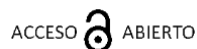


## Number Marking in Nadëb

*Marcación de número en Nadëb*

Patience Epps<sup>1</sup>  & Karolin Obert<sup>2</sup>   
University of Texas at Austin



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### ABSTRACT

One of the most robust sources of fresh insights into typological categories comes from our growing knowledge of the indigenous languages of South America, a region that until recently has been significantly under-represented in typological studies. This paper offers a case in point through the investigation of number in Nadëb, a member of the small Naduhup family of the northwest Amazon, which reveals several typologically intriguing features. One of these is Nadëb's emphasis on marking number on the verb as opposed to the noun, even while any registering of event number appears to be secondary to that of participant number. Nadëb also relies heavily on suppletive or semi-suppletive stem pairs in encoding number distinctions in both nouns and verbs. Finally, Nadëb's resources for expressing number are quite different from those seen in its three sister languages, in which number is primarily a feature of the noun phrase, suggesting a significant reorganization of number-marking within the language family. The Nadëb case underscores the considerable diversity evident in number-marking strategies typologically, and how this diversity may emerge even within a single language family of limited time-depth.

**Keywords:** number; plurality; Nadëb; Amazonia; typology.

### RESUMEN

Una de las fuentes más sólidas de nuevo conocimiento sobre las categorías tipológicas proviene de nuestro creciente entendimiento de las lenguas indígenas de América del Sur, una región que hasta hace poco ha estado significativamente subrepresentada en los estudios tipológicos. Este artículo ofrece un ejemplo a través de la investigación del número en nadëb, un miembro de la pequeña familia Naduhup del noroeste Amazónico, que revela varias características tipológicamente intrigantes. Una de ellas es el énfasis en marcar el número en el verbo en oposición al sustantivo, incluso cuando cualquier registro del número del evento parece ser secundario al del número del participante. El nadëb también se basa en gran medida en pares de raíces supletivas o semi-supletivas para codificar distinciones numéricas tanto en sustantivos como en verbos. Finalmente, los recursos del nadëb para expresar número son bastante diferentes de los que se ven en sus tres idiomas hermanos, en los cuales el número es principalmente una característica del sintagma nominal, lo que sugiere una reorganización significativa de la marcación de número dentro de la familia lingüística. El caso del nadëb subraya la considerable diversidad tipológica evidente en las estrategias de marcación de número, y cómo esta

<sup>1</sup> PhD University of Virginia. Professor of Linguistics University of Austin Texas (USA), E-mail: [patiecepps@austin.utexas.edu](mailto:patiecepps@austin.utexas.edu)

<sup>2</sup> PhD Universidade de São Paulo. Post-doctoral scholar University of Austin Texas (USA). E-mail: [karolinobert@utexas.edu](mailto:karolinobert@utexas.edu)

diversidad puede surgir incluso dentro de una sola familia lingüística que tiene una duración temporal limitada.

**Palabras clave:** número, pluralidad, Nadëb, Amazonia, tipología.

## 1. Introduction

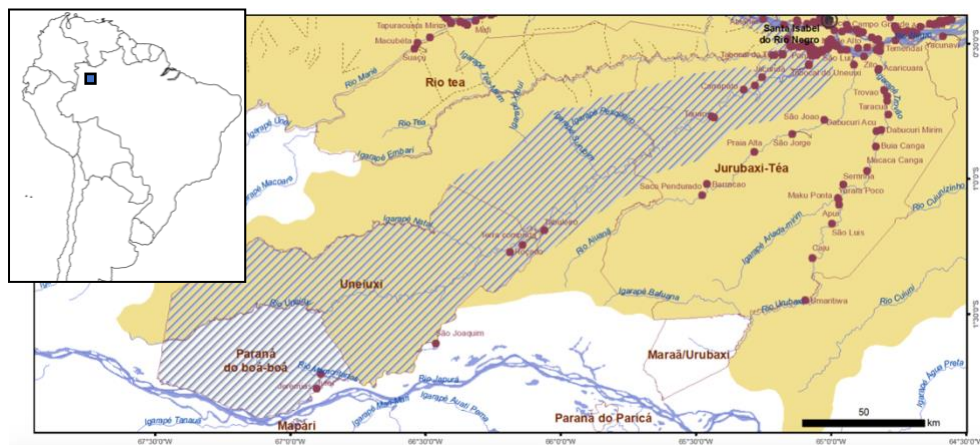
Number is a familiar category among the world's languages, widely understood as a near-ubiquitous feature of the noun phrase. However, number-marking resources are hardly confined to nouns, being frequently distributed across other loci in the clause; and in a relatively small proportion of the world's languages, number-marking is in fact associated much more robustly with verbs than with nouns (Corbett 2000, Haspelmath 2013). In its verbal realizations, a number distinction may reflect the number of participants involved in the action, or the number of times an event is realized (whether iteratively in time, or distributed in space) – a set of phenomena often referred to as pluractionality (Newman 2012, Mattiola 2019). A relative emphasis on verbal number is evident in North America (Mithun 1999) and in some languages of South America, particularly of the Jê family (Urban 1985, Salanova 2007; see also Crevels 2006 for Itonama, an isolate). However, our typological understanding of this phenomenon is still limited, and we know relatively little about how and why languages may develop a preference for verbal vs. nominal number marking, or how these preferences are distributed across regions and language families.

