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ADJECTIVIZATION OF NUMERALS IN IZÓNLANGUAGE

By

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Abstract

This study examines the adjectival functions of numerals in Izón, a central Delta Niger-Congo language, with a focus on their syntactic integration, morphological derivation, and semantic scope. Numerals in Izón – covering cardinal, ordinal, multiplicative, distributive, fractional, and collective forms – demonstrate systematic positioning within noun phrases (NPs), frequently occupying pre-nominal modifier slots typically associated with adjectives. Using primary data elicited from native speakers, the study documents derivational strategies including compounding (*-fene*), ordinal marking (*_-káramú*), multiplicative suffixation (*-kiri*), and reduplication, showing that numerals are morphologically equipped to function adjectivally. Findings reveal that numerals not only quantify but also encode semantic contrasts such as order, distribution, portioning, and iteration, and they exhibit sensitivity to animacy distinctions, particularly in human versus non-human referents. Comparisons with English numerals highlight typological divergences: while English numerals occupy a single modifier slot with minimal derivational marking, Izón numerals engage in complex syntactic and morphological interactions, effectively creating a highly elaborated adjectival system in a language with limited canonical adjectives. The study contributes to Niger-Congo typology and functional syntax, emphasizing that numeral adjectivization in Izón represents both a structural innovation and a pragmatic resource for property ascription within NPs. These insights broaden our understanding of numeral-adjective interfaces and underscore the role of numerals as multifunctional grammatical elements in African languages.

Keywords: Izón, numeral adjectives, adjectivization, distributive numerals, Niger-Congo,

1.1 Background and Motivation

Human languages routinely show flexibility in how lexical items shift between grammatical categories—or take on functions beyond their canonical class. One

such process is adjectivization, broadly defined as the conversion or extension of words originally from other classes (e.g., nouns, verbs, numerals) into adjectival uses (cf. Adjectivization in Morphology, Oxford Research Encyclopedia, 2019). In many typologies, the adjective class is considered an open category, subject to interaction and blurring with nouns and verbs (Anderson, 2018).

In the Niger Delta region of Nigeria, the Ijoid language, Izón, offers a revealing category-shifting phenomena. Although core grammars of Izón (e.g., word order, tone, morphology) have been documented (Williamson, 1978; Jenewari, 1989), less attention has been paid to how lexical categories shift into adjectival functions. In particular, numerals - traditionally used to mark quantity - appear to take on adjectival roles in Izón modification contexts. Such a shift invites reflection on how morphosyntactic and semantic factors license adjectivization in a language without a rich morphological paradigm of adjectives. The comparative angle with English is illuminating because English, while permitting functional shifts (e.g., noun → adjective via conversion), typically signals adjectivization via morphological or derivational means (e.g., beautiful from beauty). The Izon case may show how adjectivization proceeds more via syntactic positioning or semantic extension rather than overt derivational morphology.

1.2 Problem Statement and Research Gap

While adjectivization has been analysed in Indo-European languages and generative frameworks (see Stolterfoht, 2010), the phenomenon is comparatively under-explored in African languages - especially in Ijoid languages like Izón. The literature on Izón has focused heavily on phonology, tone, and basic morphology (Owoicho, 2004; Williamson, 1965) but not explicitly on category-shifting processes such as adjectivization.

Additionally, the role of numerals in adjectival modification is a less frequent focus in typology. While works on numerals in morphology note that lower numerals share features with adjectives (Oxford Research Encyclopedia, 2020), the pathway by which numerals or other non-adjectival classes evolve adjectival functions remains under-theorized. More broadly, recent work on word class flexibility (Li et al., 2020) underscores that many words can function across categories, but such studies rarely consider under-documented languages or focus specifically on numeral to adjective shifts.

In the Izón context, we thus lack detailed description of:what linguistic conditions license a numeral (or other class item) to function as an adjective;how this process interacts with Izón syntactic, morphological and semantic systems; how Izón pattern corresponds to or diverges from the adjectivization observed in English or typologically elsewhere.

