44) as a nominalizer as well. (44) differs from (40) in that the nominalized adjective stands alone as the only element in a noun phrase, not modifying or compounding with another noun. The nominal property of the cliticized adjective does not

change under this analysis, and in such a way, the understanding of *tɨh=* occurring before adjectives is more systematic.

3.2 Adjectives as nominal modifiers

The distinction of adjectives is not as clear or as important as the one between verbs and nouns (2008: 115). Previously in section 3.1, when functioning as predicates, adjectives are treated similarly to verbs in that they can both take TAM markers and boundary suffixes, as well as in that they cannot co-occur with copulas. In this section, we will discuss the similarities between adjectives and nominal elements, especially bound nouns when modifying other nominal elements.

NN compounds and noun-adjective NPs are similar in few ways. First, stress for both constituents occurs on the final element (2008: 87). Second, there is a modifying/restrictive relation occurring in both constructions, either between the possessed and the possessor or between the noun and adjective (2008: 328). Third, both non-predicate adjectives and bound nouns must be preceded by some nominal form (2008: 328). (45) show this parallelism between NN compounding in (45a) and noun-adjective NP in (45b):

(45)	a.	*tiyĭʔ=dóʔ*	*tɨh=dóʔ*
		man=child	3SG=child
		'male child'	'child' (Epps 2008: 329)
	b.	*tiyiʔ pŏ̌g*	*tɨh=pŏ̌g*
		man big	3SG=big
		'big man'	'big one' (Epps 2008: 329)

However, in spite of all these similarities, adjectives are still distinct from nouns, especially from bound nouns when modifying another nominal item as discussed in section 3.2.1 below.

3.2.1 Adjectives versus bound nouns in Hup

Bound nouns are those nominals who are always dependent on other nominal items in a noun phrase occurring only in N2 position (2008: 232). For example, kinship terms are usually bound nouns that must be inalienably possessed as *tɨ́h=yãwám* 'his brother' in example (46).

(46) *núp tɨ́h=yãwám pǽ̃y=wəd-əh*
this 3SG=younger.brother thunder=RESP-DECL
'This was his younger brother, Full-of-Thunder.' (Epps 2008: 235)

In this aspect, bound nouns and adjectives are similar because they both require the existence of another nominal item. However, Epps differentiates adjective modifiers from bound nouns for two main reasons:

(47) Reasons that adjectives are differentiated from bound nouns
a. bound nouns cannot escape from the bound construction to appear as predicates;
b. the order of head and modifier in the two types of noun phrases (bound noun and adjectival NP) is arguably reversed (2008: 114) adjectives follow the head noun

whereas nominal modifiers precede the head noun (2008: 441) as the contrast in (45a,b).

(47a) deals with the duality of predicate and modifier use of adjectives in Hup that does differentiate adjectives from other word classes. However, when only regarding adjectives as nominal modifiers, their extra functionality as predicates does not affect their similarities to bound nouns when modifying nouns.

When regarding only nominal modifying constructions, if there is a complete parallelism between bound nouns and adjectives, we would have to assume that the 'adjective' head itself is no more than a bound noun (2008: 330). However, traces show that they are still somewhat different. Phonologically speaking, the stress certainly falls on N1 (maybe additionally on N2) in a bound noun construction whereas it falls on the adjective in a noun-adjective modifier construction (2008: 328). Even though there is not yet an explicit clue indicating how stress in a phrase has to do with syntactic or semantic headedness, the different stressing still yields to somewhat different statuses for bound nouns and adjectives. Moreover, it is not quite clear why the stress with bound nouns differs from NN compounding as discussed before example (45), or maybe the stressing regarding NN compounding is not as settled.

Furthermore, Epps draws a table to compare the differences and similarities between bound nouns and adjectives (2008: 331). They are similar because they both appear as the second element in a NP. However, more features than (47a,b) can show that adjectives are different from bound nouns:

(47) c. bound nouns can sometimes occur alone (in bare form) but adjectives cannot;
d. adjectives can be negated by both nominal and verbal negators but bound nouns only take nominal negators;
e. bound nouns can take numerals as N1 but adjectives cannot;
f. (as previously discussed), stress only falls on the adjective in an adjectival NP, but can fall on both N1 and N2, or only N1 in a bound noun (2008: 331).

Among all six differences, (47b, c, d) are the most essential to our discussion, regarding bound nouns and adjectives as nominal modifiers. The syntactic status of numerals or quantifiers in (47e) may in a way complicate this discussion (2008: 324) and it is so far not clear how stable the stressing difference is.

3.2.2 Nominalized adjectives and their association with other nouns

Another salient factor that differentiates adjectives in NPs from bound nouns is that they are able to occur 'in an explicitly nominalized form in association with other nouns' (2008: 331). The nominalization is usually implemented by *tɨh=* as discussed in section 3.1.3. The nominalization of adjectives can happen in both predicative and attributive use of adjectives. When used as a modifier, the nominalized adjective is postposed to the other nominal item and modifies it.

(48) *tiyíʔ(-ăn)* *(tɨh=)pŏg-ăn* *túk-úy=mah*
man(-O) (3SG=)big-O want-DYNM=REP

‘She likes the big man, it’s said.’ (Epps 2008: 180)

We see that when ‘big’ is nominalized by *tɨh=*, its nominal status is overtly expressed by the object-marking suffix *-ăn*. Epps observes that ‘case marking can optionally occur on both members of the NP only when the adjective modifier is nominalized’ (2008: 180). However, more importantly, the obligatory object marker occurs on the nominalized adjective while the one on the bare noun seems to be optional. Even though Epps states that adjectives standing alone require to be object-marked (2008: 181), this is not really the case in (46). The nominalized adjective in (46) is in juxtaposition with another nominal item which indeed does not receive such a case marking. In contrast to the two NPs as compounds in (48), an NP formed by [N Adj] only receives case and number marking at the end of the NP, on the adjective (2008: 331).

With bound nouns, the object marking also takes place at the end of N2 (or at the end of the compound) as shown in (49).

(49) *núp* *cə̌hdeh=wəhə́d=n'ăn* *tɨh* *y'æt-ní-h*
this rainy.season=old.man=PL.O 3SG leave-INFR-DECL
‘He (creator) left these old rainy-season lords (constellations).’ (Epps 2008: 240)

In (49), *wəhə́d* ‘old man’ is considered a bound noun that modifies the preceding noun. Similar to both [N Adj] and [N *tɨh=*Adj] constructions, the object marking obligatorily occurs at the end of the phrase, directly attached to the bound noun. However, we have to admit that bound nouns are morphologically blended into the same word with the other nominal element. In this compound, the inflection has to occur at the end of the form, following the bound noun. But at least in the surface structure, we see that adjectival NPs and bound nouns all have object marking obligatorily on the right periphery. This to a certain extent contradicts (47b), because the case-marking could potentially attribute the syntactic head to the second element, be it an adjective, a nominalized adjective, or a bound noun.

3.2.3 Linear order between modifiers and nouns

The issue of headedness of adjectival NPs and bound nouns extends to the discussion of where nominal modifiers appear; or more precisely, do they occur before or after the noun that is being modified? (50) introduces different types of nominal modifiers and their relations to nouns:

(50) a. numerals, demonstratives, and compounded nouns precede the head noun (2008: 326);
b. nominal modifiers precede the head noun (2008: 828);
c. RC modifiers precede the head noun (if present) (2008: 828);
d. only adjectives, bound nouns and adpositions follow head nouns (2008: 326).

(51) shows an example of a RC as a preposed modifier in contrast to postposed adjectives. When functioning as a nominal modifier, RCs are like nouns in terms of their occurrence in both NPs and clauses (2005: 1001). Consider (51):

(51) *[ʔãh nɔ́-ɔ̃p] póg ʔãh tɔ́n-ɔ̋h nutɛ̌n-ɛ̋̌h*
1SG say-DEP big 1SG hold-DECL today-DECL
'I have a lot to say today.' (Epps 2008: 327)

The RC implemented by the dependent suffix *-ɔ̃p* occurs before the adjective to form an adjectival NP just like nominals. (51) shows how RCs act syntactically similar to nominals in Hup.

As a result, modification structures (50a-c) all precede the nominal item, whereas only bound nouns and adjectives follow it. All three (50a-c) coincide in that the nominal element is both syntactically and semantically the head of an NP. The different ordering of (50d) compared to (50a-c) makes it hard to generalize a headedness rule that can be simultaneously applied to adjectives and bound nouns.

Epps' analysis of the headedness of adjectival NPs depends largely on the type of noun that the adjective modifies (2008: 329). Head-modifier order is believed to be able to vary within Hup NPs (2008: 329-30). Different subtypes of adjectival NPs are mentioned. The easiest case is when the noun that has been modified is a 'dummy' noun, for example *(tɨh=)pŏg* as in (48). In these cases, Epps indicates that "the adjective (and final element of the NP) is a plausible head, at least semantically' (2008: 329). In other cases, when the preceding nominal is a full or complete noun, the head is invariably allocated on the nominal item. The variations of headedness in different subtypes of adjectival NPs are considered reasonable and these subtypes do not need to conform necessarily, but just share certain features. Since it is possible for adjectival NPs to have either an adjective or a noun as head, this uncertainty of headedness also differentiates noun-adjective modification from bound nouns, because headedness for the latter construction is considered more stable.

3.2.4 Noun-adjective modification versus nominal compounding involving adjectives

Besides their typical use as productive modifiers in NPs, Epps argues that adjectives can also be directly involved in a nominal compound construction (2008: 221). In such a situation, adjectives are no longer simply considered as modifiers of a nominal but "are an intrinsic component of a complex nominal head" (2008: 221).

Adjectives involved in nominal compounds are marked differently from adjectives in adjectival NPs. The former can be marked in two ways: either the adjective occurs in a reduplicated form following the noun, or it takes the *-Ýy* suffix (a homophonous suffix to the dynamic boundary aspect marker) and precedes the noun (2008: 221). Example (52) includes three NPs, one with an adjective as nominal modifier and two with adjectives involved in nominal compounds, occurring both before and after the noun.

(52) a. adjective as nominal modifier
cob pŏg
finger big
'big finger' (Epps 2008: 221)

b. postnominal reduplicated adjective in nominal compound
cob *po~pŏg*
finger RED~big
'thumb' (Epps 2008: 221)

c. prenominal prefixed adjective in nominal compound
póh-óy *deh*
high.place-DYNM liquid
'water from roof' (Epps 2008: 222)

We can see from (52) that the semantic meaning of nominal compounds (52b,c) are more lexicalized than that of direct adjectival modification (52a). Even though the roots in (52b,c) can be identified as adjectives, it is actually not quite clear whether the reduplicated and suffixed forms are still considered adjectival or not. Moreover, Epps gives additional examples similar to (52b) where there seems to be a reduplicating pattern but the lexeme before reduplication is not found in the adjective class as in (52d).

(52) d. postnominal modifier of nominal compound with unclear reduplication root
nuh *yə~yə́g*
head RED~?
'upper neck in back' (Epps 2008: 222)

(52d) is an example showing that the compound noun phrase *[nuh yə-yə́g]* has been lexicalized, even though it is not clear what *yə-yə́g* or *yə́g* exactly means. Neither are we sure which word classes *yə-yə́g* and *yə́g* belong to. However, Epps notices a great resemblance between the suffixed adjective in (52c) and RCs (2008: 222). The construction of modifier plus dynamic suffix is parallel to verb plus RC dependent marker. Thus, the suffixed adjective is considered nominal in (52c) and this turns out again to be a NN compounding. Similarly, since reduplication can be derivational morphology as well, it might be valid to regard the reduplicated forms in (52b,d) as nominals as well.

As a result, it is reasonable to assume that all adjective-like elements involved in NN compounding constructions are realized as nominals, regardless of whether they appear postnominally with reduplication or prenominally with suffixation. Example (53) exemplifies this assumption. With the dynamic suffix, the derived form 'following' is compounded with a PN, both of which act as nominals and are case-marked as objects as discussed in section 3.2.2.

(53) ... *nɔ́-óy=mah* *yúw-úh* *tɨ́h=yawám-ăn* *hŭ̆y-ŭ̆y=ʔĩ̆h-ăn-ay*
say-DYNM=REP that-DECL 3SG=young.brother-O following-DYNM=M-O-INCH
'…said that one, to his younger brother, to the one who came after.' (Epps 2008: 223)

This supports the idea that adjective-like elements are realized in NN compounds. The syntactic properties of these compounds are no more dependent on the adjectival roots but rather on the morphological derivations.

The difference between adjective-involved nominal compounds and adjectival NPs lies in the intimacy between the modifier and the noun. An adjectival NP is a looser modifier construction, whereas nominal compounding is tighter (2008: 223). This semantic and syntactic distinction between loose and tight modification is also mirrored in other constructions: the distinction between alienable and inalienable nouns, the distinction between full RCs and relative derived nominal compounds (2008: 223). These pairs are common in various syntactic functions and it is consequently significant to differentiate between tightly versus loosely associated constituents.

3.3 Adjectives in comparison with other nominal and verbal functionalities

The previous section discusses similarities between adjectives and bound nouns, especially in relation to the *tɨ́h=* proclitic. Even bound nouns and adjectival NPs are considered different constructions synchronically; Epps argues that they are very likely to be historically or functionally related (2008: 333). The inalienable possession marker with nouns and the nominalizer of adjectives potentially have the same origin since both of them surface nowadays as *tɨ́h=* in Hup. In other words, though still classified differently, bound nouns and nominalized adjectives have similar morphosyntactic functions.