One of the most robust sources of fresh insights into number as a typological category comes from our growing knowledge of the indigenous languages of South America, a region that until recently has been significantly under-represented in typological studies. This paper offers a case in point through the investigation of Nadëb, a member of the small Naduhup family, in which the encoding of number exhibits several typologically intriguing features. One of these is Nadëb's emphasis on verbal number as opposed to nominal number, even while any marked indication of event number appears to be secondary to that of participant number. Nadëb also relies heavily on suppletive or semi-suppletive stem pairs in encoding number distinctions in both nouns and verbs. Finally, Nadëb's resources for expressing number are quite different from those seen in its three sister languages, in which number is primarily a feature of the noun phrase, suggesting a significant reorganization of number-marking within the language family. The Nadëb case underscores the considerable diversity evident in number-marking strategies typologically, and how this diversity may emerge even within a single language family of limited time-depth.

In what follows, we begin by briefly introducing Nadëb and its speakers (Section 2). We then turn to Nadëb's resources for expressing nominal number (Section 3), which consist of a small set of semi-suppletive stem pairs, as well as a number distinction in pronouns and in a few demonstratives and modifiers. Section 4 considers verbal number, which is also marked primarily via semi-suppletive stem pairs, together with other morphological resources relating to quantification. Section 5 concludes.

## 2. Nadëb and its speakers

Nadëb belongs to the small Naduhup family of the northwest Amazon (formerly termed ‘Makú’; see Epps & Bolaños 2017), which also includes Hup, Yuhup, and Dâw. All four languages are spoken by peoples who traditionally inhabit the interfluvial zones of the middle and upper Rio Negro region; Nadëb itself is spoken between the middle Rio Negro and the Japurá River (Map 1).



Map 1. Nadëb territory

Most of Nadëb’s approximately 600 speakers currently live along the Uneixi River and within the Paranã Boá-Boá region to the south. This region corresponds to one principal dialect area. A stronger dialectical division divides these speakers from those Nadëb who are former inhabitants of the Téa River to the west; most of these Nadëb have moved to the Rio Negro and have shifted to Portuguese. Nadëb maintains robust vitality in the communities of Roçado and São Joaquim, but transmission to children is faltering elsewhere.

Nadëb is the most divergent language of the Naduhup family. Our current understanding of innovations within the family indicates that Nadëb occupies a distinct primary branch, with Dâw-Hup-Yuhup occupying the other (and Hup and Yuhup forming a close subgroup; see Epps & Bolaños 2017, Simmons 2021).

Nadëb is also typologically divergent from its sisters, undoubtedly due in part to different contact histories: in particular, Nadëb with regional Arawakan languages (Epps & Obert forthcoming), and Hup and Yuhup with languages of the Eastern Tukanoan family (Epps 2007). In contrast to its sisters, Nadëb displays OAV basic constituent order (a typologically unusual pattern; Dryer 2013), a preference for prefixing, head-marking, and ergative-absolutive alignment.<sup>3</sup> Earlier work on the

<sup>3</sup> The examples in this paper are represented in the Nadëb community orthography. The IPA and orthographic equivalents of Nadëb’s 17 consonants and 10 vowels (of which most have nasalized and/or long variants) are as follows. Note that Nadëb also has a laryngeal feature which associates with long vowels, represented orthographically as C’VV.

IPA	p	b	t	d	ʃ	k	g	ʔ	f	h	m	n	ɲ	ŋ	w	j	r
Orth (if diff.)					ts			ʔ / --	s				nh	ng			r
IPA	i	ĩ	u	e	ɛ	ə	o	ɔ	a	ʌ							
Orth (if diff.)		y			é	ë		ó		ä							

language is limited primarily to Weir’s (1984) MA thesis. Our own research, carried out in collaboration with the community of Roçado, was initiated in 2018 and has resulted in a small corpus.<sup>4</sup> Our investigation of number in Nadëb is ongoing, and our observations here raise many questions that we hope to explore more deeply in future research.

### 3. Number in the noun phrase

Nominal number is a marginal category in Nadëb. As we explore below, its principal realization on nouns is restricted to a small set of semi-suppletive singular-plural stem pairs; other resources include a number distinction in pronouns and a few other constituents of the noun phrase.

#### 3.1. Number marking on nouns

Nouns showing a number distinction in Nadëb are limited to a very restricted set of etyma (Table 1);<sup>5</sup> other nouns in Nadëb are unspecified for number. Within this small set, number is encoded via semi-suppletive singular/plural variants, distinguished by vowel length, vocalic laryngealization, and/or voicing of the final consonant. However, the distribution of these features across the set is not predictable, and in one case (‘day’) the pairs are fully suppletive. Typologically, the strategy of marking nominal number exclusively via changes within the noun stem is relatively unusual (Dryer 2013).

Interestingly, the set of nouns distinguished for number are semantically somewhat diverse. Four relate to relatively generic terms for humans (‘man’, ‘woman’, ‘child’, ‘offspring’), while three refer to inanimate entities (‘tree’, ‘canoe’, ‘day’) – partially violating the typological generalization that number marking tends to privilege referents higher on the animacy scale (Corbett 2000).

