Uncharacteristic Characteristics of the Iquito Adjective Class*

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1. Introduction

This paper describes the adjective class in Iquito and discusses the characteristics that distinguish this class from other word classes, namely nouns and verbs. Throughout the paper, I situate these characteristics within a larger typological context and demonstrate the continued difficulty of defining cross-linguistic criteria for the adjective class.

Iquito is a highly endangered Zaparoan language spoken in the northern Peruvian Amazon. There are about 25 fluent native speakers, all over the age of 55 and all bilingual with Spanish. The majority of these speakers live in the community of San Antonio del Pintuyacu, in the state of Loreto, Peru, about 100 kilometers west of the city of Iquitos.

Iquito is one of the three remaining languages of the Zaparoan family, together with Arabela (about 75 speakers) and Záparo (less than 10 speakers). Very little documentation work existed on Iquito before the formation of the Iquito Language Documentation Project (ILDP) in 2002. That summer, and for four subsequent summers, a team of linguists from The University of Texas at Austin and the Universidad Nacional Mayor de San Marcos in Lima, Peru conducted extensive linguistic fieldwork in San Antonio. This work was conducted in collaboration with the community, and was funded by the Endangered Languages Documentation Programme of the Hans Rausing Endangered Languages Project. The Iquito data presented in this paper is the result of fieldwork that I conducted from June to November of 2006 as a member of this project. For more information on the project, see www.cabeceras.org/indexiquito.html.

2. The treatment of adjectives in the typological literature

Much of the typological literature on adjectives focuses on the difficulty of defining an adjective class distinct from noun and verb classes, since adjectives frequently share characteristics with the language's noun class or verb class, sometimes to the point of being indistinguishable from nouns and/or verbs. In fact, several languages have been described as not having an adjective class at all; instead, adjectivals in these languages

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are defined as a subset of the noun or the verb class. Whether adjectives form a distinct class or a subclass, they are usually defined via comparison with nouns and verbs, as is evidenced in all of the contributions to the adjective typology edited by Dixon and Aikhenvald (2004), and by Wetzer (1996) who places adjectives on a noun-verb continuum, stating that some languages have adjectives that are more "nouny" and other languages have adjectives that are more "verby".

Despite generalizations that can be made about word classes across languages, word classes are generally distinguished by language-specific grammatical criteria. Adjectives are no exception, making it difficult to identify cross-linguistic characteristics for this class. The fact that adjective classes are typically defined with respect to other word classes such as nouns and/or verbs makes cross-linguistic generalizations even more challenging. Dixon (2004: 9) acknowledges this difficulty when writing about adjectives from a typological perspective, stating that "the adjective class differs from noun and verb classes in varying ways in different languages, which can make it a more difficult class to recognize, and a more difficult class to put forward generalizations about." Nonetheless, he asserts that all languages have an adjective class (contrary to earlier work, e.g. Dixon 1977 and Dixon 1982), adding that there is always some grammatical criteria that distinguishes the adjective class from other word classes, even if this criteria is somewhat subtle.

Dixon (2004: 44) goes on to define the adjective class as a word class that is grammatically distinct from the class of nouns and the class of verbs, includes words from some or all of the prototypical adjective semantic types (Dimension, Age, Value, and Color), and (a) functions either as an intransitive predicate or as a copula complement and/or (b) modifies a noun in a noun phrase.

Iquito adjectives form a distinct word class that adheres to Dixon's definition, even though Iquito adjectives exhibit some overlap with nouns. After briefly discussing this overlap, I will show that adjectives exhibit numerous syntactic and morphological characteristics that are not shared with nouns or verbs, they include terms from all of the prototypical adjective semantic types, and they function as copula complements and as noun modifiers. A number of these distinct characteristics are commonly found in the typological literature, but there are two interesting morphological characteristics that are not found in the literature at all, namely adjective classifiers and adjectives marked with orientational clitics.

3. Iquito word classes

Iquito nouns, verbs, and adjectives are distinguished from each other by their syntactic distribution and by the morphological processes that apply to them. For instance, verbs have fixed positions within the clause, occurring immediately after the subject of a realis clause or after the object of an irrealis clause.[1] Verbs also make up the only category that takes tense and aspect morphology. In contrast, nouns can occur in

[1] Actually, several different elements can intervene between the subject and the verb of an irrealis clause; the object is one of the most common, which is why it is stated here, but it should be noted that the latter statement is somewhat of a simplification of the phenomenon (see Anderson *et al* 2006 for a more thorough treatment).

several argument positions, and unlike verbs, can be topicalized. Nouns can also take distinct nominal morphology, namely possessive prefixes and the collective plural *-huaáca*.

Adjectives show slight overlap with the noun class and can be considered to be "nouny" following Wetzer's (1996) continuum. For instance, adjectives, like nouns, occur in predicates with the copula verb; see (1).

(1) a. Iímina tɨ́ɨ.[2]
canoe COP
It's a canoe.

b. Umáana tɨ́ɨ.
big COP
It's big.

In copular constructions, tense and aspect morphology are always marked on the copula and never on the noun or the adjective, making Iquito adjectives noun-like and not verb-like, as shown in (2).

(2) a. Iímina ta-cura.
canoe COP-RECPST
It was a canoe.

b. Umáana taariquɨ.
big COP.RMPST
It was big (a long time ago).

Adjectives can occur in the same position as a noun in other sentence types, again demonstrating that they are noun-like. In (3), the numeral *sɨɨsaramajɨtáapɨ* 'three (animate)' is the topicalized subject of the sentence.