Moreover, functionalities of nouns, verbs and adjectives are not always clear-cut. As discussed in section 3.2.3, RCs can function as nominal modifiers even though verbs are typically understood as predicates (2008: 114). There are exceptional examples where uninflected verb stems follow nouns as modifiers (2008: 446). However, this process is not productive but rather lexicalized.

The complexity with adjectives comes into play in a few more aspects. In Hup, [N Adj] is a common construction but indeed there are two ways to analyze it (2008: 772). The adjective could either be predicative and then this would be a clause; or it could be attributive, modifying the preceding noun in an NP.

However, there are morphological processes that are limited to certain types of predicates. Most degree markers associate with verbal and adjectival predicates but not nominal ones (2008: 667); future suffixes can attach directly to verbal predicates, but not to adjectival and nominal predicates (2008: 774); the affirmative morpheme is very common with predicate adjectives, but only occurs on negated verbs and never on nouns (2008: 445), etc. These individual morphological markings can to some extent differentiate certain predicates from others. However, a single morphological process would never be systematic enough to define a word class.

All in all, the systematic negative morphology does draw a major distinction among all predicates shown in section 3.3.1.

3.3.1 Negation of predicates

Verbs and adjectives are negated differently from nouns (2008: 158). Nouns can be possessed and are negated by the existence negator *pǎ̌* (2008: 737), whereas verbs and adjectives take the verbal negative suffix *-nɨ́h* (2008: 326). It is important to notice that this verbal negator occurs not only when adjectives are used as predicates (54) but also when they modify nouns

attributively (55). In contrast, the nominal negator (56) relates a negation of the existence or presence of a nominal entity (2008: 737).

(54) *tiyiʔ [pǒg]-**nɨ́h***
man big-NEG
'The man is not big.' (Epps 2008: 738)

(55) *[hɔ̃p tæ̃h yó] pay-**nɨ́h** mún yǽh yúw-úh*
fish small dangle bad-NEG INTENS FRUST that.ITG-DECL
'It would make a not-bad minnow-fishing line.' (Epps 2008: 215)

(56) *[tiyiʔ pǒg] **pæ̌***
man big EX.NEG
'There is no big man.' (Epps 2008: 738)

Even though nouns can also function as predicates, clausal negation is not allowed on nouns but only a negative existential applies. Epps summarizes that the use of *-nɨh* is "limited exclusively to negation of the verb phrase predicate" (2008: 725) in which both predicative and attributive use of adjectives are regarded as verb phrase predicates but predicate nominals are not. However, it is up to further research why attributive use of adjectives can be regarded as verb phrase predicates but not predicate use of nominals.

4. Karajá

Karajá is a Macro-Jê language spoken in Central Brazil (Ribeiro 2012: 1). This analysis is based on Ribeiro's (2012) dissertation, *A grammar of Karajá*. It is stated that, like other Macro-Jê languages, Karajá lacks an independent part of speech for 'adjective' (Ribeiro 2012: 172). PCWs in Karajá, for which Ribeiro uses the term 'descriptives', are expressed through other parts of speech. Earlier scholars suggest that there is an active-stative verb distinction and that stative verbs express PCWs (Fortune 1973, Maia 1986). However, Ribeiro (2012) casts doubt on their analyses and points out that PCWs are instead expressed through nominals based on their morphological and syntactic properties.

In Karajá, three types of affixes are considered homophonous but are attached to words from different lexical classes (2012: 212). They function as person markers on PCWs, pronominal object markers on transitive verbs and possessive markers on nouns. Examples (57)-(60) show the occurrence of the first person prefix *wa-* on copula (57), transitive verbs (58), nouns (59), and PCWs (60):

(57) ***wa**-hã=r-e*
1-be=CTFG-IPFV
'I am.' (Ribeiro 2012: 90)

(58) *hɔri* *Ø-r-ɪ-**wa**-l-ʊahɪ-də̃=r-e*
shaman 3-CTFG-TR-1-REL-medicine-VBLZ=CTFG-IPFV
'The shaman treated me.' (Ribeiro 2012: 44)

(59) *hɔri* ***wa**-ritʃɔrə* *Ø-r-ɪ-ɗ-ʊahɪ-də̃=r-e*
shaman 1-child 3-CTFG-TR-3-medicine-VBLZ=CTFG-IPFV
'The shaman treated my child.' (Ribeiro 2012: 44)

(60) ***wa**-d-ɛbʊrɛ=r-e*
1-REL-get.angry=CTFG-IPFV
'I am angry.' (Ribeiro 2012: 47)

Since all types of lexical classes in examples (57)-(60) can be prefixed with the same set of person markers, person-marker is not a good test to differentiate lexical classes.

On the other hand, it is widely accepted that the distinction between verb and noun is quite clear in Karajá, even though the issue with 'adjectives' is not quite settled in the language. In Macro-Jê languages, there is usually no distinct lexical class for 'adjectives', nor is there a predicative versus attributive distinction. The term 'predicate descriptive' is used for PCWs that are used in a predicative function in Karajá (2012: 213). It is worth mentioning that the predicate position is not limited to verbs, but that nouns can function as predicates as well. In other words, the fact that PCWs can take the perfective/imperfective aspect markers does not necessarily contribute to their status as verbs, because nouns, verbs and postpositions can all bear such tense/aspect markers (2012: 215). Examples (57), (58) and (60) above have already

shown that copula and transitive verbs as well as PCWs can take the imperfective suffix *-e*. The following examples (61)-(62) show that pronouns and nouns can also take aspect/tense markers:

(61) *dikarə̃=kəre*
I=FUT
'It will be me.' (Ribeiro 2012: 215)

(62) *dʒuhu=rəkɪ* *hʊrəθə̃=rəkɪ* *idə̃* *hɛɔɗɨ=r-ɛdə̃=r-e*
before=NARR lightning.bugs=NARR people fire=CTFG-PL=CTFG-IPFV
'It is said that, in the old times, lightning bugs were the fire of mankind.' (Ribeiro 2012: 215)

Even though the roots *dikarə̃* 'I' and *hɛɔɗɨ* 'fire' are not considered stative or active verbs, they can still take the future and imperfective marker, respectively. Thus, the discussion of what lexical class PCWs belong to should not be simply based on the acceptability of tense/aspect marking, nor of person-marking prefixes. Ribeiro thus carries out an alternative analysis regarding the semantics and other syntactic properties of PCWs in Karajá.

4.1 PCWs as abstract nouns

In Karajá, Ribeiro considers PCWs as abstract nouns, a subclass of nouns. PCWs can be used both predicatively and attributively (2012: 214). When used predicatively, they are always marked with the centrifugal enclitic *=r* and the aspectual suffix *-e* as shown in example (63); when used attributively, PCWs behave identical to PNs, because they can both take person-marking prefixes to restrict or modify another noun. Specifically, PCWs function as attributive modifiers of nouns (64), while possessors restrict possessed items (65).

(63) *ãhʊ* *ɗ-ʊrə̃=r-e*
lake 3-dry=CTFG-IPFV
'The lake is dry.' (Ribeiro 2012: 218)

(64) *hãbu* *itʃə̃dɛ*
man crazy
'crazy man; the man's craze' (Ribeiro 2012: 216)

(65) *habu* *kɔrʊ*
man forehead
'man's forehead' (Ribeiro 2012: 205)

From examples (64) and (65), we see that Karajá has noun-modifier and possessor-possessed order. This seems to disobey Greensburg's (1966) universal, because Karajá is an SOV language but nonetheless shows a noun-modifier order, which disagrees with Greensburg's prediction of modifier-noun order (2012: 213). To resolve this contradiction, Ribeiro proposes that in Karajá, like in Aleut (Sadock 2000), PCWs are indeed the head of a noun phrase (Ribeiro

2012: 219), as in example (64) where the head is *itʃə̃dɛ* ‘crazy’ instead of *hə̃bu* ‘man’. Headedness of the attributive element is a phenomenon that is commonly overlooked in Lowland South American languages (2012: 213). This headedness of PCWs indeed creates a parallel between noun-attributive and possessor-possessed relations, since in both noun phrases, the former nouns modify (or restrict) the latter nouns and the latter is regarded as the head of the entire noun phrase. This is also another piece of evidence to support that PCWs should be directly translated as abstract nouns in Karajá; for example in (64), it is a better solution to regard *itʃə̃dɛ* as an abstract noun ‘craze’ instead of an adjective ‘crazy’.

4.2 How different are PCWs from verbs?

Ribeiro (2012) disagrees with Fortune (1973) and Maia (1986) who characterize PCWs in Karajá as stative verbs. Instead, Ribeiro assumes that the transitivity of a predicate plays a more central role than stativity (Ribeiro 2012: 212). Although both Fortune and Ribeiro consider PCWs to be intransitive when used predicatively, Ribeiro is more interested in this inherent transitivity of PCWs rather than in the active-stative distinction.

Even though Ribeiro establishes a parallelism between attributive modification and possession to draw a major similarity between PCWs and nouns, similarities between PCWs and verbs are not as much discussed. In other words, Ribeiro attempts to use the ‘transitivity over stativity’ principle to override the active-stative verb distinction on PCWs. Unfortunately, this new analytical approach does not point out any additional morphological distinctions between verbs and PCWs when both can occur as predicates.

4.2.1 Lack of verb nominalizing morphology

PCs can be lexicalized either as nouns or as change-of-state verbs in Karajá (2012: 218). Even though PCWs usually occur as abstract nouns in Karajá, a few are still characterized as ‘change-of-state verbs’, which must be nominalized to occur in the predicate position (2012: 216). In most cases, there is no overt nominalizer to mark the difference between verb roots versus derived nominals. Ribeiro agrees with this homonymy between ‘primitive verbs and their noun forms’ (Ribeiro 2012: 217). In some cases, consonantal replacement is regarded as a method to derive abstract nouns from verbs (66):

(66) a. Primitive verb ‘to tear’
wa-d-õrɛ *Ø-r-a-**kɨka**=r-a*
1-REL-shirt 3-CTFG-INTR-tear=CTFG-PFV
‘My shirt tore.’ (Ribeiro 2012: 217)

b. Derived abstract noun by consonant replacement ‘be torn’
wa-d-õrɛ *i-**kɨra**=r-e*
1-REL-shirt 3-tear=CTFG-IPFV
‘My shirt is torn.’ (Ribeiro 2012: 217)

It is noticeable that even Ribeiro mentions this ‘to tear’ and ‘be torn’ difference between *kɨka* and *kɨra*, the glossing of both roots are the same, showing that they have an identical semantic interpretation, but it is just the grammatical category that may be inherently distinct.

In fact, the lack of a nominalizer is not just limited to PCWs, nominalized complements also commonly lack a nominalizer. In example (67) 'water drying' is a deverbal phrase that functions as the complement of 'wait':

(67) *dɪkarə̃ bɛ l-ʊrə̃ ka-r-ɪ-rakɔ=kəre*
I water REL-dry.NMLZ 1-CTFG-TR-wait=FUT
'I will wait until the water dries.' (Ribeiro 2012: 257)

The nominalized form is homonymous to its verb root *ʊrə̃* and the marking of nominalization (NMLZ) is inherently in the verb root itself, not by an additional morpheme. The lack of a derivational marker makes it hard to analyze nominalization in Karajá and, more importantly, to draw a clear distinction between verbs and nouns.

4.2.2 Direction inflection

Direction inflection is an important morphological process on verbs, where centrifugal (CTFG), marked by *r-*, *=r*, or by a zero-allomorph, indicates a process away from the current location of the speaker, whereas centripetal (CTPT), marked by *d-*, indicates a process towards the speaker (2012: 48). Examples (68a, b) show the directional contrast for the verb *wɨ* 'to carry':

(68) a. *ka-r-ɪ-Ø-wɨ=kəre*
1-CTFG-TR-3-carry=FUT
'I will take it.' (Ribeiro 2012: 48)

b. *ka-d-ɪ-Ø-wɨ=kəre*
1-CTPT-TR-3-carry=FUT
'I will bring it.' (Ribeiro 2012: 48)

With the centrifugal inflection *r-*, the item is taken away from the current position of the speaker in (68a), whereas in (68b) *d-* indicates that the item is taken from somewhere else toward the current position of speaker.

The most interesting point about direction inflection is that it is mandatory on all verbs, "including those that apparently do not indicate a motion or whatsoever" (2012: 48). As a result, centrifugal/centripetal suffixes are not only limited to marking direction of motion, but they can, to a certain extent, speak for the grammatical category of the verb. For example, non-verbal predicates do not occur with a centripetal marker (2012: 187).

However, Ribeiro contradicts himself regarding direction inflection on non-verbal predicates. On the one side, he clearly states in a footnote that "directional inflection is an exclusively verbal category in Karajá" (2012: 188); on the other side, he claims and has numerous examples supporting that centrifugal inflection also occurs on non-verbal predicates, especially on abstract nouns (60, 63, 66b). More explicitly, he states that "descriptive predicates, marked with auxiliary clitics which present directional markers, are always marked for centrifugal direction" (2012: 177). In other words, when there is an auxiliary enclitic triggering the occurrence of direction inflection, it is always the centrifugal marker that occurs on predicate PCWs.