1.3 Objectives and Research Questions

This study sets out to investigate the mechanisms and conditions under which words from non-adjectival lexical classes - especially numerals - function as or evolve into adjectives in Izón, with comparative reference to English. Specifically, the objectives are:

i. To identify and examine the linguistic environments (syntactic, morphological, semantic) in Izón that favour adjectivization of numerals or other classes.

ii.. To describe the semantic extension or modification processes by which numerals (and other classes) take on adjectival meaning in Izón.

iii. To compare these Izón patterns with analogous phenomena in English, illuminating areas of convergence and divergence.

iv. To assess the implications of these findings for theoretical models of lexical category flexibility and adjectivization.

Research questions guiding the study include:

i. What factors motivate or license adjectivization of numerals (and other non-adjectival lexical classes) in Izon?

ii. How do numerals (and other lexical classes) function adjectivally in Izón?

iii. To what extent do these Izón processes correspond to adjectivization processes in English?

iv. What do the Izón data contribute to theoretical accounts of lexical category fluidity and adjectivization?

1.4 Scope and Significance of the Study

This investigation is primarily descriptive and comparative, it is theoretically motivated. The empirical focus is on the Bassan dialect of Izón, using data collected from native speakers, published Izón grammatical descriptions, and

relevant texts. Selected examples from English are also examined to illustrate how numerals and adjectives interact.The significance of the study is twofold. First, for Izón linguistics, it contributes to the under-explored area of adjective-like modification and category-shift phenomena. Understanding how Izón handles adjectivization enhances the descriptive documentation of the language and its grammar. Second, theoretically, the study contributes to debates about how flexible lexical categories are in natural languages, how modification is encoded when overt adjectival morphology is minimal, and how numerals serve as a route into adjectivization. By linking Izón data with typological generalizations and English patterns, this research highlights adjectivization as a systematic and meaningful strategy for expressing modification and descriptive precision.

2.0 Literature Review

The study of numeral systems has long occupied a central space in linguistic typology because numerals often straddle the boundaries of lexical categories. Classic works such as Greenberg's (1978) foundational survey demonstrate that numerals tend to behave "adjectivally" cross-linguistically by modifying nouns, yet they also retain a nominal core in many languages. Subsequent typological research, however, particularly on African languages, complicates this generalization by showing that numerals frequently develop specialized morphosyntactic properties that align them neither fully with adjectives nor with nouns (Creissels, 2021, pp. 112–115). In this respect, the Izón numeral system offers a valuable perspective, especially given the language's characteristically small and often semantically fluid adjective class (Williamson, 1965, pp. 87–90).

i. Numerals in African and Niger-Congo Language Typology

Research in Niger-Congo languages repeatedly emphasizes that numeral categories often undergo grammaticalization pathways that yield adjectival or quasi-adjectival functions. Corbett's (2000, p.142-150) typology of number and agreement demonstrates that in many Niger-Congo languages, numerals participate in noun-phrase concord systems or exhibit positional flexibility like adjectives. Ameka (2006, p. 140) also argues that "quantifying expressions in West African languages frequently encode attributes, not merely quantities", thereby blurring the categorical boundary between numerals and adjectives.

Ijoid languages, of which Izón is the largest, constitute an important case. Studies by Jenewari (1989) and Williamson and Blench (2000) note that Ijoid languages have remarkably complex numeral formation patterns involving

compounding, reduplication, and classifier-like behaviour. These patterns directly impact their syntactic distribution: numerals often appear pre-nominally, a position normally reserved for descriptive modifiers. Consequently, Izón numerals can be understood as structurally conditioned adjectival units, shaped both by Niger-Congo typology and language-specific morphosyntactic evolution.

ii.Adjectivization as a Pathway of Grammaticalization

The theoretical foundation for treating numerals as adjectival elements draws heavily on work on grammaticalization and category fluidity. Heine (1997, p.113-118) outlines diachronic trajectories in which quantifiers develop into adjectives or determiners through recurrent syntactic re-analysis. This claim is further strengthened by Himmelmann's (2004, p.29) argument that lexical categories in many languages -particularly outside Indo-European – are inherently less rigid, allowing numerals to assume property-denoting roles.

Within African linguistics specifically, Heine and Kuteva (2007, p.205-210) describe how numerals often grammaticalize into classificatory or attributive elements, especially when compounded with nominal affixes, particles, or suffixes. These observations align closely with the Izón data, where the productive compounding element *-fene* creates extended cardinal forms (e.g., *oi-kenifene* 'eleven') that behave in syntax like attributive adjectives.