[2] The abbreviations used in this paper are: ADV=adverbializer, AN=animate, CLAS=classifier, COP=copular, D=directional, DET=determiner, EXCL=exclusive, EXT=existential, IMPF=imperfective, INCL=inclusive, INCP=inceptive, INF=infinitive, LOC=locative, MOT=motive, NEG=negation particle, NOM=nominalizer, PART=participializer, POSS=possessive, PRF=perfective, PL=plural, RECPST=recent past, REP=reported, RMPST=remote past, SG=singular, 1=first person, 2=second person, 3=third person. Tone is marked on each word following our current analysis of lexical tone. Because the system is complex and still under analysis, the tone for some words is still unknown, and thus not marked in this paper. Finally, the source of each example is given in parentheses following the gloss. Codes beginning with 'E' indicate that the example comes from an elicitation session; the 'E' is followed by the initials of the consultant, the initials of the investigator, and then the date of the elicitation session in DDMMYY format. Codes beginning with 'T' indicate that the example comes from a text, and the 'T' is followed by the text code, the initials of the consultant, the line of the text that the example comes from, and the date the text was recorded (in DDMMYY format).

(3) Sɨɨsaramajɨtáa-pɨ jaá na=sihuaanɨ-rɨɨ níiya=jina cáami=ji.
three-PL.AN already 3PL=arrive-INCP land=LOC above=D:from
The three (shamans), they were already arriving back to the land from above.
(T.SSQ.HDC.040804.452)

This is where the similarities end. An adjective only occurs independently of a noun when an associated noun is recoverable from discourse context. Even in such contexts, the adjective does not assume the grammatical functions of the nominal head and never takes nominal morphology, such as the collective plural, or possessive prefixes. It also exhibits semantic animacy agreement with the elided referent it modifies. In the case of (3), the numeral *sɨɨsaramajɨtáapɨ* is animate, as is its elided controller (shamans).

Adjectives exhibit many other features that do not overlap with either the noun class or the verb class and can thus be treated as a distinct class in Iquito. These other features are discussed in the next section.

4. Distinct features of the Iquito adjective class

In this section, I present the syntactic and morphological characteristics of Iquito adjectives that distinguish them from both the Iquito noun class and from the Iquito verb class. I also present the semantic characteristics of the Iquito adjective class and demonstrate that they align with Dixon's (2004) criteria.

4.1. Syntactic characteristics

Examples (1) and (2) above illustrated that Iquito adjectives can function as the complement of a copula. While this criterion is sufficient for distinguishing adjectives from verbs, it is not sufficient for distinguishing adjectives from nouns, as nouns are also able to function as the complement of a copula. Nor is it sufficient for distinguishing adjectives from other word classes, as participles and adverbs are also found as copular complements. Thus, position with respect to the copular verb is not a reliable indicator of word class. In this section, I describe three syntactic roles that are reliable indicators for distinguishing adjectives from nouns (and other word classes) in Iquito.

4.1.1. Noun modification

One characteristic that helps to distinguish adjectives from nouns is the fact that an adjective juxtaposed with a noun is always interpreted as modifying that noun. In contrast, two juxtaposed nouns are usually interpreted as a possessive construction, as can be seen in (4) a. and b. The ordering of the nouns determines the Possessor and Possessum. In (4) c. and d., whether the adjective precedes or follows the noun, it is clear that it is modifying the noun and not forming a possessive construction.

(4) a. maáya iímina
child canoe
child's canoe

b. iímina maáya
canoe child
canoe's child (pragmatically odd)

c. iímina umáana
canoe big
big canoe (owner is unspecified)

d. umáana iímina
big canoe
big canoe (owner is unspecified)

However, in (5), we see that it is possible to form a noun-noun compound where the noun acts as a modifier and not a possessor. The use of 'child' in this example is similar to the use of 'baby' in English; a baby canoe is not necessarily owned by a baby, but refers instead to its size.

(5) iímina niyíni[3]
canoe child
small canoe

Noun modification is considered to be a canonical adjective function and is common to the majority of languages with adjectives (Dixon 2004: 28); however, the fact that nouns can also modify other nouns in noun-noun compounds demonstrates that this functional role is not sufficient in and of itself to define the adjective class as a class that is distinct from nouns.

4.1.2. Parameter of comparison

Another characteristic that is often cited as being unique to the adjective class cross-linguistically is the ability to occur in comparative constructions. Often, adjectives function as the 'parameter of comparison' within the comparative construction. This characteristic is evident in Iquito, as illustrated in (6), where the parameter of comparison is the adjective *cuaána* 'clear'.

(6) Iína nási anúu táa júura <u>cuaána</u> iinajinaji taána nási.
DET chacra 3SG COP really clear in.comparison.to other chacra
That *chacra* (slash-and-burn field), it is clearer than the other *chacra*.
(E.LII.CIA.121006)

[3] The term *niyíni* 'child' differs from the term *maáya* 'child' in that *niyíni* is obligatorily possessed and *maáya* is not. Perhaps a better gloss for *niyíni* is 'offspring'.

4.1.3. Verb modification

A third syntactic characteristic is that adjectives may modify verbs. Typically, adjectives participate in a derivational process that derives manner adverbs. This process is quite common cross-linguistically, as noted by Schachter and Shopen (2007: 20-1): "in many languages, manner adverbs are derivable from adjectives by means of fairly productive processes of derivational morphology... There are also languages in which the meaning equivalent of a manner adverb is regularly expressed by an adjective without any special marking." Dixon (2004: 11) echoes this statement, saying that "in some languages adjectives may also modify verbs, either in plain form or via a derivational process." Iquito employs both strategies: manner adverbs are derived from adjective roots[4] by the addition of the morpheme *–ta* (as shown in example (7)), but more frequently, adjective roots, without any additional marking, function as adverbs. Some examples are given in Table 1.