The use of direction inflection on all predicates, not just on verbs, shows that direction more or less marks evidentiality instead of simply denoting a direction of motion (2012: 177). The only distinction between verbal and non-verbal predicates lies in the question whether they can only take centrifugal inflection or not.

A basic root is usually connected with a single part of speech (Dixon 1977: 27). Based on Dixon's assumption, the fact that PCWs and abstract nouns in Karajá can also be lexicalized as verbs is quite strange. Moreover, the lack of nominalizing morphology from verb to noun and the similar direction inflection on both word classes, make it hard to put PCWs into either the basket of nouns or of verbs.

To conclude, compared to Fortune (1973) and Maia (1986), Ribeiro (2012) succeeds in establishing the nominal parallelism between noun-attributive and possessed-possessor relations, but does not cast doubt against any predicative morphology that is shared between verbs and PCWs. All in all, the predicative and attributive uses show up on PCWs, with similar construction to verbal predicate and possessives respectively.

5. Jarawara

Jarawara is an Arawá language spoken in the state of Amazonas in Brazil (Dixon 2004). This analysis is based on Dixon's (2004) publication *The Jarawara language of southern Amazonia.* In Jarawara, there is only a small closed class of 14 lexical adjectival roots (2004: 1). Other PCs are expressed in various ways, but most frequently by PNs and stative verbs (2004: 337). PNs and stative verbs are two large subclasses of nouns and verbs (2004: 547). There appear to be around 175 PNs in Jarawara that have distinct grammatical functions from free nouns (2004: 310). At the same time, stative verbs belong to a closed subclass of around 230 inflecting verbs (2004: 547). Table 1 below shows a sample of semantic types of PCWs in Jarawara, including adjectives, stative verbs and PNs:

Table 1 Examples of seven core semantic types of PCWs in Jarawara expressed through adjectives, stative verbs and PNs (Dixon 2004: 81, 335-7, 615-29)

	Semantic type	Adjectives	Stative verbs	PNs
A	DIMENSION	*bati* 'big' *howe* 'large type' *biti/bite* 'small' *biri* 'small type' + *(w)ehebotee* 'big, large' + *fai(hi)nama* 'same size'	*-fota-* 'be big' *-nafi-* 'be big, much' *-jabo-* 'be far, long' *-neme-* 'be high, tall' *-baji-* 'be deep, thick' *-kowi-* 'be deep'	*boti* 'inside, deep part'
B	AGE	*botee* 'old' *jati* 'new, young'	*-boto-* 'be old, rot'	*boteri* 'oldness, ancester'
C	VALUE	*towe* 'bad' *jokana* 'real, prototypical' *faja* 'enough'	*-hija(-ra)-* 'be bad, ruined, broken, damaged' *-amosa-* 'be good'	*aboni/abono* 'real thing'
D	COLOR	N/A	*soki-/soki -na-* 'be black or dark-colored' *-sawi-* 'be white or light-colored'	*sokirine* 'blackness'
E	PHYSICAL PROPERTY	*tati* '(fruit) full-sized but not yet ripe and ready to eat *kini* 'small, immature (fruit) not yet full-sized'	*-kita-* 'be strong, hard' *-kanaha-* 'be heavy' *-sitaka-* 'be sour, acidy' *-tamina-* 'be well, be in good health'	*ime* 'soft thing' *kome/komene* 'sickness, pain fever'
F	HUMAN PROPENSITY	+ *kobato* 'busy' (PN?) + *birikisa/berekisa/berikisa* 'lazy' (PN?)	*-jawa-* 'be angry, be jealous over, be upset' *jajai(ri) -na-* 'be happy'	N/A
G	SPEED	N/A	N/A	N/A
	Others	*owa/one* 'another' *hinita* 'empty' *hinama* 'all and only' + *itero* 'whole, entire' (PN?)		

Table 1 includes PCWs that are identified as the first seven core semantic types which occur in the three (sub)classes. The list of adjectives includes all 14 members given by Dixon (2004). However, apart from the closed set of 14 adjectives, there are more lexemes in the column of adjectives (marked by '+'). These include DIMENSION adjectives *(w)ehebotee* 'big, large' and *fai(hi)nama* 'same size' in the appendix (2004: 615-29). Moreover, Loaned from Portuguese, the following words are not clear whether they should be identified as adjectives or PNs: *kobato* 'busy', *birikisa/berekisa/berikisa* 'lazy' and *itero* 'whole, entire', etc. (2004: 310). The subclasses of stative verbs and PNs are much larger than that of adjectives; therefore, only a few examples from these two classes are included in Table 1.

All three (sub)classes have words from four of the seven core semantic types, DIMENSION, AGE, VALUE and PHYSICAL PROPERTY. AGE cannot be expressed by adjectives in Jarawara, but are generally expressed by stative verbs. Almost all HUMAN PROPENSITIES are expressed through stative verbs, with two additional members, 'busy' and 'lazy', that may be classified as PNs or adjectives. Lastly, no individual lexeme is found in any of the three (sub)classes that expresses the notion of 'fast', 'quick' or 'slow'. There is indeed a stative verb *kana -na-* in Jarawara meaning 'move fast, run', but this word does not simply describe the speed of an action. Lastly, the word *faja* 'enough' is classified under the semantic type VALUE by Dixon (2004: 336), but it more or less conveys a quantificational meaning that is similar to *hinita* 'empty' and *hinama* 'all and only'.

Stative verbs and PNs do have various members which convey meanings other than the seven core semantic types. These PCWs are not included in Table 1.

The following sections discuss the interpretation of PCWs in different grammatical categories: adjectives, stative verbs and PNs. We will also examine how much adjectives really differ from PNs, as well as how PNs are in contrast with free nouns.

5.1 Functions of adjectives in Jarawara

Adjectives in Jarawara can be used as nominal modifiers and as CCs. When used as nominal modifiers, the noun that adjectives modify can be either a free noun, a PN, or even a complement clause which is considered nominal in Jarawara. When adjectives function in CC position, they form the second argument of the copula clause (2004: 339). For copula clauses, only the CS is obligatory. Example (69) shows a copula construction with only a CS and (70) with both CS and CC:

(69) *okoto*$_{CS}$ *ama-ke*
1SG.POSS+daughter.F be-DECL.F
'I have a daughter.' (lit. my daughter is) (Dixon 2004: 339)

(70) *okoto*$_{CS}$ *biroto*$_{CC}$ *ama-ke*
1SG.POSS+daughter pilot be-DECL.F
'My daughter is a pilot.' (Dixon 2004: 339)

The CC position can be occupied by either a full noun phrase (NP), an adjective or a pronoun in Jarawara (2004: 378). When the CC is simply an adjective, it modifies the CS.

5.2 Adjectival roots and derived adjectives

Besides their function as CCs, adjectives can also modify nouns. As nominal modifiers, adjectives can be not only base roots but also open to limited derivation from stative verbs and other word classes (2004: 75). Nouns modified by adjectives must be overtly present in an NP (2004: 303).

The suffix *-bote* can derive adjectives from verbs and adds an intensive meaning (2004: 337). This semi-productive process can only be applied to intransitive inflecting stative verbs which can already themselves denote PCWs (2004: 538). They include verbs like *-amosa-* 'be good', *-kita-* 'be strong', etc. These stative verbs can be suffixed with *-bote* to function as CCs. However, adjectives derived by *-bote* cannot modify nouns attributively.

In (71), the verb *hiwa* 'be hot' occurs in its reduplicated intransitive form, whereas in (72), *hiwa* has been adjectivized by *-bote* to occur in a CC position. Both (71) and (72) have a similar semantic denotation of 'the weather/thing is hot'.

(71) *jama* *owa* *hi~hiwa* *ka-raba-ke*
thing.F 1SG.O RED~be.hot APPL-A.BIT-DECL.F
'I feel a bit hot.' (lit. the thing (weather) warms me a bit) (Dixon 2004: 165).

(72) *[jama]*$_{CS}$ *[hiwa-bote]*$_{CC}$ *{ama-ke}*
thing.F be.hot-VERY be-DECL.F
'The weather (lit. thing) is very hot.' (Dixon 2004: 337)

There is an additional adjective-deriving suffix *-wi* that only occurs on the intransitive stative verb *-amosa-* 'be good' (2004: 538). The two derived adjectives *amosa-bote* 'very good' and *amosa-wi* 'very, very good' are said to differ in semantics: the latter adjective is of a higher degree of excellence than the former (2004: 337). The unique occurrence of *-wi* with stative verb *-amosa-* makes it questionable whether there are two adjectivizers that can intensify and regrammaticalize a stative verb to different extents. Parting from Dixon's (2004) analysis, it is as well interesting to observe why the stronger intensifier *-wi* only occurs on a single stative verb, *-amosa-*.

Besides adjectives derived by the two suffixes above, there are a few instances where lexemes that are categorized as adjectives and stative verbs with similar meanings have the exact same or similar form, as shown in (73) (2004: 538).

(73)

adjective		intransitive stative verb	
a. *jati*	'new, young'	*jati -na-*	'be alive; be raw'
b. *botee*	'old'	*-boto-*	'be old'
c. howe	'large kind'	*-howari-*	'grow, intensify' (Dixon 2004: 538)

For the adjectives and stative verbs in (73), it is hard to decide whether they are similar or identical due to a derivational process or not; if yes, then what is the direction of derivation? From another perspective, if they are related other than by a one-way derivational process, then should suffixes *-wi* and *-bote* be considered only intensifying suffixes? Further research is need to sufficiently resolve this question.

5.3 PNs as another subclass of nominal modifiers

PNs are quite similar to adjectives because they can both occur after a noun and modify it (2004: 75, 281). However, Dixon tries to distinguish these two (sub)classes using criteria that are discussed in this section. Before that, it is necessary to introduce noun phrase (NP) structure in Jarawara.

5.3.1 NP structure

NPs in Jarawara are composed of five major slots A-E ordered linearly from left to right (2004: 281). This is shown in (74):

(74) Structure of noun phrase (adapted from Dixon 2004: 281)
Slot A: alienable possessor, an embedded NP, plus possessive marker *kaa*
B: head of NP
Bi: a noun referring to sex or material or *abono* 'spirit'
Bii: one or more adjectives
Biii: augment modifier *mee*
C: **one or more PNs**
Ci: modifiers PN, **one or more adjectives**
D: contrastive marker *taa*
E: accusative suffix *-ra*

According to (74), it is possible for adjectives to occur in two slots, in slot Bii as direct modifiers of head nouns or in slot Ci as modifiers of PNs. Additionally, PNs are also nominal modifiers that occur after adjectival modifiers. Section 5.3.2 deals with the special subclass of PNs in Jarawara, including how much they differ from free nouns and adjectives.

5.3.2 PNs in Jarawara

Dixon's (2004) corpus of Jarawara includes about 175 PNs (2004: 310). About at least 65 of these end in *-ri/-rine*. Suffixation of *-ri* is a semi-productive process for forming new PNs from intransitive verbs, free nouns and adjectives. For example, the PN *boteri* 'oldness' is formed by adding the suffix *-ri* to the adjective *botee* 'old' (2004: 321). However, it is noticeable that not all PNs ending in *-ri* have synchronically related lexemes in verbs, adjectives or free nouns (2004: 532). Dixon thus argues that they could be derived either at a Proto-Arawá stage or more recently (2004: 325).

5.3.3 Differentiating adjectives from PNs

Even though both PNs and adjectives can modify nouns, they are analyzed differently by Dixon. Four major differences are drawn between PNs and adjectives:

(75) Differences between PNs and adjectives (adapted from Dixon 2004: 340-1)
a. place with respect to augment modifier *mee* within an NP: adjectives precede *mee* but PNs follow.
b. possibility as CC: a CC can be an adjective but not a PN.

c. gender marking within an NP: only two adjectives show distinct F/M forms, which differentiates adjectives from PNs.
d. ordering within a sequence: adjectives have more flexible ordering possibilities but PNs generally occur in a fixed order.

The four rules in (75) aim to differentiate adjectives from PNs, but unfortunately there are more complexities in this issue. Firstly, according to the list of PNs by Dixon, there are more than ten PNs that are homophonous to free nouns in Jarawara (2004: 343-60). On the one side, homophonous lexemes with totally different meanings may be due to historical phonological changes, for example intransitive verb *hati* 'be burnt' and adjective *hati* 'ripe' are due to consonant assimilation (2004: 20). On the other side, it is a quite different case regarding the homonymy between PNs and adjectives, because they share identical (or extremely similar) semantic meanings.

When we try to use the four rules in (75) to differentiate PNs from adjectives, there is not always a clear-cut difference. (75a) indicates that an adjectival modifier of a noun head can only appear before the augment modifier *mee*. This is why Dixon (2004: 334) classifies *abee*/*ibee* as PNs because they only follow but not precede *mee*. The reciprocal *abee* in (76) follows another PN mani, both of which follow *mee* but cannot precede it.