Noun	SG	PL
man/men	<i>ajʼyy</i>	<i>ajyy</i>
woman/women	<i>ŷnb</i>	<i>ŷñnb</i>
offspring	<i>tʼaab</i>	<i>taab</i>
child/children	<i>karapee</i>	<i>karapé</i>
tree/trees	<i>baab</i>	<i>bʼaab</i>
canoe/canoes	<i>bʼooh</i>	<i>hooh</i>
day/days	<i>adëb</i>	<i>ãb</i>

Table 1. Some suppletive forms of nouns

Nadëb’s sister languages are quite distinct in their approach to nominal number. All mark plurality morphologically via a cognate element, most consistently on human nouns: =*dʼəb* in Hup (Epps 2008:191ff), *dəb* (Silva and Silva 2012) or *dëb* (Ospina 2002) in Yuhup, and *dəb* in Dâw. This etymon is likely an innovation in this branch of the family; while no source has been identified, its restricted distribution aligns with Corbett’s (2000:267) observation that number-marking strategies tend to develop at the top of the animacy hierarchy and generalize over time.

<sup>4</sup> Data that appear here without citations come directly from our fieldnotes; see also the Nadëb Collection in the Archive for Indigenous Languages of Latin America (Epps, Obert & Pissolati 2018+). The examples in this chapter are drawn from both naturally occurring speech and elicitation.

<sup>5</sup> Table 1 provides an exhaustive list of number-alternating nouns in Nadëb, according to our current knowledge. While more exploration is needed, there is no doubt that the inventory is very restricted in Nadëb.

The history of Nadëb’s use of semi-suppletive variants to indicate nominal number is unclear; the fact that laryngealization – the principal feature that distinguishes the singular and plural variants – appears to be a phonological innovation in Nadëb (see Simmons 2021) suggests that the strategy may have developed independently in this language.<sup>6</sup> At any rate, no comparable strategy has been observed in any of its sisters, so it cannot be reconstructed to Proto-Naduhup.

Further resources relating to nominal number in Naduhup languages include markers of associative plural (Hup and Yuhup), collective (Yuhup and Dâw), and singulative (Hup and Yuhup; used mainly to individuate insects and related creatures that occur in swarms); see Epps (2008), Ospina (2002), Silva and Silva (2012), and Martins (2004). No comparable resources are attested in Nadëb, and related notions must be expressed periphrastically.

### 3.2. Pronominal elements

While all four Naduhup languages distinguish singular and plural pronouns, Nadëb is the only language of the family to have both free and bound pronominal forms, and to have an inclusive-exclusive distinction in the first person plural (Table 2). Only the singular pronominal forms in Nadëb are evidently cognate with the corresponding pronouns in Hup, Yuhup, and Dâw.

Person/Number	S	A	O	Possessor/Oblique
1SG	<i>ỹ</i>	<i>ỹ</i>	<i>ỹ</i>	<i>(baa) ỹỹ</i> (follows NP or PP)
2SG	<i>ôm</i>	<i>ma-</i>	<i>ôm</i>	<i>a(-)</i>
3SG	-	<i>ta-</i>	<i>ta</i>	<i>ta(-)</i>
1PL exclusive	<i>ãã(b)</i>	<i>ãã(b)</i>	<i>ãã(b)</i>	<i>ãã(b)</i>
1PL inclusive	<i>ër</i>	<i>ër</i>	<i>ër</i>	<i>ër</i>
2PL	<i>bëh</i>	<i>bëh</i>	<i>bëh</i>	<i>bëh</i>
3PL	-	<i>ra-</i>	<i>sa</i>	<i>sa(-)</i>
Indefinite	<i>ji</i>	<i>ji</i>	<i>ji</i>	<i>ji</i>

Table 2. Pronominal forms

For core arguments, pronominal A arguments expressing second person singular and third person singular and plural are indicated via verbal prefixes (examples 1-2);<sup>7</sup> all other arguments and person/number values are represented via free pronouns. Third person pronominal S is unmarked (3) (or may be indicated via a demonstrative).<sup>8</sup> While only one person prefix may occur on a given verb, these may combine with other prefixes, as seen in the examples below.

<sup>6</sup> We also note that the term for ‘child’ is probably a loan from a Tupi-Guarani language, which likewise supports a relatively recent development of the singular/plural distinction in at least this case.

<sup>7</sup> These prefixed A forms also occur in constructions involving applicative morphology, as in example (13). The pronominal prefixes occasionally appear with the vowel *e* rather than *a* (e.g. *te-*, also in example (13) below). These vowel variants occur on verb stems in other morphological contexts as well; they may be best understood as morphologically separable from the pronominal element, but they have no known semantic contribution.

<sup>8</sup> Our corpus contains a few examples in which the proform *ra-* occurs in what appears to be an intransitive construction, together with a co-referential noun phrase, despite the fact that both of these combinations are normally ungrammatical. An explanation for these exceptional cases awaits further research.

- (1) *nyy hēnb ma-ba-hôm?*  
INT.PRO DIR 2SG.A-ADJC-go  
'Where are you going?'
- (2) *karepé ra-ma-ŷŷb*  
children 3PL-CAUS-sleep.PL  
'They make the children sleep.'
- (3) *a-ŷŷb*  
DFT.A-sleep.PL  
'They are sleeping.'

The bound pronominal forms do not normally occur with co-referential noun phrases (example 4), and thus should probably be understood as proforms rather than agreement markers.

- (4) *ti tawarēē ba-sēēk-is, warēē, warēē*  
DEM.MED fly ADJC-go.up-only IDEO:fly  
IDEO:fly  
'Then only the fly went upwards, *warēē warēē*.'

Examples (5-7) illustrate free pronouns representing first person singular S, A, O, and first person plural S, respectively.