(7) Nu=riquii-yaa suhuaá-ta.
3SG=grow-IMPF good-ADV
It grows well. (T.CHC.ELY.150906.18)

Table 1. *Adverbs derived from adjectives*.

Adjective Root	**Adverb**	**Gloss**
amátana- 'strong'	*amátana*	'strongly, forcefully'
mucua- 'rotten'	*múcua*	'rottenly'
muusa- 'musky'	*muusa*	'muskily'
saámi- 'new'	*saámita*	'newly'
siísa- 'bad'	*siísa*	'poorly'
suhuaa- 'good'	*suhuaáta*	'well'
umáa- 'big'	*umáata*	'in a large manner; a lot'

4.1.4. Summary

The functional possibilities described in this section are frequently cited as defining characteristics of the adjective class, and some of these properties are used to classify adjective classes into cross-linguistic types. The primary division between adjectives is determined by whether they function as an intransitive predicate or fill the copula complement. As shown above, Iquito adjectives fill the copula complement, and are therefore termed 'non-verb-like adjectives' by Dixon (2004: 14). Another way that adjective classes can be classified is by their morphological possibilities when modifying a noun. These possibilities are discussed in the next section.

[4] See section 4.2 for a discussion of the term "adjective root".

4.2. Morphological characteristics

In addition to the syntactic characteristics described above, there are several morphological characteristics that help define the Iquito adjective class. Dixon (2004: 15) notes that adjectives can be classified as noun-like or non-noun-like, depending on whether or not the morphological processes that apply to nouns also apply to adjectives. Several morphological processes apply to the Iquito adjective class, but only one of these processes also applies to nouns, and so I conclude that Iquito adjectives are non-noun-like (in addition to being non-verb-like, as described in the previous section). Furthermore, these morphological characteristics are useful in defining the adjective class as a word class distinct from nouns.

It should be noted here that what I have been referring to as an adjective up until this point is in fact a bound adjective root with additional morphology added to make it an independent word or "free" adjective. Adjective roots fall into three groups: basic (underived) roots, roots derived from other adjective roots, and roots derived from other word classes. The processes which derive these latter roots are no longer productive, which is why I use the term root rather than stem. Adjective roots must combine with one of the following to become independent words (that still function as adjectives): animacy/number inflection, classifiers, orientational clitics, or the dimininutive. The formation of free adjectives from adjective roots is discussed in this section. Other morphemes can be added to adjective roots to derive other word classes; these are discussed in Section 4.3. Additionally, Iquito has a number of morphemes that derive adjective roots from other word classes, which are discussed in Section 4.4.

4.2.1. Number and animacy agreement

Iquito adjectives exhibit syntactic number and animacy agreement with the noun they modify. The agreement morphology, given in Table 2, is added in accordance with the number and animacy of the modified noun.[5] The addition of these inflectional morphemes is the most common way for adjective roots to become independent words. In fact, I treat adjective roots inflected with the singular/general morpheme *-na* as the default free form, since this is the form speakers provide when asked to translate an adjective from Spanish.

Table 2. *Number/animacy agreement morphology*.

Singular/General	Plural Inanimate	Plural Animate
-na (default)	*-mi*	*-pɨ*

[5] There are a few exceptions to this generalization. The singular/general adjective formed from the root *suhuaa* 'good, pretty' is one: it is *suhuáani* instead of the expected **suhuáana*. However, the plural forms of this adjective (*suhuáami* 'good (inanimate)' and *suhuáapɨ* 'good (animate)') are as expected. There are two other known exceptions: *cumácu* 'old' and *tasíita* 'legitimate; authentic'. These basic adjectives do not take any number/animacy agreement morphology in the singular or plural.

Although a singular/plural distinction is a property also exhibited by nouns, number marking on adjectives is an agreement category, and depends on the number choice made for the noun. Additionally, grammatical encoding of animacy is limited to adjectives. Since number and animacy marking on adjectives is a portmanteau suffix (in the plural only), adjective plural morphology substantially differs from nominal plural morphology.[6] Thus, the number/animacy agreement marking found on adjectives is an additional means for distinguishing adjectives from nouns in Iquito. And more generally, agreement is a cross-linguistic characteristic that can be used to distinguish adjectives from other word classes.

4.2.2. Diminutive forms

Another morphological process available to adjective roots is the formation of the diminutive via the suffix *-nurica*. This suffix derives singular/general adjectives from adjective roots. The suffixes *-mijaárica* and *-pɨjaárica* form the plural inanimate and plural animate correlates, respectively. These are the same plural inanimate and animate suffixes (*-mi-* and *-pɨ-*) that attach to adjectives plus a diminutive plural suffix *-jaárica*. These suffixes are given in Table 3 and are interpreted as small in size or affective (and may be employed in baby talk).

Table 3. *Diminutive suffixes*.

Singular/General	Plural Inanimate	Plural Animate
-nurica	*-mijaárica*	*-pɨjaárica*

Although any adjective can be diminutivized with *-nurica*, there are a few lexicalized forms whose diminutivized sense or corresponding adjective root is no longer available. The lexicalized forms tend to describe dimension, which is further illustrated by the fact that when *-nurica* combines with the interrogative marker *jɨɨ́ti-*, the resulting form (*jɨɨ́tinurica*) interrogates 'what size'. These forms are given in Table 4.

Table 4. *Adjectives derived from adjective roots via* -nurica.