(76) *faja [mee mani abee] hoka na mee*
THEN 3NSG arm.F RECIP pull.on AUX.F 3NSG.DEP
'Then they are arm-wrestling (lit. pushing each others' arms to see which could be pushed onto the table top).' (Dixon 2004: 333)

However, it is essential to realize that PNs that modify nouns can as well take adjectival modifiers, which makes the story more complicated. Firstly, an NP can include a series of PNs in a fixed order, and an adjective in slot Ci can modify any one of the preceding PNs (2004: 338). If both the order of PNs is fixed (75d) and an adjective can modify any of the PNs (75a), then this rigidity of ordering for PNs does not help in resolving the modification relation between slot C and slot Ci. In other words, it is hard to draw a fixed connection between PNs and those adjectives that modify them. Secondly, if a PN modifies a head noun, then adjectives in slot Bii can ideally co-occur with adjectives in slot Ci without any conflict. Theoretically speaking, since both adjectives and PNs can modify a head noun at the same time, there should be no restrictions for PNs that modify the head noun to themselves be modified by another layer of adjectives in slot Ci. However, Dixon asserts that throughout his corpus, there is no example of an adjective in slot Bii co-occurring with another one in slot Ci within the same NP (2004: 338). To a certain extent, this argues for a complementary distribution of adjectives in slot Bii and slot Ci. In general theory, if two things are in a complementary distribution, then they are more likely to be of similar functionality. This implies that adjectives that occur before and after PNs may not be as different as Dixon's NP structure suggests.

Moreover, the gender distinction between PNs and adjectives is not well established. (75c) shows that two out of all adjectives are differentiated in terms of masculine or feminine forms. Thus, the majority of adjectives have an identical form for both genders. This is indeed the same story for PNs. All derived PNs (by suffix *-ri/-rine*) make no gender distinction (2004:

310). Half of the rest of the PNs also show no difference between masculine and feminine forms. Only less than one third of PNs have relatively different forms for the two genders. In sum, most adjectives and PNs bear no gender distinction when modifying a head noun, which diminishes the distinction between the two word classes.

Lastly, Dixon finds lexemes like *hinita* 'empty, alone' that has been used like an adjective in most situations but as a PN in others (2004: 341). *kori/koro-ne* 'nakedness, lack of cover' and *one/owa* 'another' also show distributions in both slot Bii and slot C. Additionally, in Table 1, three additional forms of semantic types HUMAN PROPENSITY and QUANTIFICATION (in 'Others') are not clear whether they should be analyzed as PNs or as adjectives.

Dixon argues that some lexemes may have their 'feet' in different word classes (2004: 341). Alternatively speaking, it is reasonable to assume that PNs are not that different from adjectives. Similarly, the following section 5.3.4 reexamines the distinction between PNs and free nouns.

5.3.4 Differentiating PNs from free nouns

A free noun will be used when there is no particular association with the possessor (2004: 312). Dixon shows this by the contrastive examples (77) and (78) below:

(77) *wahati* *mee* *hawi* *ama-ke*
Jamamadi AUG path.F be-DECL.F
'It is the Jamamadi's path (lit. the Jamamadi's path is)' (Dixon 2004: 312)

(78) *[mee kaa hawi]$_S$* *moto* *kabote* *na-ni-ke*
3NSG POSS path.F go.round IMMEDIATELY AUX-IPST.NEYE.F-DECL.F
'their track immediately turned back on itself.' (Dixon 2004: 312)

In Dixon's analysis, (77) is different from (78), because in (77) the head noun, *wahati* 'Jamamadi', has been inalienably possessed by the Jamamadi people, but in (78) *hawi* 'path' is alienably possessed by a third person pronoun. Even though *mee* occurs in both NPs, they are glossed differently. In (77), it is an augment modifier that occurs in slot Biii after the head noun, whereas in (78) it occurs prenominally before possessive marker *kaa* which is in slot A. The pronoun *mee* is a third person non-singular form that occurs only in cardinal and subject forms (2004: 34). The difference between (76) and (77) shows different situations for alienable and inalienable possessions for the same noun *hawi* 'path'. However, Dixon seems to ignore the glossing difference between *mee* 'AUG' and *mee* '3NSG' because previously in (76), the third person pronoun is also regarded as an augment modifier that occurs in slot Biii.

This issue has been extended by the discussion of two types of possessions in Jarawara. Alienable possession involves the possessor stated before the possessed with a possessive marker *kaa* 'POSS' in between, whereas inalienable possession exhibits no possessive marker (2004: 90-1). Consider examples (79) and (80):

(79) *Okomobi* *kaa* *tao.kana*
Okomobi.M POSS gun.F

‘Okomobi’s gun’ (Dixon 2004: 91)

(80) *Okomobi* *teme*
Okomobi.M foot+M
‘Okomobi’s foot’ (Dixon 2004: 91)

For alienable possession, there is a possessive marker *kaa* that appears before the noun head as in (79). The free noun (i.e. possessor) and PN (i.e. possessed) occur in their original gender independently, whereas in an inalienable construction the PN reflects the gender of its preceding noun (if the PN does show an overt morphological distinction for different genders). Dixon (2004: 314) states that the head of an NP determines its gender. However, if *mee* ‘AUG’ comes in between, the inflecting PN is always in feminine form. In reality, this distinction is not so obvious. Since only a few PNs exhibit gender distinction in their allomorphs, it is quite hard to observe this difference in some cases.

The inalienability of a PN in a possessive construction without *kaa* is in a way similar to the noun-adjective modification relation in Jarawara. When an adjective modifies a noun attributively, the noun must be present in the NP. Similarly, for PNs, there always needs to be another free noun preceding the PN (2004: 314). For example, the PN *boni/bono* ‘fruit’ cannot occur alone. There is always a name of the plant that the fruit should refer to: *ami boni* ‘fruit of ice cream bean’, even when one wants to refer to the abstract concept of ‘fruit’, one would say *awa boni* where *awa* is a generic term for ‘tree’.

Lastly, there are numerous examples where PNs are either homophonous or only alternate in vowel quality with free nouns that share identical or similar meanings (2004: 312), as in (81).

(81)	bound nouns/PNs		free nouns	
	a. *fehe/fehe-ne*	‘liquid, juice, sap, water’	*faha*	‘water’
	b. *mati/mato-ne*	‘cord, rope’	*mato*	‘cord, rope, vine’
	c. *tone/tone*	‘bone’	*tona*	‘bone’
	d. *bofe/bofe*	‘bottom part of’	*bofe*	‘ground’ (Dixon 2004: 312)

Since PNs may have different masculine and feminine inflecting forms, as shown in (81a,b), it is possible to have either or neither of those forms identical to the corresponding free noun. Moreover, the semantic scope of the PN and free noun can be exactly the same (81c), or one may include more meanings (PN in 81a, free noun in 81b), or, lastly, they could be essentially similar but translated differently in English (81d). With similar morphological shapes, these lexemes are sometimes hard to categorize as either a PN or a free noun.

5.4 Stative verbs in Jarawara

Most stative verbs in Jarawara are inflecting and intransitive (2004: 83). Inflecting verbs make out about 33% of the verbs in a dictionary count. Even though stative verbs only occupy less than one-third of verbs, they denote the most general meanings that predominate in texts (2004: 548-9).

Even though stative verbs are quite distinct from free nouns, sometimes there is a fuzzy difference between stative verbs and PNs. At first glance, we see that about 55 stative verbs

are related to PNs in Jarawara, which outranks the 30 free nouns that are related to PNs (2004: 324). However, it is more important to look at the semantic interpretations of an identical form that functions as both a PN and a stative verb:

(82) *[oko* *makari* *botee* *nafi]$_{CS}$* *ama-ke*
1SG.POSS garment old all be-DECL.F
'All of my garments are old.' (lit. all my old garments are) (Dixon 2004: 313)

(83) *[oko* *makari]$_{S}$* *nafi]$_{CS}$* *botee$_{CC}$* *ama-ke*
1SG.POSS garment be.big+NMLZ old be-DECL.F
'I have one huge garment and it is old (lit. my garment which is huge is old).' (2004: 313)

In (82) and (83), the only overt difference is the ordering between *botee* and *nafi* that results in the interpretational difference of the two examples (2004: 313). In both phrases, *oko* is an inalienable prenominal possessive pronoun, *makari* is a free noun, *botee* is an adjective, and, lastly, *nafi* is considered homophonous between PN and stative verb. In (82), *nafi* is a PN that modifies the adjective *botee* 'old' which contributes to *makari* 'garment'. However, (83) is different since *nafi* functions as a stative verb 'be big', which is nominalized without overt morphology to occur in a CS position. The adjective *botee* in (83) is a CC which adds a property to the nominalized CS 'my huge garment'. The fact that *nafi* can really function as an intransitive verb is exemplified by (84) and (85) below:

(84) *amo* *ni* *nafi.tee-himona* *ama-ka*
sleep AUX+NMLZ be.much.RP.NEYE.M-REP.M EXTENT-DECL.M
'He is reported to have slept a long time (lit. his sleeping is reported to have been a lot). (Dixon 2004: 217)

(85) *jifo* *tee* *na~na-nafi* *nama* *na-hi*
fire.F 2NSG.A RED~CAUS-be.big A.LOT AUX-IMPIMP.F
'You (non-singular) make the fire really big!' (Dixon 2004: 172)

(84) and (85) give evidence for the fact that the cognate of the PN *nafi* does show up as a stative verb. More interestingly, when used as a stative verb, it has two slightly different interpretations: 'be big' and 'be much'. The former is used in (83) which enforces the analysis of *nafi* as a nominalized stative verb that is part of the CS; the latter is used for a large quantity of non-countables like 'sleep' and 'water' (2004: 75).

Even though it is possible for *nafi* to function as both PN and stative verb, the contrastive analysis in (82) and (83) is somewhat untenable. Firstly, (83) is a quite rare construction, because it is infrequent for the adjective *botee* to modify a nominalized clause which occurs in a CS position (2004: 483-4). Even though the distinction between nominalized and complement clauses is not clearly drawn, it is most likely for complement clauses to be modified by adjectives. Secondly, when a bigness-related reading is needed for *nafi*, we are forced to

analyze it as a stative verb. However, parting from Dixon's analysis, I see no restriction to also analyze *nafi* in (82) as a nominalized stative verb 'be much'.

Lastly, even though stative verbs, also referred to as adjectival verbs by Dixon (2004), cannot directly modify nouns attributively, they can still occur in a dependent clause construction (2004: 337) to contribute a property to the noun as in (86).

(86) *jimawa* *o-kanika-hara* *o-ke,* *ino-haaro*
knife.F 1SG.A-buy-IPST.EYE.F 1SG-DECL.F be.sharp-DEP.F
'I bought a sharp knife (lit. I bought a knife, which is sharp).' (Dixon 2004: 479)

In summary, we see that in Jarawara, PCWs most often occur as adjectives, PNs and stative verbs. All three classes have cognates in the other two classes so the interplay between them is quite worth studying. When stative verbs appear to be more distinct due to their inflections, the cut-off point between PNs and adjectives is not quite clear. The four rules in (75) that differentiate adjectives from PNs are not as effective as Dixon (2004) states. If PNs are categorized as a subclass of nouns, the similarities between PNs and adjectives can possibly lead to the conclusion that adjectives may essentially also be a subclass of nouns in Jarawara. Moreover, it is worth to test if the possessor-possessed and noun-adjective relations share effectively many similarities. If so, we can potentially conclude that in Jarawara adjectives may be another subclass class of nouns that is as different from free nouns as PNs.

6. Kwaza

Kwaza is a yet unclassifed language isolate spoken in the state of Rondônia in the southwest of Brazil in the Amazonian region (Van der Voort 2004: 1). This analysis is based on Van der Voort's (2004) publication: *A grammar of Kwaza.* According to Van der Voort, it is not necessary to classify 'adjectives' as a distinct word class in Kwaza, and, thus, PCWs are expressed by "verb roots followed by canonical verbal inflections" (2004: 23, 94). At the same time, attributive modifications, which include possession and comparison, are realized by juxtaposition of nouns, attaching a nominal (or nominalized) modifier to the right of a noun. (87) and (88) show the same PCW *'ki* 'ripe' that functions predicatively and attributively:

(87) *'ki-ki*
ripe-DECL
'it ripens, it is ripe' (Van der Voort 2004: 467)

(88) *'mangka 'ki-hỹ 'ja-da-ki*
mango ripe-NMLZ eat-1S-DECL
'I ate a ripe mango' (Van der Voort 2004: 94, 467)

As a predicate, *'ki* takes a declarative inflection just like other canonical verbal predicates; as a nominalized modifier, *'ki-hỹ* follows the object it modifies, similar to possessive constructions. In Van der Voort's view, since verbs can be nominalized to modify a noun, classifying PCWs as 'adjectival' verbs can easily analyze the two functionalities of adjectives: as predicates and as attributive modifiers. However, the discussion regarding Kwaza PCWs is not that simple.

6.1 Bound roots in Kwaza

In Kwaza, there is a subclass of bound roots, mostly PCWs, which require further derivation by a nominalizer, a classifier or an attributive morpheme (2004: 96). The presence of these derivational morphemes allows these roots to function predicatively and receive person and mood inflections (2004: 596). Even though these roots are considered verbal, they cannot be affixed with verbal inflections unless there is an intermittent nominalizer or classifier. According to this analysis, bound roots need to be nominalized first and after that the classified/ nominalized forms take verbal inflections. Even so, the group of bound roots is regarded as semantically attributive (2004: 195). (89) and (90) contrast the attributive and predicative use of the bound adjectival root *arwa* 'new' in Kwaza:

(89) *a'xy arwa-'xy*
house new-CL:house
'new house' (Van der Voort 2004: 234)

(90) *arwa-'kãi-ki*

new-CL:mouth-DECL
'bucket, canoe is new' (Van der Voort 2004: 153)

xy and *kãi* are classifiers in Kwaza. When *arwa* is used attributively, a classifier follows it; when used predicatively, a classifier is still present plus an additional declarative marker suffixed at the end. Van der Voort argues that either the general nominalizer *-hỹ* or any other classifier cannot be lexicalized in combination with the bound root, because of the possibility to alternate between different classifiers. The bound roots are mostly used as stative verbs but they are not regarded as verb roots because they require a classifier or nominalizer before anything else (2004: 195).