The adjectival behaviour of numerals therefore cannot be separated from the broader grammaticalization processes that restructure NP-internal relations. In Izón, as the data show, numerals consistently occupy the modifier position before the noun, lack internal inflection, and encode semantic attributes such as ordinality, distributiveness, and proportion – all canonical adjectival functions in Dixon's (2010, p. 92-98) typology of properties.

iii. Structure of the Noun Phrase and the Position of Numerals

An understanding of numeral adjectivization requires a general understanding of Izon NP structure. Following Payne's (1997) descriptive framework, NPs commonly host determiners, adjectives, numerals, and relative modifiers, though the order and availability of these elements differ cross-linguistically. In Izon, available grammatical descriptions demonstrate that the NP is head-final: modifiers typically precede the noun (Williamson, 1965; Jenewari, 1989). This makes the numeral slot syntactically salient and reinforces its adjectival reading.

Creissels (2021, p.141-145) further notes that languages with restricted adjective classes routinely recruit numerals, quantifiers, or verbal nouns to express adjectival meanings. This structural pressure is visible in Izon: numerals are not

merely quantifiers but also function as direct property-assigning modifiers, specifying quantity, sequence, distribution, iteration, and fractional composition.In this sense, according to Ameka (2006, p.143) numerals are "adjectival in function, though not necessarily in category membership". This distinction is crucial because Izón does not possess an extensive adjective class. Numerals thus supplement the descriptive resources of the language by providing precise, morphologically encoded relational properties.

iv. Morphological Complexity of Numerals and its Syntactic Implications

Many scholars note that numerals across languages often carry extra pieces of morphology that affect how they fit into sentences. In Izón, this is especially visible, as different numeral forms are created using clear and productive markers such as *–fene* (for compound numbers), *-karamu* (for ordinals), and *-kiri* (for multiplicatives), along with reduplication for distributives. These forms do more than simply produce new numbers; they also determine how the numerals function grammatically. For example, when Izón adds *-karamu* to create ordinals, the resulting forms behave almost exactly like adjectives: they classify nouns by order (first, second, third). Reduplicated distributives such as *mamumamu* 'two each', also behave like modifiers that apply a specific quality of distribution to a noun phrase. Even fractional forms (*diei*, *kibe*) act like adjectival properties because they describe part-whole relationships. This shows that the morphology of Izón numerals is not random. Each morphological element signals a specific type of meaning, and that meaning shapes how the numeral fits syntactically into a noun phrase. In other words, the shape of the numeral strongly influences its grammatical role, making numeral morphology a key gateway into understanding adjectival behaviour in Izón.

v. Numerals, Meaning, and Interpretation inside the Noun Phrase

Previous literature highlights that numerals often carry more meaning than just "how many". They frequently express ideas such as order, distribution, proportion, or exactness. These additional meanings place numerals close to adjectives because adjectives also express properties and qualities of nouns. The Izón numeral system shows this very clearly. Multiplicatives like *kenikiri* (once) or *makiri* (twice) describe how an action happens, not just how many items exist. Distributives like *kenikeni* (one each) and *mamumamu* (two each) describe how something is shared, which is an attribute applied to the noun. Ordinals (*beleu*, *mamukaramu*) specify sequence, which again functions as a descriptive property.

Fractionals (*diei*, *kibe*) describe proportions, another adjectival meaning. English numerals typically express only quantity and order, but Izón numerals carry multiple layers of meaning that often relate directly to the qualities of the noun. This shows that Izon numerals are not only counting devices; they also behave like adjectives by providing descriptive, classifying, and relational information.

3.0 Theoretical Framework: Systemic Functional Grammar and Linguistic Typology

The analytical framework adopted in this study draws on two complementary perspectives: Systemic Functional Grammar (SFG) framework, complemented by insights from Linguistic Typology. The combination is apt because adjectivization of numerals involves both functional meaning-making and cross-linguistic structural variation, which SFG and Typology jointly illuminate. Systemic Functional Grammar (SFG), developed by Halliday (1985), views grammar as a network of systems that express three broad metafunctions - ideational, interpersonal, and textual. Within this framework, numerals are treated not merely as quantifiers but as grammatical resources that realize experiential meaning through modification of nominal groups. Thus, adjectivization of numerals in Izón can be analyzed in terms of their syntactic roles, semantic contributions, and contextual motivations in clause structures.