- (5) *ŷ a-hyng*  
1SG DFT.A-go.downriver.SG  
'I go downriver.'
- (6) *tēeng ŷ a-wēb*  
tapir 1SG DFT.A-eat.meat  
'I eat tapir.'
- (7) *ŷ P'éé beg'āās*  
1SG (name) see  
'P'éé sees me.'
- (8) *ēr a-hyk*  
1PL.INCL DFT.A-go.downriver.PL  
'We are going downriver.'

The indefinite pronoun *ji* is unspecified for number, but often has first person plural reference (example 9).

- (9) *“kanahën do-s ji a-wa ji waa”*  
*näng ta-kyyh,*  
a.little NMLZ-only INDF DFT.A-eat INDF food be  
3SG-speech  
“One/we eat only a little bit of one’s/our food” he said.’

As seen in Table 2, pronominal possessors and oblique arguments are encoded via a partially distinct set of forms, which differ from the corresponding forms for core arguments in notably diverse ways: The first person singular possessor/oblique pronoun occurs with a long vowel, alongside several other behavioral differences (see below). The second and third person singular and the third person plural forms may appear as prefixes (thus resembling A arguments; examples 10-12), although the rules governing their occurrence as free or bound are currently unclear. Of these, the second person form is distinct from any of the other second person pronominal forms (examples 11-12), while the third person plural resembles the corresponding O form (example 13).

(10) *tiikä*, *ãã* *jëk* *ta-dabeeb*  
and.then sleep lie.in.hammock 3SG-together.with  
'And then she lay down to sleep in the hammock with him.'

(11) *Adelino karẽn ta-be-r'oot a-sii*  
(name) want 3SG-ADJC-speak2SG.NC-with  
'Adelino wants to talk with you.'

(12) *a-taab*  
2SG-offspring.PL  
'your children'

(13) *te-jäng jem ta-ha-wüt sa-mahang*  
3SG-dream ? 3SG-APPL-walk 3PL.NC-among  
'He dreamt of walking among them.'

The behavior of the first person singular possessive/oblique pronoun is notably distinct. Unlike all other pronouns in this set, including the first person plural, this pronoun follows the possessed noun or adposition rather than preceding it (examples 14-16).

Moreover, when a possessed entity is notionally plural, a first person singular possessor is expressed via the morpheme *haa*, which may occur with or without the first person pronoun *ỹỹ* (examples 17-18).<sup>9</sup> This plural possessum element *haa* occurs both where the noun has distinct singular/plural variants (compare 15 and 17), and where it does not (16 and 18; where the immediate possessum is a possessive classifier). To our knowledge, *haa* does not occur with any other possessor aside from the first person singular, or in any other context in the language; nor do Nadëb's sister languages exhibit any parallels to this form or to the unusual behavior of the first person singular.

(14) *Adelino karẽn ta-be-r'oot sii ỹỹ*  
(name) want 3SG-ADJC-speakwith 1SG.NC  
'Adelino wants to talk with me.'

<sup>9</sup> While *haa* is normally required in this context, certain exceptions are encountered in our data, such as in example (20) below. The absence of *haa* in this case may relate to the presence of the possessive classifier ('pet') and the order of constituents in the noun phrase, but this question requires further investigation.

- (15) *t'aab* **ỹỹ**  
offspring.SG 1SG.NC  
'my child'
- (16) *masãb* **ỹỹ** *awaar*  
CL:pet 1SG.NC dog  
'my (pet) dog'
- (17) *taab* **haa** **ỹỹ**  
offspring.PL 1SG.POSS.PL 1SG.NC  
'my children'
- (18) *masãb* **haa** *awaar*  
CL:pet 1SG.POSS.PL dog  
'my (pet) dogs'

### 3.3. Demonstratives and other modifiers

Within the noun phrase, a number distinction is formally indicated on one demonstrative and the modifier 'other'. There is no further evidence for a number distinction on other elements of the noun phrase.

Nadëb distinguishes proximate, medial, and distal demonstratives. Of these, only the proximate form displays singular and plural variants – *hahỹ(h)* and *hahỹỹh*, respectively – while the other two are unspecified for number. The following examples illustrate the singular and plural forms of the proximate demonstrative, both as a modifier within the noun phrase (19-20) and as a head (21-22).

- (19) *ma* *ma-ber'oot* *gëët* **hahỹh** *a*  
*patug*  
IMP 2SG.A-tell lie.in.hammock DEM.PROX.SG 2SG.NC husband  
'Tell it to that (one) your husband (who is) lying in the hammock!'
- (20) *bëëb* **hahỹỹh** *awaar* *masãb* **ỹỹ**  
lie.down.PL DEM.PROX.PL dog CL:pet 1SG.NC  
'These dogs (that are) lying down are mine.'
- (21) **hahỹ** *gó*  
DEM.PROX.SG in  
'(Put it) in this (basket).'
- (22) *ôm* *arook* *ga-buuj* **hahỹỹh**  
2SG basket in-fill DEM.PROX.PL  
'These (fruit) will fill your basket.'

The modifier 'other' is also distinguished for singular and plural via the suppletive forms *see* (singular) and *nób* (plural),<sup>10</sup> as illustrated in (23-27). (When preceding the

<sup>10</sup> The form *nób* may be cognate with the universal quantifiers *wap* 'all' in Dâw, *w'ap* 'each, all' in Yuhup, and the quantifying element *?ap* in Hup.



noun they modify, both ‘other’ forms take the third person singular prefix *ta-*, which may have a nominalizing function; see examples 24-25.)