However, bound roots are not just limited to PCWs; for example, the numeral root *aky-* 'two' is also considered a bound root (2004: 197). Examples (91)-(94) show that numerals require the presence of a classifier or a nominalizer for attributive and predicative uses as well:

(91) *(a'xy)* *aky-'xy*
(house) two-CL:house
'two houses' (Van der Voort 2004: 131)

(92) *aky-'hỹ*
two-NMLZ
'two things' (Van der Voort 2004: 176)

(93) *aky-'djay-tse*
two-CL:snake-DECL
'There are two snakes, centipedes, etc.' (Van der Voort 2004: 139)

(94) *yhỹ'ko* *aky-'hỹ-tse* *jere'xwa*
here two-NMLZ-DECL jaguar
'Here there are two dogs.' (Van der Voort 2004: 220)

The numerals in (91)-(94) pattern exactly like the bound 'adjectival' roots in (89)-(90). However, Van der Voort (2004) treats the two types of bound roots differently. While bound roots that express PCWs are regarded as a special subtype of stative verbs, numerals remain unclassified with no clear evidence to show whether they are verbal or nominal (2004: 181).

At the same time, there exist other attributive roots that could be identified as bound roots because they appear in environments similar to (89) and (90). However, they are not identified as bound roots, because there are cases where the nominalizer or classifier can be absent and the root denotes a slightly different meaning (2004: 198). (95)-(98) illustrate the occurrence of the attributive morpheme *'wai* 'good':

(95) *wai-ki*
good-DECL
'It is good.' (Van der Voort 2004: 198)

(96) *wai-'hỹ-ki*
good-NMLZ-DECL

‘It is beautiful’ (Van der Voort 2004: 198)

(97) *wai-’xy-ki*
good-CL:house-DECL
‘It is a beautiful house’ (not: ‘a good house’) (Van der Voort 2004: 133)

(98) *tã’jã wade-’xyi bu-ni’te wai-’hỹ-hỹ ’e-ki*
chief tucuma-CL:hair put-INSTR good-NMLZ-NMLZ have-DECL
‘The chief has a beautiful hat made of the fibre of tucuma’ (Van der Voort 2004: 187)

Only in (95) *wai* is translated as ‘good.’ In (96)-(98), the nominalizer *-hỹ* or a classifier is attached to the root and it behaves like a bound root denoting a meaning of ‘beautiful’ instead of ‘good’. However, there are instances where a nominalizer is attached to *wai* but it is still translated as ‘good’ as in (99):

(99) *’wai-nãi ’e-re*
good-NMLZ have-INT
‘Does it (taste) good?’ (Van der Voort 2004: 510)

There might be two ways to explain this contradiction. First of all, it is possible that the nominalizer *-nai* can denote a slightly different meaning than *-’hy*. Secondly, and more convincingly, the contrast between (98) and (99) shows the difference between adding one or two nominalizers. Specifically, since adding a classifier or the nominalizer *-’hỹ* changes the meaning from ‘good’ to ‘beautiful’, it is quite natural to add a second nominalizer for the attributive use of ‘beautiful’ as in (98). At the same time, it would be more convenient to use a different nominalizer for the attributive use of ‘good’ as in (99). In both of the two analyses, the main difference results from the use of nominalizer or classifier. In the following section, I will discuss how the two functional suffixes differ from each other and how they mark attribution and nominalization.

6.2 Attributive morpheme *-ỹ*

Not only attributive roots can be nominalized to follow a head noun, verbs with a non-attributive meaning can also obtain an attributive meaning through juxtaposition, some of which require an attributive morpheme *-ỹ-* (2004: 187). This ‘ambivalent morpheme’ can be applied to different categories of stems, including nouns, verbs or adverbs (2004: 189). The derived result after attaching the attributive morpheme requires further derivation to function either as a noun or a verb. However, roots differ in their capacity to take the attributive affix. “The verb *da’rje-* ‘strong, quick’, for example, does not even allow the morpheme” (2004: 189) while *’ha-* changes its meaning from ‘clean’ (100) to ‘white’ (101, 102) by adding an attributive morpheme in between:

(100) *’ha-ki*
clean-DECL

‘It is clean’ (Van der Voort 2004: 190)

(101) *’ha-ỹ-ki*
clean-ATTR-DECL
‘It is white’ (Van der Voort 2004: 190)

(102) *’ha-ỹ-xy*
clean-ATTR-CL:leaf
‘white paper’ (Van der Voort 2004: 190)

After attaching the attributive morpheme the semantic meaning changes to ‘white’ and the derived form goes through a further derivation to function predicatively (101) or attributively (102). The attributive morpheme used here should be understood as an ‘attributivizer’ (2004: 193). In other words, it would be reasonable to assume that these morphemes are derivational and transform ‘non-adjectival’ morphemes into ‘adjectivals’. These derived forms can take the declarative suffix to function as predicates or take a classifier/nominalizer to modify head nouns. Even though Van der Voort does not classify ‘adjective’ as a distinct word class, he does introduce this attributive morpheme which turns lexemes from other word classes to be morphosyntactically adjective-like.

6.3 Classifiers and *-hỹ* nominalizer

The most common nominalizing morpheme *-hỹ* derives nominals from verbs substituting the mood marker on the root (2004: 129). Furthermore, *-hỹ* may function as a neutral classifier (though still glossed as a ‘NMLZ’), which can be replaced by any other classifier (2004: 130). The process of classification has a wider function than just attributive modification. In possessive structures, these classifiers/nominalizers are used in a similar way.

Kwaza has no possessive pronouns and a derivational possessive morpheme *-dy-* is always required, followed by a classifier or the nominalizer *-hỹ* (2004: 181).

(103) *’si-dy-hỹ ecũi’ri*
1-POSS-NMLZ buttock
‘my buttock’ (Van der Voort 2004: 181)

(104) *maga’rida-dy-’xyi*
Margarida-POSS-CL:hair
‘Margarida’s hair’ (Van der Voort 2004: 183)

(105) *’si-dy-hỹ-ki ’kopu*
1-POSS-NMLZ-DECL cup
‘The cup is mine/it is my cup.’ (Van der Voort 2004: 182)

(106) *’si-dy-hỹ ’kopu-ki*
1-POSS-NMLZ cup-DECL

'The cup is mine/it is my cup.' (Van der Voort 2004: 182)

Examples (103)-(106) show that the possessive marker has to combine with the nominalizer -*hỹ* in order to mark a possessive construction. If it is only a nominalized/classified possessor in adposition with a head noun, the entire phrase is still nominal. Additionally, a declarative morpheme can be attached to this nominal construction, on either the possessor or the possessed, to produce a declarative phrase. This declarative morpheme is copula-like because it conveys a sentential meaning 'A is B' rather than simply marking a possessed NP.

Moreover, the possessive morpheme is often, but not always, optional when the construction is headless and refers to animal body parts (2004: 184). Examples (105)-(106) have an obligatory *-dy* possessive marker because 'cup' is not a human body part, but in (107), the possessive morpheme is optional. On the other side, the first-person inclusive pronoun *txana* is not allowed to take possessive morpheme but is followed directly by the nominalizer as in (108).

(107) *arũi(-dy)-'ri*
tapir-POSS-CL:flat
'the tapir's liver' (Van der Voort 2004: 184)

(108) *txana(*-dy)-'hỹ-ki* *'kopo*
1PL.INCL(-POSS)-NMLZ-DECL cup
'It is our cup/ the cup is ours.' (Van der Voort 2004: 184)

Examples (107)-(108) show that in possessive constructions, the possessive marker seems to be optional or even not allowed. However, the nominalizer or classifier is always present.

6.4 Independency of juxtapositions

In Van der Voort's (2004) description, the juxtaposition of nouns compensates the lack of adjectives. In such a juxtaposition, the modifying noun that occurs on the right is dependent on the optional head noun (2004: 180, 187). The modifier could be a bare noun, a derived noun, or even a attributive clause nominalized by *-hỹ* (2004: 687-9). In attributive, possessive and other juxtapositions, the nominal modifier can be a bare noun root or a noun derived from verbs, adverbs or from other nouns (2004: 180). In many situations, the modified head noun may be omitted, leaving the dependent modifying noun alone to represent the noun phrase (2004: 181).

The preceding examples in Kwaza have already shown different cases where the head noun could be omitted: either the NPs are regarded as predicates in examples (90) and (93), or as non-predicates as in (92) and (102). More essentially, Van der Voort states that "in many of the headless structures given here, the actual presence of an overt head was never attested" (2004: 692).

It is potentially possible to view this omission of the head noun from another perspective. Typologically speaking, the presence of a modified noun is preferable in a modification construction. The fact that the preceding noun can be frequently omitted may question the dependency of the modifiers that follow. Since these modifiers always surface in a nominal form in juxtaposition to the preceding noun, we can call the preceding modified noun an N1

and the modifying one an N2. The N2 is semantically dependent on N1, but morphosyntactically its occurrence could be quite independent. It is indeed worthwhile to further examine whether N1 and N2 should be regarded as a single NP, or two heads in adposition; and if there is only one noun, is there a head and how should the head be determined?

6.5 Predicate use of classified nouns

According to Van der Voort (2004), a classifier suggests that the lexeme is syntactically a noun but it can be used as a predicate without any adaptation (2004: 193). The only overt marker is the declarative suffix *-tse* 'DECL' which always occurs on predicates as in (109):

(109) *tewe-'tu-ỹ-he-tse*
slant-CL:back-ATTR-NEG-DECL
'It is not slanting.' (Van der Voort 2004: 193)

As discussed in section 6.4, the declarative morpheme could potentially be regarded as a copula. An illustrative example is that a nominalized RC can function as a predicate in a cleft-like construction (2004: 188).

(110) *jo-ka'nɛ txitxi-'dy-da-hỹ-ki*
manioc-bar fry-CAUS-1SG-NMLZ-DECL
'They're pieces of manioc which I fried.' (Van der Voort 2004: 188)

In (110), the declarative marker is attached to the nominalized RC as well to modify 'manioc bar'. It is not sure whether in (110) it is just any predicate or it has to be a verbal predicate. However, in some constructions, the classifier has been incorporated into the verb thus the classified terms in Kwaza have no nominal use attested (2004: 198). For example the classifier *-ku'ty* 'CL:head' is attached to *koxona* 'itch (body)' but the lexeme can only be used predicatively as in (111).

(111) *'koxona-ku'ty-da-ki*
itch.body-CL:head-1SG-DECL
'It itches on my head.' (Van der Voort 2004: 168)

When PCWs are used as predicates derived by *-hỹ* or a classifier, unlike verbs, they do not take verbal inflections (2004: 596). The reason that Van der Voort categorizes these attributive bound roots as verbs is due to the fact that "they do not occur as independent words by themselves, and because they have to be nominalized before they can function as a noun" (2004: 596). However, the argument only supports the fact that the bare root form cannot modify a noun and a derivational process is needed for it to function as a nominal modifier. There is no clear clue that these PCWs should be classified as verbs. Indeed they behave similar to nouns and pronouns in possessive constructions, thus it is as well reasonable to classify bound roots as nouns. It is up to further discussion what word class these bound roots that convey PCs belong to.

7. Cavineña

Cavineña is a Tacanan language spoken in the Amazonian rainforest of northern Bolivia (Guillaume 2008). This analysis is based on Guillaume's 2008 publication: *A grammar of Cavineña*. Guillaume (2008) states that adjectives belong to a distinct word class in Cavineña. More interestingly, Guillaume proposes two different lexical classes for adjectives: namely, predicative adjectives and attributive adjectives (2008: 15). Predicative adjectives, like verbs and nouns form an open lexical class in Cavineña that primarily function as a CCs (see Dixon 1982 for copula clause structure), whereas attributive adjectives form a closed class, consisting of only 16 members that modify the head noun postnominally (2008: 15, 464). Examples (112) and (113) show basic use of adjectives that occur as a CC and in a postnominal position respectively:

(112) ***ari-da*** *ju-kware* *aja*
big-ASF be-RPST capuchin.monkey
'The capuchin monkey was big.' (Guillaume 2008: 68)

(113) *e-na* ***siri*** *=tu-ke* *iji-ume*
NPF-water old =3SG-FM drink-IMP.SG.NEG
'This is old water. Don't drink it!' (Guillaume 2008: 469)

Predicative adjectives in Cavineña mainly function as CCs but also as adverbs and secondary predicates (2008: 68). Note that 'adverb' is not identified as a word class in the language and most 'adverbial' functionalities are expressed through predicative adjectives, demonstratives, etc. (2008: 61). Predicative adjectives are distinct from attributive adjectives because they cannot occur as NP modifiers, unless relativized by *=ke* and used in a copula RC (2008: 68). Example (114) shows a predicative adjective *ari-da* that has been relativized by *=ke* and used as a nominal modifier, which contrasts with its original predicative use as in (112):

(114) *e-kwe* *ani-kware* *maletero* ***ari-da=ke***
1SG-DAT sit-RPST bag big-ASF=LIG
'I had a big bag (lit. a big bag sat to me.)' (Guillaume 2008: 68)

When describing attributive adjectives, it is essential to recognize the noun phrase structure in Cavineña which has been described in terms of eight slots A-H aligned from the left to right as in (115). Head nouns occupy slot E and attributive adjectives follow closely in slot F, whereas RCs marked by *=ke* occur in slot A or H, further away from the head noun.