Adjective Root	Adjective	Gloss
sɨɨ́sa- 'bad'	*sɨɨ́sanuríca*	'small'
tana- 'shallow'	*tananuríca*	'shallow'
taqui- '?'	*taquinuríca*	'short (in the vertical sense)'
tuqui- '?'	*tuquinuríca*	'short (in the horizontal sense)'
jɨɨ́ti- 'interrogative marker'	*jɨɨ́tinurica*	'what size'

[6] There is a set of nouns that use these number/animacy agreement morphemes as their plural markers, but the set is relatively small, and members pattern just like nouns in all other ways. Additionally, members are usually animate, and therefore only take the plural animate suffix *-pɨ*. As a result, the full set of number/animacy agreement morphemes is not available to nouns.

Nouns can also be diminutivized via the addition of a suffix, but not with *-nurica*. Nouns are diminutivized by a stem vowel change plus the addition of *-ca*. As a result, the adjective-specific diminutive suffix *-nurica* is another piece of evidence that adjectives form a distinct word class in Iquito, separate from that of the nouns. Unlike the agreement characteristic described above, this characteristic is language specific.

4.2.3. Adjective classifiers

In addition to the distinct plural morphology and the diminutive suffixes, adjective roots may also be inflected with a classifier to form an independent word. The known adjective classifiers are given in Table 5 and an example can be seen in (8). Note that the classifier occurs in lieu of number/animacy suffixes, thus trumping the requirement for the adjective to exhibit agreement with the modified noun.

Table 5. *Adjective classifiers.*

Classifier	**Semantics**
-huaásа	of or relating to the mouth
-huɨɨca	leaves
-jaaca	fruits; female genitalia
-quina	fruits; eggs; male genitalia

(8) Saa-huɨɨca tíɨ nu-íimɨ.
long-CLAS.LEAVES COP 3SG.POSS-leaf
Its leaves are long. (E.JPI.CIA.251006)

These classifiers are only used with members of the adjective class; synchronically, there are *no* noun classifiers in Iquito. This is typologically unusual. Usually when classifiers occur with adjectives they mark agreement with the noun; that is, the noun is also marked with a classifier (e.g. Tariana, see Aikhenvald 2004: 113). Enfield (2004: 326-7) provides an example of a 'linking modifier classifier' in Lao that occurs with verbal modifiers but not nominal modifiers. Since Lao adjectives are considered to be a sub-type of verbs, this would be an example of a classifier occurring with an adjective but not a noun. However, this classifier simply links the modifier to the head noun, and does not seem to provide any additional semantic information other than definiteness. Iquito adjective classifiers do more than link the modifier and head; they provide information on the shape of the item being modified, making Iquito classifiers quite different from Lao ones. All other mentions of classifiers marked on adjectives in Dixon and Aikhenvald's (2004) typology are ones of classifier agreement, further supporting the typologically unusual-ness of Iquito adjective classifiers. It is possible that the Iquito adjective classifiers were once part of a noun classifier agreement system, but that the noun classifiers have since been lost, especially considering that other languages in the family have noun classifiers (e.g. Záparo and Arabela).

There is a hint of evidence in the noun plural-marking system that Iquito might have once had noun classifiers. Michael (2006: 7) discusses this possibility in detail, noting

that four of the Iquito plural morphemes "show strong tendencies to occur with semantically-definable sets of nouns." For instance, as we see in Table 6, *-huaáca* is used with kin terms and terms that characterize humans through their physical characteristics or social roles, whereas the plural marker *-hua* is principally used with animals and appears to be especially closely related to birds and small school-forming fish. The plural marker *-huɨya* is used with long, slender objects such as veins, candles, and certain tree species with relatively branch-free trunks, and *-quɨya* is used with quasi-geometrical nouns that indicate edges, tips, centers, etc. Michael also notes a tendency for the subtractive plural to be employed with fruit-bearing plants and worm-like creatures. It should be underscored, though, that these correlations are unidirectional; not all members of these semantic classes take these plural markers. While these plural markers exhibit some similarities in form with the adjective classifiers (compare *-huaáca* and *-hua* with *-huaásа*, and *- huɨya* with *-huɨica*, they only minimally overlap in terms of semantics, and so I maintain that synchronically, classifiers can be used to distinguish adjectives from nouns.

Table 6. *Nominal plural markers that pattern with specific noun sets.*

Plural Marker	**Semantics of noun set used with this marker**
-huaáca	kin terms and terms that characterize humans through their physical characteristics or social roles
-hua	animals (especially closely related to birds and small school-forming fish)
-huɨya	long, slender objects such as veins, candles, and certain tree species with relatively branch-free trunks
-quɨya	quasi-geometrical nouns that indicate edges, tips, centers, etc.
subtractive plural	fruit-bearing plants and worm-like creatures

4.2.4. Orientational clitics

Iquito has a set of orientational clitics, given in Table 7, that, like the adjective classifiers, trump the requirement for the adjective to exhibit agreement with the modified noun. However, unlike the adjective classifiers, animacy/number agreement remains on the adjective in specific word orders.

Table 7. *Orientational clitics.*

Clitic	**Semantics**
=cu	upriver, up, outside
=ma	downriver, down, inside
=cúura	perpendicular to the river

When the order of the noun phrase is noun-adjective, the clitic attaches to the adjective, and animacy/number agreement is absent, as demonstrated in (9).