Linguistic Typology, on the other hand, provides a cross-linguistic perspective by comparing how different languages (including Izón and related Niger-Congo languages) express adjectival functions. Typology identifies universal and language-specific patterns in word classes - especially where boundaries between numerals, adjectives, and determiners blur. It helps reveal whether adjectivized numerals in Izón follow universal patterns or exhibit morpho-syntactic strategies unique to it. By integrating SFG and Typology: SFG explains how adjectivization operates functionally within Izón clause system; Typology explains why these forms appear as they do across languages of similar typological families. This hybrid theoretical approach provides a balanced account of both function and cross-linguistic structure, making it ideal for a descriptive study of adjectivization in an indigenous language such as Izón.

4.0 Research Methodology

The study adopts a descriptive qualitative design with morpho-syntactic analysis. This design is most suitable because the study aims to describe how numerals function adjectivally in Izón, exploring both form and function in natural language

contexts rather than numerical computation or measurement. The population will include native speakers of Izón, especially those proficient in both the traditional and modern forms of the language (e.g., elders, teachers, broadcasters, from Izón backgrounds).Data were obtained through structured oral elicitation using guided wordlists and sentence frames to test adjectival use of numerals (e.g., "two boys," "second day," etc.), and existing grammatical texts, including Kwokwo (in press).

The analysis will be qualitative and comparative, involving: Morphological analysis, i.e., identifying the processes (affixation, reduplication, tone change, etc.) through which numerals are adjectivized. Syntactic analysis: examining the syntactic positions of adjectivized numerals (pre-nominal or post-nominal, head-modifier relations), semantic interpretation in a comparative manner. Tree diagrams and phrase markrs are employed to illustrate structural relationships. Findings will be described using Systemic Functional Grammar (SFG) or Lexical-Functional Grammar (LFG) frameworks (depending on which you adopt) to show how numerals realize adjectival functions within clause structure. Informed consent will be obtained from all participants. Participants' names will are kept anonymous as well. Recordings will be used solely for academic purposes.

5.0 Data Presentation and Analysis

The analysis draws on elicited Izón numeral data from native speakers across the Bassan dialect. The dataset spans cardinal, ordinal, multiplicative, fractional, distributive, and collective numerals, carefully normalized for clarity (italicized and hyphenated, e.g., *oi-kenifene*). English equivalents (in Roman numerals) accompany each example for comparative clarity. To illustrate adjectival function within the nominal group, linear phrase markers are used: [NP [NumP numeral] [N noun]]. Below is a dataset on Numeral Systems and Adjectivization Patterns in Izón Language

Table 1: Cardinal Numerals (as spoken in Bassan Izón)

S/N	English Numerals	Izón Numerals		S/N	English Numerals	Izón Numerals
1	One	Keni		17	Seventeen	Oi-sonoma-fene
2	Two	Mamu		18	Eighteen	Oi-ninghina-fene
3	Three	Taru		19	Nineteen	Oi-isen-fene
4	Four	Nein		20	Twenty	Sii
5	Five	Sonron		21	Twenty-one	Sii-keni-fene
6	Six	Sondie		22	Thirty	Sii-oi
7	Seven	Sonoma		23	Forty	Ma-sii
8	Eight	Ninghina		24	Fifty	Ma-sii-oi
9	Nine	Ise(n)		25	Sixty	Tara-sii
10	Ten	Oi		26	Seventy	Tara-sii-oi
11	Eleven	Oi-keni-fene		27	Eighty	Neina sii
12	Twelve	Oi-mamu-fene		28	Ninety	Neina sii oi fene
13	Thirteen	Oi-taro-fene		29	Hundred	Soron-asii or onde
14	Fourteen	Oi-nein-fene		30	Two hundred	Ọndọ
15	Fifteen	Oi-sonra-fene		31	Four hundred	Ma-onde
16	Sixteen	Oi-sondie-fene		32	Thousand	Ma-onde mo kibe