(115) NP structure in Cavineña

Slot A	RC
Slot B	Quantifier
Slot C	Genitive modifier
Slot D	Juxtaposed noun
Slot E	**Head noun**
Slot F	Attributive adjective
Slot G	Number
Slot H	RC

Moreover, for attributive adjectives, the head noun has to be overtly expressed in the phrase, but for RC modifiers, the overt expression of the head noun is not required (2008: 71). Morphologically speaking, attributive adjectives are simple because not much inflections can happen on them. So to speak, affixation and reduplication are not allowed on attributive adjectives (2008: 73).

As for predicative adjectives, there are two subtypes in Cavineña, *da*-adjectives and independent adjectives (2008: 68). The *da*-adjectives form a closed class which obligatorily occur in a reduplicated form, or with inflection, most frequently with the 'dummy' suffix *-da* 'ASF' (2008: 357). Whereas *da*-adjectives are all base roots (2008: 368), independent adjectives can either be of base roots, or open to derivational processes from verbs and nouns (2008: 388). Base independent adjectives do not need to take any affix or be reduplicated, moreover, they can never take the dummy *-da* suffix (2008: 68).

7.1 Semantic types of three subtypes of adjectives

In terms of basic roots, the sizes of three subtypes of adjectives are ranked as follows: predicative *da*-adjectives form the largest closed class, consisting of 110 to 120 bound roots, followed by independent predicative adjectives, consisting of at least 40 to 50 basic roots, and lastly, attributive adjectives being the smallest class with only 16 roots (2008: 357, 464). Considering the fact that the numbers of these three subtypes of adjectives are significantly different, it is not so strange that the *da*-adjectives span into more semantic types than the attributive adjectives. Table 2 concludes the semantic distribution of the three subtypes of adjectives in Cavineña based on Guillaume's lists (2008: 401-404, 475). It is noticeable that Guillaume at time merges two PCs, for example AGE and VALUE, into one category. For the sake of comparability with other languages, I will try to separate these PCs in Table 2, according to Dixon & Aikhenvald's (2004) categorization of 13 semantic types:

Table 2 Semantic types of PCWs that function as predicative and attributive adjectives in Cavineña

Semantic types of PCWs		**Predicative adjective**				**Attributive adjective**		
		***Da*-adjective**		**Independent adjective**				
		size	example	size	example	size	example	Corresp. word class
A	DIMENSION	8	*baru*- 'tall'	3	*tyubu* 'short'	4	*baru* 'tall'	*da*-adj., etc.
B	AGE	1	*nana*- 'young'	1	*esiri* 'old (by aging)'	2	*siri* 'old'; *nana* 'young'	*da*-adj; ind. adj., etc.
C	VALUE	5	*ji*- 'good'	3	*yuama* 'bad'	0		
D	COLOR	7	*paja*- 'white'			5	*paja* 'white'	*da*-adj., etc.
E	PHYSICAL PROPERTY	71	*uke*- 'hot'	32	*ushuri* 'skinny'	4	*uke* 'hot'	*da*-adj., ind. N, etc.
F	HUMAN PROPENSITY	12	*dyai*- 'lazy'	5	*pureama* 'happy'	0		
G	SPEED	2	*bida*- 'fast'	0		0		
H	DIFFICULTY	2	*masa*- 'hard, tiring'	0		0		
K	QUANTIFICATION	1	*uma*- 'many, in great quantity	6	*jetiama* 'many'	0		
L	POSITION	3	*japa*- 'far'	0		0		

According to Dixon & Aikhenvald's classification, semantic types A-D are the 'core semantic types' that appear in all three subtypes of adjectives. In Cavineña, however, the following type E, PHYSICAL PROPERTY, has the greatest amount of adjectives of all subtypes. In Guillaume's (2008) analysis, this type E has a large span of semantic scope from *asika*- 'dirty', *jari*- 'painful' to *saru*- 'toasted' and *mare*- 'ripe' (Guillaume 2008: 401-2). As a result, PHYSICAL PROPERTY includes large sets of semantic meanings that are excluded from other preceding and following semantic types which have much more narrow definitions. It is, therefore, not surprising to find out that in each of the three subtypes of adjectives, at least one third of the adjectives belong to the semantic type E, PHYSICAL PROPERTY. Considering this specific situation in Cavineña, it is alternatively reasonable to introduce PHYSICAL PROPERTY as a fifth 'core semantic types' (since Guillaume merges AGE and VALUE into one type, PHYSICAL PROPERTY would then be the fourth type). Since the size of the *da*-adjectives class ranks over independent and attributive adjectives, the number of semantic types that can be expressed by *da*-adjectives is the largest: 10 semantic types for *da*-adjectives, 6 for independent adjectives and 4 for attributive adjectives.

Besides the different number of semantic types that a subtype of adjective can occur in, Guillaume also mentions that *da*-adjectives and predicative adjectives tend to have different semantic connotations: "*da*-adjectives tend to express positive concepts, while independent adjectives tend to express negative concepts" (2008: 69). Especially, when there is a pairing of positive and negative concepts between *da*-adjectives and independent adjectives, it is most frequently the *da*-adjectives that indicate the positive concepts. Consider Table 3, where opposing concepts are expressed through either different subtypes of predicative adjectives or through the same subtype:

Table 3 Opposing concepts realized as predicative adjectives in Cavineña

Semantic types	PCs	*da*-adjective		independent adjective	
DIMENSION	'big' vs. 'small'	*ari-*	'big'	*achasha/ashasha*	'small'
	'long' vs. 'short'	*junu-*	'long'	*tyubu*	'short'
	'thick' vs. 'thin'	*beje-*	'thin'		
		misi-	'thick'		
AGE	'young' vs. 'old'	*nana-*	'young'	*esiri*	'old (by aging)'
VALUE	'good' vs. 'bad'	*ji-*	'good'	*yuama*	'bad'
PHYSICAL PROPERTY	'silent' vs. 'noisy'	*abaka-*	'silent'	*abakata*	'silent'
		ijawakaka-	'noisy'		
		sikaka-	'noisy'		
	'fat' vs. 'skinny'	*juji-*	'fat'	*ushuri*	'skinny'
		tseri-	'fat'		
	'dirty' vs. 'clean'	*asika-*	'dirty'		
		pupi-	'clean'		
	'hot' vs. 'cold'	*ba-*	'cold'		
		uke-	'hot'		
HUMAN PROPENSITY	'happy' vs. 'sad'			*pureama*	'happy'
				peyainime	'sad'
	'stupid' vs 'intelligent'			*pude*	'stupid'
				yukeneri	'intelligent'
QUANTIFICATION	'many' vs. 'not exist'	*uma-*	'many…'	*jetiama*	'many…'
				aama	'not exist'

Opposing semantic concepts in Cavineña can have different distributional possibilities in predicative adjectives. Opposite concepts can occur in the same subtype of predicative adjectives, either as *da*-adjectives (as the examples in DIMENSION and PHYSICAL PROPERTY) or as independent adjectives (as the examples in HUMAN PROPENSITY). In Guillaume's analysis, *da*-adjectives express positive concepts and independent adjectives express negative ones. This tendency does occur when opposing concepts are expressed through different subtypes, as the examples in DIMENSION, AGE and PHYSICAL PROPERTY. However, such cases where "*da*-adjectives tend to express positive concepts while independent adjectives tend to express negative concepts" (2008: 69) are as dominant as Guillaume describes. The preceding examples show that opposing ideas occur as frequently in the same subtype of predicative adjective. In other words, Guillaume analysis should be rephrased as:

(116) When opposing concepts are expressed through different subtypes of predicative adjectives, it is a tendency that *da*-adjectives express positive concepts while independent adjectives express negative ones. However, opposing concepts can also be expressed solely by *da*-adjectives or by independent adjectives.

7.2 Predicative adjectives and copula constructions

In Cavineña, predicative adjectives mostly function as CCs where there is no case marking (2008: 96), as in example (112) above. Guillaume also suggests that copula clauses are morpho-syntactically quite similar to intransitive clauses when the predicate has no inflection. Specifically, "the copula predicate is homophonous with the intransitive auxiliary" (2008: 97). Both predicative adjectives and absolutive elements of non-inflecting verbs precede the homophonous predicates. Example (112) already show that predicative adjectives precede the predicate, (117) show the same case with the intransitive verb and auxiliary:

(117) *[yawa nana-da=ju] kwejipa=ja e-tare=kwana*
ground young-ASF=DS hurricane=DAT NPF-house=PL

riwi-sha-bawe ***ju-wa***
fall-CAUS-ALWS be-PFV
'When the world was young, the houses were always felled by hurricanes.' (Guillaume 2008: 329)

Guillaume indicates two criteria in differentiating copula clauses from other 'basic' clauses, but both of them are based on the assumption that such a copula clause exists in Cavineña:

(118) Features of copula clauses proposed by Guillaume (2008: 97) for Cavineña
a. only copula clauses can have an NP or PP as CC;
b. the copula predicate can be omitted (while the predicate of an intransitive basic clause cannot).

For basic verbal predicate constructions, the verb root always immediately precedes the auxiliary (2008: 114) as in (117). An auxiliary is obligatory when the head of predicate is a non-inflecting verb (2008: 119). In Dixon & Aikhenvald's (2004) analysis of copula constructions, the predicate is the copula verb (usually *ju-* 'be'). However, if we consider the predicative adjective as the essential semantic connotation of the clause, we see that both predicative adjective and non-inflecting verb precede the copula/auxiliary. It is always the pre-copula element that carries the bulk of the semantic meaning. It is undeniable that in a basic verb clause, the predicate cannot be omitted; but in certain cases, the following auxiliary can be deleted, similar to the copula verb in a copula construction. This diminishes the difference of a copula clause from a basic intransitive/transitive clause (118b). Moreover, only when a copula construction is considered systematically in Cavineña, we can propose (118a). In other words, if a copula clause is not confirmed to be distinct from other basic clause types, then feature (118a) would be a circular argument.

However, Guillaume's three subtypes of adjectives do not comply with Dixon & Aikhenvald's (2004) generalization since adjectives can function only in two of the three syntactic slots in Cavineña: only as CCs and modifiers of NPs, but not as predicates of intransitive clauses. Guillaume explicitly states that "predicative adjectives cannot head the predicate which is the main criterion that distinguishes them from verbs" (2008: 357). Thus, Guillaume's analysis of Cavineña violates the universal syntactic functionality of adjectives

formulated by Dixon & Aikhenvald (2004), even though most of Guillaume's work is done following Dixon's theory.

The necessity of a copula verb within a copula clause is another issue regarding predicative adjectives. In copula RCs, the copula verb is typically omitted (2008: 748). However, in a different type of clause, a temporal clause that marks for same subject (SS), the SS suffix *-(a)tsu* always requires an overt copula verb *ju-* 'be' to carry the suffix (2008: 705). In main clauses, as discussed in (114) above, the copula verb is frequently omitted, leaving the predicative adjective alone which is one of the main features with which Guillaume differentiate copula clauses from basic intransitive/transitive clauses.

The linear order of a CS and CC could potentially be related to the omission of a copula verb. At first glance, CC and CS seem to have a great flexibility in the ordering that they can occur in a copula clause. However, most likely, there seems to be a pattern (120), illustrated by the examples in (119):

(119) a. *ari-da*$_{CC}$ *ju-kware*$_{CP}$ *aja*$_{CS}$
big-ASF be-RPST capuchin.monkey
'The capuchin monkey was big.' (Guillaume 2008: 358)

b. *[make paja]*$_{CS}$ *=tu*$_{CS}$ *atuka-pude-da*$_{CC}$
piranha white =3SG(-FM) eye-red/brown-ASF
'The white piranha is red/brown-eyed.' (Guillaume 2008: 358).

(120) Pattern of CS and CC ordering in predicative adjective clauses:
a. when a copula predicate (CP) is present, CC always precedes CS;
b. when CP is absent, CS tends to precede CC.

Besides the CC use of predicative adjectives, some *da*-adjectives and independent adjectives can be interpreted as manner adverbs as in (121), where they modify the verbs that follow (2008: 361). Other adjectives that cannot be directly used as adverbs, are suffixed by *-tsewe* 'ASSOC' and function as postpositional RCs (2008: 363) as in (122).

(121) ***[misi-da*** *tawi-tsu]* *=yatse* *tawi* *ju-ya*
thick-ASF sleep-SS =1DL dream be-IPFV
'When we sleep deeply (lit. when we sleep thick), we dream.' (Guillaume 2008: 361)

(122) *ekwita=kwana=tu* ***dyai-da=tsewe*** *mere* *ju-ya*
person=PL=3SG(-FM) lazy-ASF(=LIG)=ASSOC work be-IPFV
'The men are working lazily (lit. with a lazy manner).' (Guillaume 2008: 363)

Predicative adjectives can additionally function as secondary predicates together with verbs like *ba-* 'see' (2008: 365).