(9) a. Qui=musii tíira cacúti musúti=cúura.
1SG=swim.IMPF there beach white=D:there
I am going to swim there to the white beach.

b. Qui=musii naámi cacúti musúti=ma.
1SG=swim.IMPF down.there beach white=D:downriver
I am going to swim downriver to the white beach.

c. Qui=muusii cáami cacúti musúti=cu.
1SG=swim.IMPF up.there beach white=D:upriver
I am going to swim upriver to the white beach.
(E.ELY.CIA.300906)

But when the order of the adjective and noun are reversed, animacy/number agreement is marked on the adjective and the clitic attaches to the noun, as can be seen in (10):

(10) P~~i~~=iicuaa cáami-raata saámi-na p~~i~~-nási=cu.
1PL.INCL=go.IMPF upriver-D:towards new-SG 1PL.INCL.POSS-chacra-D:upriver
We are going upriver to our new *chacra* (slash-and-burn field).
(E.HDC.CIA.021006)

I argue that these orientational clitics are enclitics that attach to the entire noun phrase, and that is why animacy/number agreement is present on adjectives in examples like (10), but not those in (9). In contrast, when a postposition follows a noun-adjective pair, number/animacy agreement remains, as in (11).

(11) Qui=musii tíira cacúti musúti-na=jina.
1SG=swim.IMPF there beach white-SG=LOC
I am going to swim over there at the white beach. (E.ELY.CIA.300906)

In copular constructions, the orientational clitic occurs in lieu of animacy/number agreement, as in example (12). Note that in this example, the adjective root is *mi~~i~~ńa-* 'black'; with the default animacy/number marker, the adjective form is *mi~~i~~ńana*.

(12) Saaca ácuji t~~i~~ mi~~i~~na=cu quia-namíya?
what MOT COP black=D:exterior 2SG-face
Why is your face black? (T.CAS.JPI.210706.25)

Adjective roots with orientational clitics continue to behave like adjectives, as evidenced by the fact that they can occur in comparative constructions; an example is given in (13). This demonstrates that the orientational clitics are not functioning as some sort of locative nominalizer.

(13) Iína huaarti anúu jinacuma táa júura isíti=ma
DET bucket 3SG inside COP really deep=D:interior

iinajinaji taána huaarti.
in.comparison.to other bucket
That bucket, its interior is deeper than the other bucket. (E.JPI.CIA.111006)

The orientational clitics are the only morphemes available to adjectives that also occur on nouns.

4.2.5. Summary

In this section, I have presented four sets of morphemes that are found with adjective roots: number/animacy agreement suffixes, the diminutive suffix, adjective classifiers, and orientational clitics. These morphemes combine with bound adjective roots to form "free" adjectives and with the exception of the orientational clitics, are not found with nouns or any other word class. As a result, they serve as additional evidence supporting the claim that the adjectives form a distinct word class in Iquito.

Number/animacy agreement is a characteristic of adjectives found in many other languages, but the diminutive suffix, adjective classifiers, and the orientational clitics are language specific criteria and are not typically discussed in the typological literature. These characteristics add to the types of features that can be used to define an adjective class, but underscore the fact that defining this word class often relies on language specific criteria and not cross-linguistic commonalities. Furthermore, the occurrence of adjective classifiers without corresponding noun classifiers is typologically unusual and an interesting topic for future study.

4.3. Deriving other word classes from adjective roots

Adjective roots may also combine with derivational morphemes to form words belonging to other classes. For the most part, these derivational morphemes only apply to the adjective class, with a few exceptions that are noted below. As a result, these morphemes, along with the morphemes discussed in Section 4.2, contribute to defining the adjective class as distinct from other classes. Using derivational morphology to define the adjective class is a cross-linguistic method for defining the class. For instance, England (2004: 128) uses derivational morphology, namely two suffixes, to define adjectives as a class in Mam. One of these suffixes derives nouns from adjectives and the other derives intransitive verbs from adjectives. Similar derivational processes are seen in Iquito; words of several classes are derived from adjective roots, including adverbs (discussed above in Section 4.1.3), verbs (see Section 4.3.1), nouns (see Section 4.3.2), and other adjectives (see Section 4.3.3). Additionally, there are two types of compounds that are formed from adjective roots; these are discussed in Section 4.3.4.

4.3.1. Derivation of verbs

The derivational morpheme *-nuu-* derives transitive verbs from adjective roots, resulting in the meaning 'to make someone/something Adjective'.[7] Some examples are given in Table 8; these forms are all infinitives marked with the infinitival suffix *-ni*. An inflected form of this verb can be found in (14).

Table 8. *Verbs derived from adjective roots.*

Adjective Root	**Verb**	**Gloss**
ácana- 'shiny'	*acananuuni*	'shine; polish; sand'
íruhua- 'soft'	*iruhuanuuni*	'soften (trans.)'
ísacua- 'sweet'	*isacuanuuni*	'sweeten (trans.)'
mɨ́ɨ́na- 'black'	*mɨɨmanuuni*	'blacken (trans.)'

(14) Iruhuá-nuu iína amariyaája turuúja; aaca-nuu[8] nuú.
soft-to.make DET *pihuayo* dry.PART water-to.make 3SG
Soften this dried *pihuayo* (palm fruit); add water.
(Dictionary Example; *iruhuanuuni*)

Interestingly, verbs derived with *-nuu-* have a corresponding middle voice form. For example, the middle voice form of *acusanuuni* 'redden (trans.)' is *acusanɨɨni* 'redden (intrans.)', as can be seen in (15). Both verbs are derived from the adjective root *ácusa-* 'red'. The morpheme *-nɨɨ-* could be considered a separate derivational morpheme, but this middle voice alternation is consistent with other middle voice alternations in Iquito, which are also marked by a change in vowel quality, typically from /*a*/ or /*u*/ to /ɨ/.