Cardinal numerals in Izón employ basic roots for 1–10: kenị (one), mamu (two), taru (three), nein (four), sonron (five), sundio (six), sonoma (seven), ninghina (eight), isen (nine), and oi (ten). Numbers beyond ten are formed via additive compounding, using the suffix *-fene*: oi-keni-fene (ten plus one "eleven"), oi-mamu-fene (ten plus two "twelve"), oi-taru-fene (ten plus three "thirteen"). The suffix -fene signals additive composition and functions as a derivational adjectivizer, allowing numerals to integrate seamlessly with nouns:

$[_{NP}\ [_{NumP}$ oi-keni-fene$]\ [_{N}$ owei-owou$]] \rightarrow\ [_{NP}\ [_{NumP}$ eleven$]\ [_{N}$ boys$]]$

Unlike English, where "eleven" is lexically opaque, Izón numerals maintain transparent morphological compositionality (Comrie, 1989, p. 47; Heine, 1997, p. 112).

1b) **Measure *or Currency Quantificational Expressions***

The counting of money in Izón language exhibits a highly systematic currency-specific morphophonological alternation. In most lower numerals, cardinal forms undergo a restricted vowel modification whereby an -a- segment is inserted or

harmonized when the numeral precedes the currency noun naira. This producesformssuchas:

ma naira
tara naira
neia naira
soran naira
isena naira
oia naira

This pattern is not general phonology but a lexically restricted morphosyntactic rule tied exclusively to monetary expression, indicating that the numeral adopts a specialized "currency agreement" form. In terms of syntactic structure, "counting money" system is best analyzed as a quantificational construction in which a cardinal numeral modifies a currency noun phrase to express precise monetary value. Structurally, it typically follows a tight syntactic unit:

[NumP +NP (currency)

Example:

Keni naira	-	one naira
Tara naira	-	three naira
Neia naira	-	four naira
Sondia naira	-	six naira

However, at higher numeral ranges (100 and above), the system shifts structurally. The currency noun "naira" is preposed, followed by the numeral, yielding an inverted order:

naira onde → 'one hundred naira'
naira enderi → 'one trillion naira'

This inversion reflects a quantificational restructuring conditioned by numerical magnitude, where larger values trigger a syntactic reanalysis of the numeral–currency relation.In sum, the Izón monetary system displays a dual mechanism:

i) a currency-bound morphosyntactic alternation (vowel modification in low numerals), and
ii) a macro-syntactic inversion strategy (noun–numeral ordering in high numerals).

This aligns with Kwokwo's (in press) observation, that the numeral system in Izón shows domain-specific morphological adjustment when interfacing with currency expressions, suggesting that monetary quantification is grammatically set apart from general numeral formation. In conclusion, monetary counting in Izón is not merely numerical expression but a specialized grammatical subsystem of quantification with its own internal rules.

2) *Multiplicative and Fractional Numerals*

Once – kenikiri
Twice – makiri
Thrice – tarakiri
Quadruple – neinankiri
Half – diei / kibe
One and a half – kenimo kibe mọ

Multiplicative forms in Izón are derived via the suffix *-kiri*, encoding repetition or multiplication: kenikiri (once), makiri (twice), tarakiri (thrice), neinakiri (quadruple). Fractional numerals are formed either as lexical roots (diei, kibe for "half") or as periphrastic constructions (kenimo kibe mo → "one and a half").
$[_{NP}\ [_{N}$ Irin$]\ [_{NumP}$ tarakiri$]]$ → "three times a day".

The multiplicative suffix *-kiri* enables numerals to function as modifiers of event frequency, analogous to English adverbs but morphologically embedded in Izón (Crystal, 2010, p. 203; Greenberg, 1978, p. 65).