(123) *ji-da=dya=pa=tu* *ba-kware* *tume=ke* *ebakani*

good-ASF=FOC=REP=3SG(-ERG) see-RPST there=LIG NPF-name
'He thought that that name was nice … (lit. he saw that name good).' (Guillaume 2008: 365)

Additionally, predicative adjectives share a similar construction with those verbs that carry a fully productive abilitative suffix *-taki* 'ABL' which are situated in CC (2008: 395). The verbs suffixed with the abilitative are called 'abilitative adjectives' by Guillaume, but they should not be considered as basic adjectival roots, because of their derivation from verbs. Similarly, another type of 'deverbal predicative adjectives' (2008: 519), the resultative adjectives, should also be excluded from base adjectives due to their derivation by suffixation from other word classes.

7.3 Verbalization of adjectives

Even though predicative adjectives can collaborate with copula verbs and function predicatively in their base root form, verbalization of predicative adjective is also frequent in Cavineña (2008: 142). Only *da*-adjectives can turn into inflected verbs and such derivations can be implemented in at least two ways: either by a set of five verb-deriving suffixes or by reduplication of *da*-adjectives. The verbs that are derived by suffixation can vary in transitivity, while *-kwina* typically derives intransitive verbs (124), *-tura* derives transitive verbs (125). The latter *-tura* could be alternatively understood as causative markers, because the derived verb is usually transitive with a causative intension.

(124) *uke-kwina-ya* *ijeti* *amena*
hot-VBLZ-IPFV sun BM
'The sun is becoming hotter and hotter now.' (Guillaume 2008: 135)

(125) *nei=ra=tu* *ari-tura-ya* *kweri*
rain=ERG=3SG(-FM) big-VBLZ-IPFV river
'The rain caused the river to become bigger.' (Guillaume 2008: 142)

7.4 Similarity between verbs and adjectives

While the derivation from adjectives to inflecting verbs donates more morphological markers to the adjective roots, adjectives sometimes can hardly be differentiated from non-inflecting verbs (2008: 150). The boundary between them is not as clear and an adjective that functions as a CC does not show much difference from an intransitive verb. For example, both non-inflecting verbs and adjectives (though only in a handful of examples) can take *=ebari* 'INTENS(ifier)' as a phrasal particle that strengthens the degree of predication (2008: 687). This particle is homophonous to an attributive adjective *ebari* 'big' in Cavineña which is probably the origin of the particle (2008: 688). Moreover, adjectives like *ji-* 'good' can even be postposed to a non-inflecting base verb to modify the non-inflecting verb like an 'adverb' in English (2008: 345). Additionally, certain modifiers of adjectives can modify verbs as well. For example *dyake* 'very', which modifies an adjective (e.g. *dyake kasa-da* 'very strong-ASF'), can occur as a modifier of a verb which means 'a lot' (2008: 360).

Besides morphological ambiguity between non-inflecting verbs and adjectives, the base root forms of adjectives can be homophonous to various types of verbs. This happens with *da*-adjectives in Cavineña. In Guillaume's list of 110-120 *da*-adjectives, 25-30 are homophonous to verb roots, either transitive or intransitive (2008: 385). In this case, the suffixation is different: verbs are usually marked with TAM markers, e.g. *-ya* for 'IPFV (imperfective)', while adjectives are marked with *-da* 'ASF ('dummy' adjective suffix)'. The correspondences between *da*-adjectives and their homophonous verbs are not characterized as derivational relations; instead, Guillaume calls them 'direction conversions' (2008: 385-7), which I will further discuss in section 7.8.

7.5 Subclasses of nouns and their derivational processes

Nouns in Cavineña are divided into three subclasses: a closed class consisting of 100-150 *e*-nouns that obligatorily take a dummy *e*- 'NPF' prefix, a closed class of about 30 kinship nouns that require an inflection of the possessor on the noun, and, lastly, an open class of thousands of independent nouns that bear no inflectional requirement (2008: 72).

e-nouns mandatorily take an *e*- prefix in their citation forms and in most morphological environments. However, Guillaume indicates that there are three derivational processes that happen to *e*-nouns where the *e*- prefix can be deleted (2008: 410-11):

(126) Three derivational processes of *e*-nouns that delete the *e*- 'NPF' prefix
   a. Adjectivization with *-ki* 'with' or *-ma* 'without'
   b. Compounding with *da*-adjectives
   c. Incorporation within transitive verbs

It is not sure if all three processes can be considered derivational for adjectives, since compounding and incorporation can be regarded as a morphological combinational process between words from different lexical classes. A process that do not necessarily change the lexical class of any single word. Moreover, even for the three processes, *e*- deletion does not always happen. Guillaume gives an example of *-ma* suffixing where in *y-aa-ma* ('NPF-branch-WITHOUT'), the *y*- prefix, an allomorph of the *e*- prefix, cannot be deleted even though the word is marked with the *-ma* suffix, i.e. the form **aa-ma* would be ungrammatical (2008: 414). In this case, it is not clearly stated in which environments adjectives must be deleted and in which they should not be.

Independent nouns, the open subclass of nouns that consists of the large majority of nouns, can be marked by the suffixes *-ki* and *-ma* as well, similar to the process in (116a) (2008: 423). There is no overt morphological change in these independent nouns compared to the *e*-deletion of *e*-nouns. On the other side, the other two processes in (116) do not occur with these independent nouns, especially that independent nouns cannot be compounded with *da*-adjectives.

The derivational process in (116a) that is available for both *e*-nouns and independent nouns can not only be understood as an adjectivization, but can also express clausal possession (2008: 518). Adjectives derived by the *-ma* and *-ki* suffixes are considered predicative adjectives which are in the CC position and function predicatively. In these cases, it is also reasonable to analyze the two suffixes as adjectivizers. More interestingly, the same suffix *-ki* can also be

used as a nominalizer in certain situations (2008: 437). For example, *tsawa-* means 'help O' and the derived noun *e-tsawa-ki* means 'helper, assistant'. It is then questionable if it is the same morpheme that can derive two different lexical classes, or there exist two derivational morphemes that are homophonous.

Besides suffixation, nouns can also derive adjectives by full reduplication (2008: 392). These independent adjectives can be derived by full reduplication from *e*-nouns (e.g. *kwija-kwija* 'with many thorns' derived from *-kwija* 'thorn) or from independent nouns (e.g. *kani-kani* 'with many holes' from *kani* 'hole'). Either this reduplication or the earlier suffixation adds a 'with' or 'without' sense to nouns and allows them to occur in the CC position. However, it is not as clear if such processes in fact turn these nouns into another word class, for example into predicative adjectives. Surprisingly, it is also stated that the full reduplication of the noun *uyuuyu* 'mud' comes from the predicative adjective *uyu-* which is in the opposite direction of derivation from the previous examples (2008: 447).

7.6 Noun juxtaposition and noun-adjective modification

In a noun phrase, the two slots that are situated immediately before and after the head noun (in slot E) are slot D for 'juxtaposed nouns' and slot F for attributive adjectives (2008: 453). As discussed in the introduction, only attributive adjectives can modify a head noun immediately after this head (relativized predicative adjectives occur in slot A/H instead of slot F). On the other side, for the modifying noun that precedes the head noun, both the head and the modifying noun can either be an independent noun or an *e*-noun (but not a kinship noun) (2008: 453). This noun-noun construction is not considered as compounding in Cavineña, because Guillaume suggests that "the two nouns form one grammatical unit as opposed two separate grammatical words" (2008: 463).

Another salient feature of juxtaposition in Cavineña is that attributive adjectives can usually be lexicalized when modifying a head noun (2008: 465). This is shown with the following noun phrase: [[*shita sewe*] *biti*] '[[sugarcane black] skin]' (2008: 474). The internal phrase is originally an [N attributive adjective] construction which has been lexicalized as a noun and precedes another noun *biti*. The attributive adjective *sewe* keeps its morphological environment in modifying the noun in the internal structure, but it is just the entire phrase *shita sewe* that is considered nominal which precedes another noun *biti*.

However, there are quite many cases where there is indeed an ambiguity between noun-noun juxtaposition and noun-attributive adjective modification (2008: 458). Guillaume gives the example of *juje deka* 'duck male'. Two different interpretations are possible: either both words are analyzed as nouns then the construction is a juxtaposition where the first noun modifies the second; or, *deka* is an attributive adjective that modifies the head noun *juje*. Guillaume argues that the first analysis is more appropriate since *deka* can exist independently as a noun in Cavineña. However, the 'direct conversion' between noun and adjective later discussed in section 7.8 may further complicate this issue.

7.7 Nominalization of adjectives

In Cavineña, nominalization is not limited to deriving nominals from other non-nominal word classes, e.g. verbs, predicative adjectives and attributive adjectives. Instead, deriving nouns from other noun subclasses is also considered as nominalization by Guillaume (2008: 431). It

is worthwhile to notice that the result of nominalization is always and only independent nouns; *e*-nouns can derive but cannot be derived.

Three mechanisms of nominalization are worth discussing: affixation, compounding and direct conversion. Agentive *-puji* 'ONE.THAT' is a suffix that can derive independent nouns from various word classes: nouns, adjectives and verbs (2008: 432). This suffix can be attached to different word classes under a similar construction and is interpreted as 'one that' in all cases. Thus Guillaume concludes that this suffix should be considered an agentive nominalizer.

7.8 Compounding and direct conversion

The other two nominalizing mechanisms are compounding and direct conversion. Compounding in Cavineña can occur in two situations: when a noun is modified by another noun, like *ebakwa tare* 'uterus, lit. child house', and when a noun is modified by an attributive adjective *eka paja* 'egg white' (2008: 432). Even though a case of noun-noun compounding is discussed here, throughout the grammar, Guillaume prefers to call such noun-noun relations juxtaposition (as in section 7.6). It is then not quite clear according to Guillaume (2008) in what cases a noun-noun combination should be viewed as compounding rather than juxtaposition. Moreover, it might be untenable to introduce such noun-noun combinations as a nominalization process if the combined noun phrase does not exhibit morphosyntactic differences from the head noun.

Direct conversion is another problematic type of nominalization. The term 'direct conversion' has not been defined precisely in the grammar, but it seems to be a morphological process that substitutes derivation. When "the subclass of *da*-adjectives is closed to both borrowing and internal derivation", it can still be homophonous with nouns or verbs, which is considered a process of direct conversion in Cavineña (2008: 383). In Guillaume's analysis, 45-50 *da*-adjectives have corresponding (i.e. homophonous) nouns, be they *e*-nouns or independent nouns, which can be considered as results of direct conversion. For example, the direct conversion between *e*-noun *e-rami* 'NPF-flesh' and *da*-adjective *rami-da* 'fleshy-ASF' (2008: 383). Apart from *da*-adjectives, independent adjectives can also be directly converted from *e*-nouns and independent nouns (2008: 400). Additionally, *da*-adjectives can be in a direct conversion relation with verbs as well.

Guillaume analyzes such a relation as direct conversion, rather than a derivational process, for two reasons: firstly, the process from noun or verb to *da*-adjective is not fully-productive, even though semantically speaking it would seem to be compatible; secondly, one can never predict the meaning of any adjective from a corresponding noun/verb even though they are always semantically related in certain ways (2008: 386-7). However, derivational processes themselves can also be not fully-productive and may lead to unpredictable semantic interpretations.

For Guillaume, all items in the entire closed subclass of *da*-adjectives are considered basic roots. If so, for those *da*-adjectives that allow direct conversion with nouns/verbs: are both words in the two lexical classes considered basic, or is one considered a result of direct conversion from another, and, if so, which one is more basic, the *da*-adjective or the verb/noun? Because of the lack of an explicit explanation of the mechanism for 'direct conversion', this problem needs further exploration.

7.9 Attributive adjective: is it really a distinct class?

Guillaume classifies attributive adjectives as a small closed lexical class with only 16 elements. The most interesting fact about this class is not the small size, but the fact that 15 out of the 16 words in the class have at least one correspondence in another subclass of adjectives or in other word classes (2008: 474). Examples in Table 2 show that attributive adjectives can have their homophonous corresponding words in other classes/subclasses, including but not limited to *da*-adjectives, independent adjectives and independent nouns. The rather low functionality of attributive adjectives plus the fact that they are often lexicalized may falsely weaken their status as adjectives that are distinct from predicative adjectives and other word classes. But, most essentially, the morphological environment that attributive adjectives can occur in is unique: immediately after the head noun in slot F. Moreover, the fact that they can never be affixed, reduplicated, negated or modified contributes to their distinct features as a separate lexical class in Cavineña.

7.10 Negation of predicative adjectives

As mentioned above in section 7.9, attributive adjectives cannot be negated. As for predicative adjectives, the negative morphemes differ as well for *da*-adjectives as for independent adjectives.

(127) Rules regarding negative morphemes *-dama* and *=ama* (2008: 375)

a. basic root of *da*-adjective is negated by suffix *-dama* 'NEG';
b. affixed or reduplicated *da*-adjectives are negated by enclitic *=ama* 'NEG';
c. independent adjectives can be negated directly by *=ama* (never take *-da/-u*) (2008: 387);
d. negation disallows adverbial use of *da*-adjectives (2008: 364);
e. negative morpheme *=ama* is also lexicalized to negate entire NPs and independent pronouns (2008: 679).