(15) Ájapaqui nu=acusa-nɨɨni.
NEG:EXT 3SG=red-become.INF
It is not reddening. (The speaker is referring to a fruit that is not ripening.)
(T.IC2.LII.011106.69)

4.3.2. Derivation of nouns

There are two nominalizing suffixes that derive nouns from adjective roots. The first such suffix, *-ca*, derives abstract nouns, much like the English suffixes '-ness' and '-ity' form abstract nouns from adjectives (e.g. happy > happiness; serene > serenity). In Iquito, there are only a few nouns that have been derived with this suffix, as this process is no longer productive.[9] Some examples are given in (16) and Table 9.

[7] There is a homophonous, but semantically very different morpheme *-nuu-* that applies to verb roots.
[8] *Aáca* is both a noun and an adjective root; see Table 18.
[9] This morpheme also appears as a nominalizer on a few **verb** stems; it is also not productive.

(16) Íiya iína=na, quiɨ́ra-ca ácuji, nu=niti-riɨ-quiaquɨ=na...
From there=REP afraid-NOM MOT 3SG=run-INCP-PRF.RPST
From there, out of fear, he ran... (T.MCS.JPI.150706.10)

Table 9. *Nouns derived from adjective roots with* -ca.

Adjective Root	**Noun**	**Gloss**
anása- 'painful'	*anásaca*	'pain'
cucuá- 'sharp'	*cucuáca*	'edge (of a knife or machete)'
íhua- 'itchy'	*íhuaca*	'itchiness'
ípana- 'hot'	*ípanaca*	'fever'
mɨ́na- 'black'	*mɨ́naca*	'black substance'
quɨ́ra- 'afraid'	*quɨ́raca*	'fear'

The second nominalizing suffix, *-qui*, is used to derive a noun meaning 'a place characterized by Adjective'. Some examples are given in Table 10 and (17).

Table 10. *Nouns derived from adjective roots with* -qui.

Adjective Root	**Derived Noun**	**Gloss**
cuaá- 'clear'	*cuaáqui*	'clear area'
isíti- 'deep'	*isítiqui*	'deep spot in a body of water'
ruutí- 'slippery'	*ruutíqui*	'slippery place/spot'

(17) Nu=asɨ́ti-riɨ ruutí-qui.
3SG=slip-INCP slippery-NOM:LOC
S/he slipped in a slippery spot. (Dictionary Example; *asɨ́riɨ́ni*)

A few nouns derived via *-qui* have undergone semantic narrowing and have been lexicalized. For example, the word *saáqui* is derived from the adjective root *saá-* 'long', and it does not mean any straight place, but specifically refers to a straight stretch of a river (*estirón* in regional Spanish; see example (18) below). Another example is the word *niínaqui*, derived from the adjective root *niína-* 'dark', which means 'night'.

(18) Cana=niqui-sahuɨɨ-quiaquɨɨ Pucallpa saá-qui=jina nuú.
1PL:EXCL=see-upon.arriving-PRF.RPST Pucallpa long-NOM:LOC=LOC 3SG
Upon arrival, we saw it (a boat) in the *estirón* of Pucallpa. (T.VPI.ELY.220706.7)

Additionally, the negative existential *ájapaqui* is likely a grammaticalized form derived from the adjective root *ájapa-* 'lacking' plus the locative nominalizer *-qui*, thus resulting in the sense 'place that is lacking'.[10] An example of both the negative

[10] The frustrative adverbial *ájapaa* also derives from this adjective root.

existential and the adjective form can be seen in (19) below. In this example, a hunter is trying to convince his companion that there cannot be any agouti up ahead on the trail because there is a spider web (presuming that if the agouti had recently passed, the spider web would be broken). Note the contrasting directional adverbs in this sentence; *iíti* 'here' is used with *ájapaqui*, and *cáami* 'up ahead' is used right after *ájapa=cu*.

(19) Ájapaqui tíí tímaaca iíti, ájapa=cu tíí.
NEG:EXT COP agouti here lacking=D:up COP
There aren't any agouti here, or up ahead.

Tácusi áhuaya iiquii cáami.
spider web exist.IMPF up.ahead
There's a spider web up ahead. (T.HMS.JPI.190806.76-7)

4.3.3. Derivation of adjectives

The morpheme *-játi-* derives adjectives from adjective roots. The resulting adjective denotes the given property to a lesser degree, much like the English suffix '-ish'. The property is lessened either in terms of intensity or distribution. Animacy/number agreement is then added to the derived form. For example, *acusajátina* 'reddish (sg)', which is derived from the root *ácusa-* 'red', denotes something that is a dull red or something that is spotted red. The adjective root with just animacy/number agreement (i.e. *ácusana*) is reserved for objects that are prototypically red. Some additional examples are given in Table 11; all of these forms are given with the suffix *-na*, the number/animacy agreement marker that I consider to be the default.

Table 11. *Adjectives derived from adjective roots via* -játi-.

Adjective Root	**New Adjective**	**Gloss**
ácusa- 'red'	*acusajátina*	'reddish; red in parts'
míína- 'black'	*míínajátina*	'blackish/gray; black in parts'
picá- 'wet'	*picajátina*	'slightly wet; wet in parts'

4.3.4. Derivation of adjectival and nominal compounds

Both nominal and adjectival compounds are formed from adjective roots. The first type of compound is the personality characteristic compound, so named because compounds of this type refer to human personality characteristics. The heads of these compounds are derived from intransitive verbs by means of subject nominalization; the non-head element is an adjective root. The resulting compounds are nouns. A few examples of these personality characteristic compounds can be seen in Table 12.