3). Distributive *Numerals*

One each – kenikeni
Two each – mamumamu
Three each – tarutaru
One by one – kenibokenibo
Two by two – maoru-maoru (non-human)/ makeme-makeme (human reference)
Three by three – taraoru-taraoru (non-human) / tarakeme-tarakeme (human reference)

Distributive numerals indicate allocation or distribution, often using morphological eduplication or phrase markers: kenikeni (one each), mamumamu (two each), tarutaru (three each). Sequential or grouped distribution appears as kenibokenibo (one by one), maoru / makeme-makeme (two by two, human), tara oru / tarakeme-tarakeme (three by three, non-human /human). [NP [NumPmamumamu] [N fruits]] → "two each fruit". The Izon distributive system distinguishes human vs. non-human referents, a semantic feature rarely encoded morphologically in English (Dixon, 2010, p. 78).

4).Ordinal Numerals

First	–	beleu
Second	–	mamukaramu
Third	–	tarukaramu
Fourth	–	neinkaramu
Fifth	–	sonronkaramu
Sixth	–	sondiekaramu
Seventh	–	sonomakaramu
Eighth	–	ninghinakaramu
Ninth	–	isenkaramu
Tenth	–	oikaramu
Eleventh	–	oi-keni-fene-karamu

Ordinals in Izón are constructed with the suffix -karamu: beleu (first),mamukaramu (second), tarukaramu (third), neinkaramu (fourth), sonronkaramu (fifth). For numbers above ten, the additive + ordinal pattern combines -fene with -karamu: e.g.

[NP [NumP mamukaramu] [N erein]] → "second day";

oikenifene-karamu (eleventh)

[NP [NumP oikenifene-karamu] [N tọbọụ]] → "eleventh child".

English ordinals are lexically distinct, whereas Izón builds them systematically from cardinal roots (Comrie, 1989, p. 54).

5.1. Comparative Analysis with English

Izón numerals are morphologically productive, syntactically integrated, and semantically subtle, contrasting with English's lexically fixed system (Crystal, 2010, p. 204; Dixon, 2010, p. 82).

5.2. Morphosyntactic Implications

Derivational morphology (*-fene*, *-kiri*, *-karamu*) enables Izón to adjectivize numerals in the modification of nouns. Reduplication and phrase alternation mark distributive semantics and animacy distinctions.[NP [NumP oi-tara-fene] [N obori]] → "thirteen goats".
Izón numerals encode quantity, order, multiplicity, and distribution with adjectival force embedded in morphology (Comrie, 1989, p. 47; Heine, 1997, p. 112).

6.0 Findings and Discussion

The findings of this study reveal that numerals in Izón language extend far beyond their traditional role as mere indicators of quantity. Rather than functioning solely as counting devices, Izón numerals exhibit extensive adjectival properties morphologically, syntactically, and semantically. The analysis, covering cardinal, ordinal, multiplicative, distributive, and fractional reveals three central findings.

First, Izón numerals function primarily as adjectival modifiers within the noun phrase (NP), occupying the canonical pre-nominal slot typically reserved for property-ascribing elements.

Second, the morphological behaviour of numerals, especially through compounding, reduplication, and affix-like extensions (e.g., *-fene*, *-karamu*, *-kiri*), demonstrates a system that has undergone functional expansion into adjectival domain.

Third, syntactic environments show that Izón numerals do more than quantify: they encode structural relations such as order, distribution, partitioning, and event-structure. In effect, the numeral system of Izón constitutes a major descriptive subsystem within the grammar of the language

6.1. Numerals as Primary Modifiers within the Noun Phrase

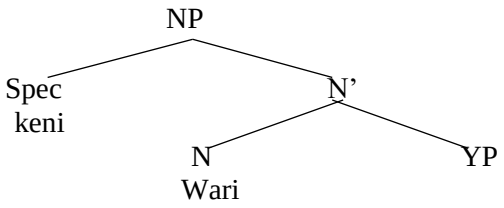
The most obvious finding is that Izon numerals regularly appear in the specifier position of the NP, preceding nouns exactly where adjectives would occur in languages with a dedicated adjective class. The structures below show that

numerals are tightly integrated into the NP architecture as the first modifying element.