- (23) *panyyg*            **see**            *ta-tii*  
 story                  other.SG            3SG-DEM.MED  
 ‘This one is another story.’
- (24) *ti*                  **ta-see**            *panyyg n'aa*  
 DEM.MED            3SG-other.SG    story                  PURP  
 ‘There is another story.’
- (25) *ti*                  *a-näng* **ta-wób**            *panyyg*  
 DEM.MED            DFT.A-be            3SG-other.PL    story  
 ‘There are other stories.’

With mass nouns, the singular/plural variants of the demonstrative and ‘other’ modifiers trigger a portion reading (26-27).

- (26) **hahÿh**            *masuuk see*  
 DEM.PROX.SG    manioc.flour    other.SG  
 ‘This is another (mound of) manioc flour.’
- (27) **hahÿÿh**            *masuuk wób*  
 DEM.PROX.PL    manioc.flour    other.PL  
 ‘These are other (mounds of) manioc flour.’

While no other modifiers in Nadëb have been observed to encode a number distinction, some quantifying elements are lexically specified for nominal number, as well as for mass/count status (Obert 2021). For example, all notional count nouns in Nadëb can combine directly with numeral terms (28), while notional mass nouns can do so only in the context of a measure phrase (29).

- (28) *tsém*                  *hě*            *Watom ba-bapäh*            **tamawób**            **hě**  
**depaa**  
 yesterday            ADVZ    (name) ADJC-see            three                  ADVZ  
*paca*  
 ‘Yesterday, Watom saw three pacas (*Cuniculus paca*).’
- (29) **tamawób**            **hě**            *sareej kajahar*                  *ääb*                  *e-*  
*ëëk*                            *jëng*  
 two                            ADVZ    pot            manioc.porridge            1PL.EXCL  
 DFT.E-drink            VQNT  
 ‘We drank three pots of manioc porridge.’

A similar pattern can be observed for quantifiers. For example, the quantifier *hajöng* ‘many’ indicates plurality with count nouns (30) and with mass nouns that are individuated via a measure phrase (31), while the verb *eb* ‘be big’ functions to quantify undifferentiated mass nouns, such as ‘juice’ in example (32).

- (30) *hajōng ta-moo ta-ts'ëk*  
many 3SG-arm 3SG-cross.waterway.PL  
'He crossed many rivers.' (lit. 'arms')
- (31) *hajōng sareej ÿnb moonät wäng bëéh*  
many pot woman work patawa juice  
'The woman made many pots of patawa (*Oenocarpus batana*) juice.'
- (32) *ÿnb moonät a-eh wäng bëéh*  
woman work DFT.A-be.big patawa juice  
'The woman made a lot of patawa juice.'

#### 4. Verbal number

Number-marking is relatively robust on verbs in Nadëb, in comparison with nouns. Verbal number is indicated principally by stem changes, as well as via a set of morphological resources that relate to quantification. Despite their verbal locus, these number-marking strategies function primarily to indicate participant number, rather than event number.

##### 4.1. Number in the verb stem

Various Nadëb verbs exhibit pairs of distinct singular and plural forms, which agree with S and O arguments. This agreement pattern is typologically common in languages with verbal number (even in otherwise non-ergative languages; see Corbett, 2000: 253, Mattioli, 2019: 76). No comparable phenomenon is observed in Nadëb's sister languages; however, verbal number suppletion is not uncommon in the Americas, and is attested in several other South American language families, including Tukanoan, Panoan, and Macro-Jê (Veselinova 2013).

The singular and plural forms of verb roots are lexically determined. Variants tend to differ by glottalization, vowel length, and/or voicing of the final consonant – but which feature(s) are employed, and whether the singular or the plural variant appears more phonologically complex, does not appear to be predictable. This pattern resembles that observed in the small set of nouns that encode a number distinction (Table 1 above). Still other verb pairs are more fully suppletive, as seen in Table 4; most of these are intransitive and relate to posture or movement.<sup>11</sup>

While a determination of the full set of Nadëb verbs that are distinguished for number awaits further research, the dictionary entries in Weir et al. (2011) suggest that the phenomenon is relatively limited across the verbal lexicon (with some 20 out of approximately 2000 verb entries indicated as having plural variants). However, it is robustly evident in discourse, in that many of the most frequent verbs manifest the number distinction, as do several high-frequency auxiliaries relating to aspect (see below).<sup>12</sup>

<sup>11</sup> In many of these pairs, such as 'lie in hammock', 'lie on ground', 'go', 'walk', and 'attach to' in Tables 4 and 5, the singular form has cognates with corresponding semantics across the family, while the plural variant appears to be unique to Nadëb. No cases of the reverse (cognate plural and unique singular forms) have been observed.

<sup>12</sup> Many verb roots also exhibit (semi-)suppletive pairs relating to realis/irrealis mood, yielding as many as four distinct root variants. (However, there are considerably more verbs with realis/irrealis variants than there are with singular/plural variants.)