Table 12. *Personality characteristic compounds.*

Compound	**Underived Constituents**	**Compound Gloss**
ánasa iiquiáana	*anása-* 'painful, angry' + *ihuiini* 'be, live'	'short-tempered person'
sucuara cuhuasiáana	*sucuará-* 'dirty' + *cuhuasiini* 'talk'	'impolite person, gossip'
paapa iiquiáana	*paapá-* 'calm, quiet' + *ihuiini* 'be, live'	'peaceful person'

Several of the personality characteristic compounds are derived from the verb *ihuiini* 'be, live'. This verb in its infinitival form also participates in several other compounds involving adjective roots, such as *paápa ihuiini* 'live calmly' (the adjective root is *paapá-* 'calm, quiet'), *sɨɨsa ihuiini* 'live badly' (the adjective root is *sɨɨ́sa-* 'bad'), and *suhuaa ihuiini* 'live well; the good life' (the adjective root is *suhuaa* 'good').

Another compound type formed from adjective roots is the physical attribute compound. Compounds of this type express a particularly salient body part characteristic (reminiscent of compounds like 'redhead' in English). They are formed by preposing an adjective root to a body part noun. The result is an adjectival compound to which animacy and number morphology are added. Consider, for example, the compound *rihua najicána* 'crooked-nosed'. This compound is derived from the adjective root *rihuá-* 'crooked, bent' plus the noun *najíca* 'nose'. When used with a singular referent, the general/singular marker *-na* is added to the end of the compound, i.e. to the noun. Physical attribute compounds are typically used to describe people, although *saqui namijána* 'light-eyed' can be used to describe certain snakes as well as some birds of the family *Icteridae* (especially the Yellow-rumped Cacique, *Cacicus cela*). As a result, the plural inanimate marker *-mi* is not used as a plural form with these compounds, only the plural animate marker *-pɨ*. Table 13 illustrates a range of physical attribute compounds.

Table 13. *Physical attribute compounds.*

Compound	**Constituents**	**Compound Gloss**
casi namijána	*casí-* 'gray; ashy' + *namíja* 'eye'	'person with cataracts'
pari najicána	*parí-* 'broad, flat' + *najíca* 'nose'	'broad-nosed'
pica namijána	*picá-* 'wet' + *namíja* 'eye'	'watery-eyed'
rihua iícana	*rihuá-* 'crooked, bent' + *iíca* 'tooth'	'crooked tooth-ed'
saa ahuásina	*saá-* 'long' + *áhuasi* 'finger'	'long-fingered'
saqui namijána	*saquí-* 'lightly-colored' + *namíja* 'eye'	'light-eyed'
rihuasicuta cajasina	*rihuasicúti-* 'curly; zig-zag' + *cajási* 'hair'	'curly haired'

A subset of the physical attribute compounds are formed with the morpheme *-huaása* in place of a body part. Although *-huaása* does not occur synchronically as a free morpheme, all of the compounds formed with *-huaása* express characteristics of the mouth and function adjectivally. These compounds are given in Table 14.

Table 14. *Compounds formed with* -huaása.

Compound	Adjective Root	Compound Gloss
anihuaása	*ani-* '?'[11]	'loud-voiced'
mucuahuaása	*mucua-* 'rotten'	'bad-breathed'
parihuaása	*parí-* 'broad, wide'	'wide-mouthed'
picahuaása	*picá-* 'wet'	'slobbery-mouthed'

4.4. Deriving adjective roots from other word classes

The previous sections outlined the numerous ways in which adjective roots can participate in derivational processes that form words of other classes. In this section, I outline the derivational processes that derive adjectives from other word classes. The morphemes discussed in this section can also be considered to provide evidence for a distinct adjective class.

The most common of these adjectivalizers is the morpheme *-ti-*. This morpheme derives adjective roots from nouns, verbs, and adverbs; the resulting adjectives mean something along the lines of 'having the quality of Noun/Verb/Adverb'. Some examples of adjective roots formed with this morpheme are given in Table 15.

Table 15. *Adjectives derived with* -ti-.

	Derivational Base	Adjective Root	Gloss
Noun	*ánija* 'root'	*ánijati-*	'having a lot of roots'
	áquica 'branch'	*aquicáti-*	'having a lot of branches'
	sahuíja 'star'	*sahuijáti-*	'sparkly'
	sapáca 'grime'	*sapacati-*	'grimy'
Verb	*jipɨquɨɨni* 'shrivel'	*jipɨquɨ́ti-*	'shriveled'
	quɨsɨquɨɨni 'wrinkle'	*quɨsɨ́quɨti-*	'wrinkled'
	rihuasicuuni 'fold repeatedly; make a zigzag'	*rihuasicúti-*	'curly'
	taraquɨɨni 'be a coward'	*taraquɨ́ti-*	'timid; cowardly'
Adverb	*iyarácata* 'quickly'	*iyarácati-*	'active'

The number of adjectives derived from nouns using *-ti-* is large, but this process is not fully productive because consultants resist using this morpheme with borrowed words.[12] The morpheme is appended to the noun; number/animacy agreement

[11] This root does not occur synchronically except in a few cases like this one. Diachronically, this root probably meant something like 'big'.

[12] Interestingly, borrowing of adjectives is extremely common around the world (Hajek 2004: 357), but Iquito seems to resist both the borrowing of adjectives and the derivation of adjectives using borrowed words.

morphology is added to this stem. There are a few instances where the noun base is altered; these are given in Table 16.[13]

Table 16. *Irregular adjective derivations from nouns.*

Noun	**Derived Adjective Exhibiting Stem Change**
anajáca 'smoke; vapor'	*anajatína* 'having a penetrating odor'
cajási 'hair'	*cajatína* 'hairy'
iyɨɨcáca 'algae'	*iyɨɨtína* 'algae-y'
papasíca 'aerial roots'	*papasitína* 'having aerial roots'

Adjectives derived from both verbs and adverbs via *-ti-* are much fewer in number; the forms given in Table 15 are all of the ones in our corpus. Furthermore, the verb and adverb bases are altered. In the case of adjectives derived from verbs, *-ti-* is added to the verb root, but the final vowel is shortened. The adverb ends in *-ta*, a known adverbial marker; the adjective derived from an adverb takes *-ti-* in lieu of *-ta*.