1) Kene wari "One house"
2) Ma keme "Two people"
3) Tarukaramu obori "Third goat"

In phrase-structural terms, the NP would be portrayed as below:

4)



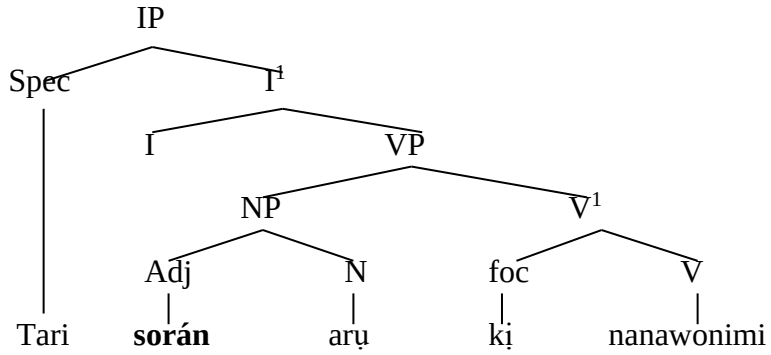
In this diagram, the Specifier of N is the numeral adjective, 'keni' which modifies the noun 'wari'.This structural positioning agrees with cross-linguistic findings that, in languages with impoverished adjectives status, numerals assume the role of attributive descriptors (cf Ameka, 2006; Dixon 2010). Another important characteristic associated with adjectives cross-linguistically is that of having both attributive and predicative distribution. The findings also reveal that Izón Numerals are used not only as attributive adjectives but also as predicate adjectives. This is evidence that numerals perform proper adjectival syntactic function. This dual syntactic position of numerals is illustrated in the following sentences.

5(i) Tiari **során** arụ kị nanawonimi. =Tari has five boats (attributive)
5(ii) Tari nanawonimi arụ mọ **sorón.** =The boats which Tari has are five. (predicate)
5(iii) Woni **neina** ofoni fẹẹmi.. = We bought four fowls. (attributive)
5(iv) Wo fẹẹ ofonimọ **nein**. = We fowls we bought are four. (predicate)

Examples such as (5ii and iv) above demonstrate that numerals may occur in predicate position and function as clause-level descriptors. Kwokwo (in press) notes thatsuch constructions reveal the expansion of numeral semantics from quantification into descriptive predication. This finding is significant because predicate usage is one of the defining syntactic properties of adjectival categories

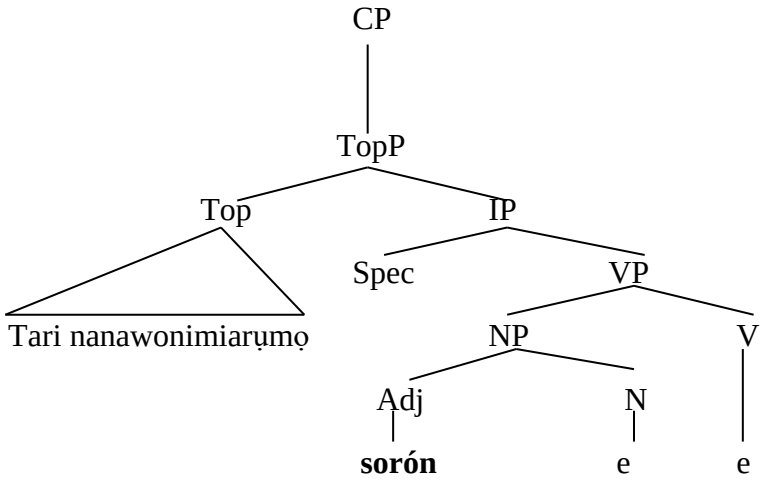
in many languages. The following P-marker, captures the structure with the numeral in predicative distribution.

6.



However, when the numeral adjective is predicative, as in [ii] and [iv] above, the sentence undergoes topicalization: the subject, verb and the object of the original sentence become a verbless grammatically well-formed clause. At the same time, the entire derived sentence too is verbless.

7)



6.2. Morphological Evidence for Adjectivization

Izón numeral morphology exhibits strong adjectival tendencies. The productive –*fene*extension used in compound numerals (*oi-keni-fene* (eleven) to *oi-isen-fene* (nineteen), and*si-kene-fene* forms for (twenties) mirrors derivational strategies characteristic of adjectival expansion in many Niger-Congo languages as Creissels (2021) observes. The suffix *-karamu* in ordinal numerals such as "*mamukaramu"*, "*tarukaramu", etc,* acts like a property-marker, turning a numeral into an order-describing item. Functionally, this is parallel to English *-th* in "fourth", "fifth", etc.