Verb	SG	PL
sit	<i>soob</i>	<i>toonb</i>
lie in hammock	<i>gä</i>	<i>j'eenb</i>
lie on ground	<i>jat</i>	<i>bëëh</i>
fall	<i>däng</i>	<i>jäk</i>
go	<i>bôm</i>	<i>bok</i>
be big	<i>eb</i>	<i>nëëh</i>

**Table 4.** Some suppletive verb forms

Examples (33-36) illustrate number agreement with the S argument of an intransitive verb:

- (33) *ÿ*            ***a-hyng***  
1SG    DFT.A-go.downriver.SG  
'I go downriver.'
- (34) *ër*            ***a-hyk***  
1PL.INCL    DFT.A-go.downriver.PL  
'We are going downriver.'
- (35) *a-sëëg*        ***gä***  
DFT.A-go.up    lie.in.hammock.SG  
'He got up and lay in the hammock.'
- (36) *a-s'ëëg*        ***j'eenh***  
DFT.A-go.up.PL lie.in.hammock.PL  
'They got up and lay down in the hammock.'

In examples (37-39), we see agreement with the O argument of a transitive verb (irrespective of the number of A).

- (37) *arook*        *ÿ*        ***e-këë***  
basket        1SG    DFT.E-weave.basket.SG  
'I am weaving a basket'
- (38) *arook*        *ããb*        ***e-këë***  
basket        1PL.EXCL    DFT.E-weave.basket.SG  
'We are weaving a basket.' (everyone is working on only one basket)
- (39) *arook*        *ããh*        ***e-k'ëëh***  
basket        1PL.EXCL    DFT.E-weave.basket.PL  
'We are weaving baskets.' (everyone is working on his/her own basket)

Verbal number is also registered in a set of aspectual morphemes, probably best understood as auxiliaries, which are frequently encountered in Nadëb discourse. To date, three such aspectual pairs have been identified (Table 5); all appear to be diachronically derived from homophonous posture/movement verbs, which display the same number alternations (involving agreement with S and O; see also Weir 1984:176). The aspectual auxiliaries follow the main verb and agree with it in

number (but only the auxiliary carries number marking when the main verb does not have singular/plural variants available).

Aspectual value	Verbal meaning	SG	PL
Perfective	‘walk’	<i>wät</i>	<i>bong</i>
Completive <sup>15</sup>	‘lie on ground’	<i>jat</i>	<i>bëeh</i>
Change of state	‘attach to’	<i>däk</i>	<i>padëek</i>

Table 5. Aspect markers

Example (40) shows agreement of the verb and auxiliary with a singular S argument in an intransitive construction; examples (41-42) illustrate agreement with a plural S. The S argument has a human referent in (40-41) and an inanimate referent in (42).

- (40) *ÿnb wajaa wät*  
 woman run.SGPFV.SG  
 ‘The woman ran.’
- (41) *pewop ÿÿnb waj’aa bong*  
 two women run.PL PFV.PL  
 ‘Two women ran.’
- (42) *tamawoob hë jamaad a-hód bëeh*  
 three ADVZ abiu DFT.A-fall.PL COMPL.PL  
 ‘Three abiu (*Pouteria caimito*) fruits fell.’

In examples (43-45), we see agreement of the auxiliary with a plural O argument (no singular/plural forms are available for the main verb in this case). Again, examples (43-44) have human O referents, while the O in (45) is inanimate (and is not explicitly stated, in contrast to the animate R of the ditransitive).

- (43) *Daniel hapäh wät sét hë maruus*  
 (name) see PFV.SG one ADVZ girl  
 ‘Daniel saw one girl’
- (44) *Daniel hapäh bong maruus*  
 (name) see PFV.PL girl  
 ‘Daniel saw the girls’
- (45) *tiikä te-ts’ëë bong ta j’oob hä*  
 and.then 3SG-divide.PL PFV.PL 3SG cousin OBL  
 ‘Then he divided (the tools) with his cousin.’

The plural form of the aspect marker is ungrammatical with O arguments having singular reference, as seen in (46-47).

- (46) *Daniel hapäh bong ÿÿnb*  
 (name) see PFV.PL women

<sup>15</sup> The aspectual contribution of this morpheme is still under investigation, but it generally conveys the notion of an event brought to its logical conclusion, and also relates to telicity.

‘Daniel sees the women.’

- (47) \**Daniel hapäh bong ŷnh*  
(name) see PFV.PL woman  
Intended meaning: ‘Daniel sees the woman.’

However, the patterns of verbal number agreement are in fact more complex than this straightforward association of plural verb forms with plural S and O arguments would imply. As seen in examples (48-50), *plural* O arguments may also appear with the *singular* form of a verb and/or aspectual marker. We note that all attested examples involve non-human (i.e. animal or inanimate) Os; further testing is needed to establish whether this flexibility is also available with human Os, whether the same option of using a singular variant of the verb or auxiliary is possible for plural S arguments, and whether the choice is associated with any difference of interpretation. We propose that non-human S/O arguments may be underspecified for number, such that they may occur with either the singular or plural form of the verb or auxiliary when they have plural reference; but that singular S/O arguments cannot occur with a plural verb/auxiliary, and human arguments require number agreement. The underspecification of number according to animacy is cross-linguistically common (though it is better explored for nominal number; see e.g. Corbett 2000:90-94); further research will clarify how this pattern applies in Nadëb.

- (48) *hajõng t'ëeng aj'yy a-wëh*  
many tapir man DFT.A-eat.meat  
‘The man is eating many tapirs.’ (cf. plural verb form *-w'ëeh*)
- (49) *Dilma e-tsëi wät pewóp hë dyjy pooh*  
(name) DFT.E-buy PFV.SG two ADVZ [? nose]  
*Dilma* DFT.E-buy PFV.SG two ADVZ spoon  
‘Dilma bought two spoons.’ (cf. plural auxiliary form *bong*)
- (50) *Hig ge-kyj däk tamewób hë depaah dab*  
*bäh*  
(name) APPL.in-cut CHG.ST.SG two ADVZ paca  
meat piece  
‘Hig cut three (pieces) of game meat.’ (cf. plural auxiliary form *padëëk*)

O arguments referring to mass nouns require the singular form of the verb (51-53), even when they occur with a measure term (53). Mass nouns can only occur with the plural verb form when they are both quantified *and* individuated via a measure term (54).