The first three rules (117a-c) can be rephrased as: 'complete' adjectives are negated by *=ama*, when not complete, by *-dama.* An adjective is considered 'complete' if an adjective has been affixed or reduplicated; moreover, basic independent adjectives are already complete in the root form. It is possible to assume that the negative suffix *-dama* is a shortened form of *-da=ama* on *da*-adjectives, since there is no case of *=ama* negating an adjective that has already been negated by *-dama* (2008: 375). Moreover, even though *-ma* 'WITHOUT' is a negative morpheme that occurs in nouns, it has no functionality on adjectives. There is then no supporting evidence for *-dama* as a combination of **-da-ma*, instead, the previous assumption that *-dama* is derived from *-da=ama* might be more reasonable in the adjective class. The distinction between *=ama* and *-ma* also occurs with rule (117e) where *-ma* is directly attached to head noun while *=ama* is used to negate an entire noun phrase or independent pronoun, both of which are also considered a 'complete noun phrase' in Cavineña.

8 Discussion & conclusion

Sections 2-7 above deal with the issue of PCWs in six Amazonian languages: Panare, Hup, Karajá, Jarawara, Kwaza and Cavineña. The main discussion is summarized below in Table 4 and will be discussed briefly per language in sections 8.1-8.6.

Table 4 Summary of PCWs in six Amazonian languages

Sample language	Panare	Hup	Karajá	Jarawara	Kwaza	Cavineña
Genetic grouping	CARIBAN	NADAHUP	MACRO-JÊ	ARAWÁ	ISOLATE	TACANAN
Is there a word class of adjectives?	No	Yes	No	Yes	No	Yes
Are there any PCWs realized not by verbs or nouns?	Yes; AD-form	Yes; adjective	No	Yes; adjective	No	Yes; pred & attr adj
If so, are they more similar to verbs or nouns?	Nouns	50%-50%	Nouns	Nouns	Verbs? Nouns!	50%-50%
Are there any PCWs that behave similarly/identical to nouns?	Yes	Yes	Yes	Yes	Yes	Yes
Methods to differentiate PCWs from (other) nouns?	AD-suffix; DIRECT-prefix; case-marking	copula-less; negator	N/A	ordering; position; predicate use;	N/A	*-ki/-ma*; direct conver-sion; syntactic position
Are there any PCWs that behave similarly/identical to verbs?	Yes	Yes	Yes	Yes	Yes	Yes
Methods to differentiate PCWs from (other) verbs?	N/A	boundary suffix	No centri-petal; transitivity	inflection	classifier/ nomina-lizer	CC
Is semantics involved in establishing the distinctive syntactic features of PCWs?	Yes	Yes	No	No	Yes	Yes
Are copula clauses a type of clause that involve PCWs?	Yes	Yes	N/A	Yes	No	Yes

8.1 Panare

Panare is a Cariban language that does not exhibit the class of adjectives according to Payne & Payne (2013). However, there is a word class that is distinct from verbs and nouns in Panare: AD-forms. AD-forms refer to PCWs and function grammatically like those that are classified as adjectives and adverbs in other languages. AD-forms are most similar to nouns and can be derived from nouns by suffixation, most frequently by *-pe*. Both bare nouns and AD-suffixed nominals can occur postposedly to modify the preceding noun attributively. Moreover, AD-suffixed nominals can additionally denote an adverbial reading. It is not quite clear whether these AD-suffixes are derivational or not; and whether the semantic differences between adjectival and adverbial readings are outcomes of grammatical categories or not.

Morphologically speaking, nouns and AD-forms have different prefixal markings in Panare. A third person DIRECT marker *n-* occurs on past-perfective transitive verbs when the verbs are not directly preceded by object nouns. For these specific verbs, it is comparatively easy to distinguish whether the preceding element is an object noun or not. When it is an object noun, the *n-* prefix cannot occur but it is possible to exhibit an inverse marking prefix *y-*. As for other non-transitive or non-past-perfective verbs, this prefixal distinction does not show up and cannot be applied to differentiate AD-forms from nouns.

Copula clauses plays a role in Panare when AD-forms are used predicatively, even though the copula verb could be optional. AD-forms function in the same way as predicate nominals in copula constructions. However, unlike nouns, AD-forms do not exhibit case and number markings. These criteria draw similarities and differences between AD-forms and nouns. It is up to further exploration whether AD-forms should be considered a distinct word class that behaves very similar to nouns, or maybe it could be a subclass of nouns.

8.2 Hup

Hup is a Nadahup language for which Epps (2008) defines a closed word class of adjectives. Adjectives are similar to verbs because they can take TAM-markers and verbal negations; but they are also similar to bound nouns when occurring postnominally.

When functioning as predicates, adjectives are distinguished from verbs because they can optionally occur without boundary suffixes, most frequently the declarative suffix *-V́h*. However, when such a suffix occurs, it is not quite sure if such a predicate is realized as a stative verb, or as an adjective. On the other side, predicate adjectives are like predicate nominals in that they both optionally take boundary suffixes. Copula are another issue that relates to the predicate use of adjectives. Bare adjectives cannot co-occur with copula, only adjectives nominalized by the proclitic *tɨ́h=*. When adjectives are nominalized by *tɨ́h=*, they act identically to nominals. They can stand alone as the only element in an NP without modifying other nouns. Nominalized adjectives can function predicatively as well.

Bare adjectives are also similar to nouns, especially bound nouns, in that they can both occur postnominally to modify the preceding noun. However, noun-adjective and noun-noun (NN) compounding structures are different regarding the headedness of the two components. As for bound nouns and adjectives themselves, the largest difference lies in that bound nouns can only take nominal negators but adjectives can exhibit both nominal and verbal negations. The difference in negation also occurs between adjectives and free nouns when both function predicatively. Moreover, reduplicated and dynamic suffixed adjectives can also participate in

NN compounding in Hup. It is possible that these two morphological processes could be considered nominalizations as well. It is up to further research why attributive use of adjectives can take verbal negators but predicative use of nominals cannot.

8.3 Karajá

Ribeiro's (2012) analysis of Karajá argues for the lack of an independent part of speech for 'adjectives' while PCWs are expressed through nominals. Nominals can function predicatively as well and take person and TAM-markers like verbs. It is transitivity that ranks over stativity which leads to the conclusion that adjectives are more similar to nouns than to verbs.

PCWs are regarded as abstract nouns which are always marked by the centrifugal enclitic *=r* when functioning predicatively, and they are like PNs when occurring attributively. When facing the problem of headedness inside an NP, Ribeiro argues that the head is the following adjective in a noun-adjective construction, which is in parallel with the headedness of a possessive construction.

Besides the categorization of abstract nouns, PCWs can as well be expressed through change-of-state verbs. These verbs must be nominalized to occur in predicative positions but no overt nominalizing morpheme is introduced by Ribeiro, besides consonant replacements in few cases. Another relevant issue is the occurrence of directional inflections. Even though these centrifugal/centripetal morphemes are argued to only occur on verbal predicates, it is quite common that abstract nouns can also exhibit these inflections when they function predicatively, even though it is only the centrifugal marker that can occur in predicate PCWs.

Accordingly, PCWs are quite like nouns, abstract or possessed, in Karajá but do exhibit some similarities with verbs when occurring as a predicate.

8.4 Jarawara

Dixon (2004) distinguishes adjectives from other word classes in Jarawara, an Arawá language. Besides the small closed class of adjectives, PCWs can also be realized as PNs and stative verbs. Because of the larger quantity, stative verbs and PNs cover a wider semantic scope than adjectives in Jarawara. Adjectives can be used as nominal modifiers and CCs in Jarawara. Adjectives can be derived by *-bote* but derived adjectives cannot function attributively.

The complication of adjectives comes into play when adjectives function as modifiers inside an NP. It is noticeable that PNs are also postposed to the modified noun. Even though adjectives commonly occur ahead of PNs when modifying the head noun, adjectives can as well occur after PNs, but in such cases, these post-PN adjectives are regarded as modifiers of PNs, rather than of head nouns. Many PNs themselves are derived from verbs by the suffix *-ri/-rine.* Adjectives are differentiated from PNs by their position of occurrence, possibility as a CC, and relative free ordering. However, these rules to distinguish adjectives are not always clear-cut. In reality, many adjectives are mutually indistinguishable from PNs due to their lexical forms and syntactic functionalities. PNs are also different from free nouns because they must be bound and inalienably possessed, which means they cannot occur alone in an NP.

Besides adjectives, stative verbs also express PCWs in Jarawara. A large amount of stative verbs also share morphological forms with adjectives but they tend to occur in different morphosyntactic environments. However, the inflectional possibilities differ a lot between

stative verbs and adjectives; thus, adjectives are still considered closer to nouns than verbs in Jarawara.

8.5 Kwaza

Kwaza is an unclassified language isolate that does not necessarily exhibit a distinct class of adjectives (Van der Voort 2004). PCWs are mostly expressed through verbal roots with verbal inflections. Attributive modifications are realized after nominalization of these verbal roots by *-hỹ*. When functioning predicatively, adjectives are also suffixed by the declarative marker *-'ki*.

In Kwaza, bound roots are considered verbal but unlike other verb roots, they must be classified/nominalized before they can take verbal declarative inflections. In other words, bound roots take nominalizers/classifiers to occur attributively and modify nouns, whereas they take additionally verbal inflections to occur in a predicate position.

Besides the general nominalizer *-hỹ* that enables bound roots to occur attributively, another attributive suffix *-ỹ* is introduced to allow verbs that are non-attributive to be nominalized and occur in an NN compound. However, there might be a slight semantic change after derivations by this attributive morpheme. It could be possible that this attributive morpheme *-ỹ* is morphologically related to the general nominalizer *-hỹ*, but whether they are allomorphs or separate morphemes is not quite clear yet. Moreover, since Kwaza does not have possessive pronouns, possessive marker *-dy* and the neutral nominalizer *-hỹ* are attached to nouns/pronouns to mark possession. These nouns/pronouns that are attached with the possessive marker and the neutral nominalizer can additionally take the declarative marker to form a clause. When used predicatively, syntactic nouns can only take the declarative suffix, just like bound roots.

Everything discussed above suggests that these bound roots always require a nominalizing/classifying suffix before they can occur in any syntactic position. Since nominals can also function as predicates and classifying/nominalizing suffixes can also be attached to nouns and pronouns in possessive constructions, bound roots that obligatorily take these suffixes might be better analyzed as nouns rather than verbs.

8.6 Cavineña

Guillaume (2008) introduces a Tacanan language, Cavineña, where the distinct class of adjectives not only exists, but where there are two different lexical classes for attributive and predicative adjectives. Predicative adjectives belong to an open class that primarily functions as CCs, where attributive adjectives form a closed class that modify nouns postnominally. Predicative adjectives cannot directly modify noun unless relativized by *=ke*. As nominal modifiers, RCs occur more loosely with head nouns and it is possible to omit the head nouns when modified by RCs, but not for those nouns modified directly by attributive adjectives.

Inside the class of predicative adjectives, there is a subdivision between *da*-adjectives which mandatorily occur with some kind of inflection including the *-da* suffix, and independent adjectives that can occur in bare forms. Semantic scopes are pretty similar across different types of adjectives but when opposing concepts (negative versus positive) are expressed through different predicative adjectives, *da*-adjectives tend to express positive concepts while independent adjectives express negative ones. Predicative adjectives are distinguished from verbs because they occur in CCs instead of as predicates themselves (in copula clauses the

predicate is the copula in Dixon's (2010) theory). Like predicative adjectives, verbs that take *-taki* can also be situated in a CC. In addition to their own functions in a clause, *da*-adjectives can take verb-deriving suffixes to occur as a predicate, rather than as a CC.

Adjectives are also associated with nouns. Not only because *-ki* and *-ma* can derive independent adjectives from nouns, but also because the [noun attributive-adjective] construction is quite similar to noun juxtaposition in Cavineña. Moreover, both predicative and attributive adjectives can be nominalized and direct conversion can apply as well to allow adjectives to participate in nominal juxtaposition. As for attributive adjectives, even though the class is small and with only limited functionalities, they are distinguished from other word classes mainly because of their syntactic position when modifying nouns. Attributive adjectives cannot be negated in Cavineña and negators differ between the two subtypes of predicative adjectives.

8.7 Conclusion

Among the six Amazonian languages in the sample, there is a large variety in different PCW-related aspects. Firstly, half of them do not define a separate lexical class of adjectives with the exception of Panare, where instead 'AD-forms' are introduced. However, all six languages agree in that PCWs can function both as modifiers of nouns and as statements of properties; whether they themselves serve as predicates is another discussion regarding copula versus intransitive clauses. PCWs are distinguished from (other) nouns and verbs mostly by morphological inflections. In many languages, grammatical functions of PCWs are as close to verbs as to nouns. However, if a choice between nouns and verbs has to be made, PCWs are rather more similar to nouns than to verbs. This may be due to two facts: nouns can also function as predicates, and attributive use of PCWs is more similar to PNs, bound nouns, whereas predicative use of PCWs does differ in certain ways from bare verb roots. Most often, semantic issues involve and interfere with the lexical class that PCWs belong to, but these interpretational differences may be unneglectable when these indigenous Amazonian languages are introduced to us, or, in other words, when we are analyzing such languages that are quite different from prototypical Indo-European languages.

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