Multiplicative numerals (*kenikiri, makiri, tarakiri*) use the suffix *-kiri*, which behaves like a derivational morpheme marking event frequency. Fractional forms such as (*diei, kibe, kenimo kibe mo,*) *operate* as scalar descriptors. Distributive forms (*kenikeni, mamumamu, tarutaru*) arise from full reduplication, a morphological process widely associated with adjectival intensification and semantic distribution in Niger-Congo (Inkelas& Downing, 2015). These morphological patterns collectively demonstrate that the numeral system in Izón is not merely enumerative; it is derivationally equipped to express adjectival contrasts such as quality, rank, iteration, distribution, and proportionality.

6.3. Semantic Expansion Beyond Counting

A major finding is that Izón numerals encode subtler semantic distinctions than cardinal quantity alone. The system distributes numeral roots across multiple grammatical domains including:

i. Ordinality (order/rank): *beleu, mamu-karamu, oi-karamu*
ii. Distribution (portion-by-portion events): *kenikeni, mamu-mamu, tarutaru-tarutaru*
iii. Frequency (event iteration): *kenikiri, makiri, tarakiri*
iv. Fractionality (scalar proportion): *diei, kibe*

Such diversification demonstrates a semantic maturation analogous to grammaticalization pathways described by Heine and Kuteva (2007), where numerals extend into functions of relational measurement.

6.4. Syntax: Numerals as Adjectival Heads of the Modifier

The findings show that Izón noun phrases organize their internal structure around the numeral as the primary modifying head. The numeral determines the interpretive frame for all subsequent nominal material. For example:

5) **Mamu-karamu**warinanabo
Second house owner
"the owner of the second house"

6) **Soron**owou zi araumo
Five children birth woman-who
"the woman who gave birth to five children"

The numeral is the first interpretive filter; other modifiers, (e.g., demonstratives, relative clauses) follow. This syntactic prominence confirms that numerals in Izón have assumed the functional load typically associated with adjectives in other languages.

6.5. Evidence from Variation in Human versus Non-Human Grouping

Distributive numerals reveal a second syntactic pattern: animacy-based structural alternation. Human referential distributives such as *tarakeme-tarakeme* differ from non-human forms *taraoru-taraoru.* This split tracks a broader Ijoid typology where human reference triggers dedicated morphology as Jenewari (1989) notes. Thus, it could be concluded that Izón numerals are sensitive to NP semantic categories, a property ascribable to adjectives: they regularly index animacy, humanness, or noun class in many Niger-Congo systems.

6.6. Implications for Ijoid Typology

The findings contribute three typological insights including:

1) Izón does not have a large open adjective class, a feature prevalent in many Ijoid languages.
2) The paucity of adjectival class in its syntactic structure is bridged by numerals, as they assume the adjectival functions.
3) Izón portrays advanced adjectivization, a level far more elaborate than that observed by earlier grammars such as Williamson (1995) of the Kolokuma dialect.

This positions Izón at an intriguing typological midpoint. It retains Niger-Congo morphosyntactic features but also innovates structurally by expanding numeral functions.

7.0. Conclusion

The study demonstrates that the Izón numeral system is a grammatical engine of adjectival meaning, not a peripheral counting device. Numerals in Izon systematically occupy adjectival syntactic positions, participate in derivational morphology typical of property markers, encode semantic contrasts, including order, distribution, iteration, and proportion, that parallel adjectives cross-linguistically. Three concluding claims would be:

i. That Izón numerals are structurally adjectival. They are hosted in the NP's modifier slot where they govern interpretive relations.
ii. That Izón numerals are morphologically productive. This is seen in processes such as reduplication, suffixation, and compounding give numerals adjectival versatility.
iii. That Izón numerals represent a grammaticalized modifier system. They fill the functional space typically occupied by adjectives, a trait akin to languages with impoverished adjectival class.

In conclusion, the adjectivization of Izón numerals shows a language that encodes precision, hierarchy, and relational structure through a finely articulated modifier system. This contributes not only to the documentation of the Ijoid family but also to broader theoretical discussions on the nature of categories, the plasticity of numeral system, and the evolving syntax of nominal modification in African languages.

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