- (51) *ŷnh moonät däk a-eh wäng bëeh*  
woman make CHG.ST.SG DFT.A-be.big patawa  
juice  
‘The woman made a lot of patawa juice.’
- (52) \**Daniel hapäh bong naëng*  
(name) see PFV.PL water

Intended meaning: ‘Daniel sees (a lot of, many receptacles of) water.’

- (53) \**Daniel hapäh bong hood tasyyj*  
(name) see PFV.PL recipient oil  
Intended meaning: ‘Daniel sees bottles of oil.’

- (54) *Daniel hapäh bong hajõng hood tasyyj*  
(name) see PFV.PL many recipient oil  
‘Daniel sees many bottles of oil.’

Events themselves are quantified via an adverbial phrase; for example, a numeral + *nuu me* ‘times’ (example 55).<sup>14</sup> As noted above, verbal number as encoded via root pairs in Nadëb does not appear to relate to event number independently of participant number.

- (55) *pewop nuu me ÿnb wajaa wät*  
two times INS woman run PFV.SG  
‘The woman ran twice.’

#### 4.2. Verbal morphology relating to number

Nadëb has several other resources relating to number and quantification, encoded via verbal morphology. One of these is the distributive prefix *pa-*, which is probably derived historically from the postposition *pa* ‘next to’ (see Weir 1986). Most examples of *pa-* in our corpus indicate multiple referents distributed in space. Like Nadëb’s other verbal resources relating to number, *pa-* quantifies over S and O arguments (see examples 56 and 57, respectively).<sup>15</sup>

- (56) *ta-tyyt n’aa ha saroor pa-däk*  
3SG-rope PURP LOC clothes DISTR-be.attached.SG  
‘The clothes are hanging on the washing line (alongside each other).’

- (57) *ÿ pa-da-däk saroor ta-tyyt n’aa ha*  
1SG DISTR-CAUS-attach clothes 3SG.NSUBJ-rope PURP  
LOC  
‘I hang the clothes on the washing line (alongside each other).’

The plural reading of ‘clothes’ in (56-57) may be contrasted with the singular reading in (58), in which *pa-* is absent. A similar contrast is illustrated in (59) (referring to several spiders distributed along a wall) and (60) (where a single spider is indicated).

- (58) *tatu n’aa poh gad’oo ub bä saroor ba-däk*  
stick PURP nose end? ? LOC clothes ADJC-  
attach  
‘The clothing is hanging from the end of a stick.’

<sup>14</sup> In this expression the postposition *me* (glossed ‘instrumental’) appears to have a more generic oblique-marking function.

<sup>15</sup> This prefix appears to be present, at least etymologically, in the plural form of the ‘change of state’ aspect marker (see Table 5 above).

(59) *sanajoo pa-dāk tóp hadë n'aa bā*  
spider DISTR-attach house wall PURP LOC  
'The spiders are (distributed) along the house wall.'

(60) *p'oop sanajoo ba-dāk*  
high spider ADJC-attach  
'The spider is up high.'

We note that the verb stem itself in examples (56, 57, 59) occurs in its singular or underspecified form even where the (non-human) S or O argument is marked (via *pa-*) as plural (see §4.1 above). In example (61), on the other hand, the distributive prefix occurs with a plural verb variant (in a construction that is presumably the source of the plural 'change of state' auxiliary; see above). Here, we understand the plural verb form as registering agreement with the plural O argument ('ants'), in contrast to the underspecified option evident in the examples just above.

(61) *jëë ti pa-dëëk atsëë sa-moo hē*  
uacu DEM.MED DISTR-be.attached.PL ant 3PL.NSUBJ-arm  
ADVZ  
'Those uacu (*Monopteryx uacui*) trees had ants on their twigs (arms).'

It is possible that the number-related function of *pa-* may be "mixed", i.e. with a capacity to encode both participant and event number (see Corbett 2000:249), but the degree to which an event-oriented interpretation is accessible awaits further investigation. Examples in which both interpretations are plausible include (62), in which the shaman is carrying out the shamanic action of 'blowing' in an effort to cure his sick mother; *pa-* is used here in connection with a repeated event (with no overt O argument), but the blowing is presumably carried out over different parts of the patient's body. Similarly, in (63) *pa-* appears to convey the sense of multiple potential locations, while also plausibly having temporal relevance given that a person would try out one option at a time.

(62) *ti sëëw pa-buunb, ta-pa-buunb, ta-pa-buunb*  
then shaman DISTR-blow 3SG-DISTR-blow 3SG-DISTR-blow  
'Then the shaman blew, he blew, he blew.'

(63) *doob wäd ta-pa-gä péb*  
NEG1 go 3SG.A-DISTR-live NEG2  
'He no longer had anywhere to stay/live.'

Nadëb also has a verbal quantifier *jëng*, which may have developed diachronically from the homophonous verb 'return'. This element follows the verb and indicates that a participant is totally affected by the event. All examples attested in our corpus involve the quantification of O arguments (whether or not these are overtly expressed, see 64-65); whether or not *jëng* may also quantify S arguments requires further testing. As seen in (64), the verbal quantifier is very often accompanied by the universal quantifier *sabõnh* (*hë*) 'all'.