In addition, there are a few adjective roots which appear to have been derived with this morpheme, but synchronically, there are no corresponding noun, verb, or adverb forms. These adjectives are given in Table 17.

Table 17. *Adjectives believed to be diachronically derived.*

Adjective	**Gloss**
caratína	'plump (referring to a fruit)'
isítina	'deep'
musútina	'white'
riítina	'opaque; turbid'
sɨmɨtina	'cold'

Adjectives are also derived from nouns via the morphemes *-taca* 'having Noun' (not productive, used with things that grow, e.g. beard, teeth), *-araca* 'like Noun' (productive), and *-iyuu* 'covered in Noun,' (productive, used with mass nouns like sand and smoke). Adjectives derived via these morphemes do not take additional number/animacy agreement morphology.

Finally, there are a few adjective roots which appear to have been derived from nouns diachronically without any additional morphology; the few forms in our corpus are given in Table 18.

[13] The nouns ending in *-ca* were most likely plural nouns diachronically (*-ca* is the synchronic default plural morpheme), explaining why *-ca* is not present in the adjective form.

Table 18. *Adjective roots derived from nouns without additional morphology.*

Noun	**Adjective**	**Other Forms**
aáca 'water'	*aacána* 'watery'	*aacanuuni* 'dilute'
huíira 'animal fat'	*huiírana* 'fatty'	
isája 'salt'	*isána* 'salty'	*isanuuni* 'add salt'
nanáti 'coagulated blood'	*nanatína*[14] 'covered in coagulated blood'	

4.5. Adjective class semantics

In addition to discussing the syntactic and morphological characteristics that define the adjective class, it is important to discuss the semantic types associated with the adjective class. Semantics is another criteria that can be useful when defining an adjective class and are a component of Dixon's (2004: 44) definition of the adjective class. Dixon (2004: 3; 1977: 31) identifies four core semantic types that are typically associated with the adjective class cross-linguistically, regardless of the size of the class. These types are Dimension, Age, Value, and Color. There are three additional semantic types associated with medium-sized and large adjective classes; these are Physical Property, Human Propensity, and Speed. The underived descriptive adjective roots in Iquito form a closed set of about 50 members; representative examples are given in Table 19 along with the approximate number of basic adjectives that belong to each semantic type. Six of the seven aforementioned semantic types are found; speed is expressed via the basic adverbs *iyarácata* 'fast, quickly' and *maacuáarica* 'slowly'.

Table 19. *The semantic types of basic adjectives*.

Property	**Quantity**	**Adjective**	**Gloss**
AGE	3	*cumácu*	'old'
		namísaana	'new, whole'
		saámina	'new'
DIMENSION	8	*isítina*	'deep'
		parína	'broad'
		quiináana	'thin'
		saána	'long'
		umáana	'big'
VALUE	3	*suhuáani*	'good'
COLOR	7	*ácusana*	'red'
PHYSICAL PROPERTIES	27	*jahuána*	'dry'
HUMAN PROPENSITY	8	*paapána*	'calm'

Dixon (2004: 5) also lists a number of other semantic types associated with large adjective classes; these are Difficulty, Similarity, Qualification, Quantification, Position, and Cardinal Numbers. A number of these types fit what Schachter and Shopen (2007:

[14] This adjective form might have been derived with *-ti-*, which has been lost due to haplosis.

13) refer to as the "so-called limiting adjectives" (which contrast with descriptive adjectives), giving words such as 'some', 'this', and 'other' as examples. They point out that the limiting adjectives never constitute an open class, and they do not consider these limiting adjectives to be adjectives at all. In Iquito, a number of the words belonging to the semantic types of Similarity, Quantification, and Cardinal Numbers behave like descriptive adjectives in that they must take number/animacy agreement, and they also participate in some of the derivational processes described in section 4.3. Examples of words that fall into this category are the interrogative marker *jɨ́ɨ́ti-*, *masiaa-* 'many, several', *taa-* 'other', and the lexical numerals *cuu-* 'two', *sɨ́ɨ́saramajɨ́taa-* 'three', and *suhuaaramajɨ́taa-* 'four'. These terms, however, can be distinguished from the Iquito descriptive adjectives on syntactic grounds: while the descriptive adjectives can occur immediately before or immediately after the noun depending on whether or not the adjective is focused, the limiting adjectives always precede the noun. This criterion could be used to consider these forms as a subclass of the adjective class or as a separate class altogether (e.g. quantifiers); either way, they are distinct from the descriptive adjectives and outside the scope of this paper.

5. Conclusion

Based on the syntactic, morphological, and semantic characteristics presented in this paper, it is clear that adjectives in Iquito form a distinct word class. Many of the characteristics fit within the typology of adjectives; the Iquito adjective class is slightly "nouny" but still fits the definition of an adjective class provided by Dixon (2004: 44). Yet some characteristics are unique to Iquito and furthermore are typologically unusual, namely the adjective classifiers and orientational clitics. These characteristics add to the types of criteria that can be used for defining an adjective class, but do not contribute to a general typology of the adjective class, since they are so language-specific. Rather, they demonstrate the continued difficulty of defining cross-linguistic criteria for the adjective class.

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