(64) *sabõnh hë ra-be-bõg jëng ta dab*

all ADVZ 3PL-ADJC-cut.meat VQNT 3SG meat  
‘They cut (off) all of his flesh.’

(65) *ta-wëb* *jëng*  
3SG-eat VQNT  
‘He ate everything.’

In comparative perspective, Nadëb’s sister languages show quite different verbal resources relating to number. A verbal distributive element *pid* exists in Hup, but it is almost certainly historically unrelated to Nadëb *pa-*, and its function is distinct in that relates much more strictly to event number; e.g. *papad-píd-* (moan-DISTR-) ‘moan over and over’. No verbal distributive morphology is attested in Dâw. In both Dâw and Hup, meanings comparable to those expressed with *pa-* in Nadëb are conveyed via nominal number and/or adverbial expressions. An etymon *hũ?* (with an identical form and closely comparable function, marginally grammaticalized from a verb ‘finish’) can be identified as a verbal quantifier in Hup, Yuhup, and Dâw. Like Nadëb *jëng*, *hũ?* references participant number of S and O, but the Nadëb form is clearly not cognate and may be an independent innovation.

## 5. Conclusion

As we have explored here, the category of number in Nadëb exhibits several typologically noteworthy characteristics. First, this language’s primary strategy for encoding a singular/plural distinction involves semi- and/or fully suppletive singular and plural pairs for a lexically specified subset of both nouns and verbs. Second, in contrast to the majority of the world’s languages, nominal number is largely underspecified, with only a handful of etyma displaying singular-plural variants among noun roots or other constituents of the noun phrase; moreover, these etyma do not form a coherent set with respect to the animacy hierarchy. In addition, while pronouns are more robustly distinguished for number, the first person singular form behaves in ways that are unusual both from language-internal and cross-linguistic perspectives, including in the treatment of plural possessed entities in constructions with a first person possessor. Finally, in contrast to nouns, a number distinction is considerably more evident in verbs in Nadëb, but verbal number nonetheless makes primary reference to participants rather than events. The encoding of number in verb roots relates to S and O arguments and appears to display sensitivity to the animacy and mass-count status of participants; further verbal resources relating to number have distributive and quantifying functions, again relating to S and/or O arguments.

Nadëb’s approach to number also compels attention from a comparative-historical perspective. Virtually all of the number-marking resources evident in Nadëb differ significantly from those seen in its sister languages, in which the principal number-marking resource is a plural morpheme associated with nouns. Nadëb’s sisters exhibit virtually no suppletive roots relating to number, either in verbs or nouns. None of the number-related forms or strategies explored here can be reliably reconstructed to proto-Naduhup, and all or most may be innovative either in Nadëb, Hup-Yuhup-Dâw, or in some subset of the latter group. The Naduhup case



may represent a relatively extreme example of number as a historically emergent and/or volatile category.

There is still much to explore regarding Nadëb's number-marking resources. Nonetheless, our investigation here has showcased a set of typologically intriguing characteristics. Languages like Nadëb highlight the importance of understudied and endangered languages, particularly from long-overlooked regions like Amazonia, in expanding our typological and historical understanding of grammatical categories.

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### Abbreviations

ADJC adjunct; ADVZ adverbializer; APPL applicative; CAUS causative; CHG.ST change of state; CL classifier; COMPL complete; DEM demonstrative; DFT.A /DFT.E default verbal prefixes (*a-/e-* forms); DISTR distributive; EXCL exclusive; IDEO ideophone; IMP imperative; INCL inclusive; INDF indefinite; INS instrumental; INT.PRO interrogative pronoun; LOC locative; MED medial; OBL oblique; NEG negation; NMLZ nominalizer; NC non-core argument; PL plural; PFV perfective; PROX proximate; PURP purposive; SG singular; VQNT verbal quantifier

### References

- Corbett, G. (2000). *Number*. Cambridge: Cambridge University Press.
- Crevels, M. (2006). Verbal Number in Itonama. In G. J. Rowicka and E. B. Carlin (eds.), *What's in a Verb? Studies in the Verbal Morphology of the Languages of the Americas*, (pp. 159-170). Utrecht: LOT Publications.
- Dryer, M. S. (2013). Coding of Nominal Plurality. In Matthew S. Dryer and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Epps, P. (2007). The Vaupés Melting Pot: Tucanoan Influence on Hup. In Alexandra Aikhenvald and R.M.W. Dixon (eds.), *Grammars in Contact: A Cross-Linguistic Typology*, (Explorations in Linguistic Typology 4), (pp. 267-289). Oxford: Oxford University Press.
- Epps, P. (2008). *A Grammar of Hup*. Berlin: Mouton de Gruyter.

- Epps, P. and Bolaños, K. (2017). Reconsidering the ‘Makú’ Family of Northwest Amazonia. *International Journal of American Linguistics*, 83(3), 467-507.
- Epps, P. and Obert, K. (Forthcoming). Linguistic clues to hunter-gatherer histories: the Naduhup peoples of northwest Amazonia. *Journal of Hunter-Gather Research*.
- Epps, Patience, Karolin Obert, and Nian Pissolati. (2018). Nadëb Collection. *Archive of the Indigenous Languages of Latin America*, ailla.utexas.org.
- Haspelmath, M. (2013). Occurrence of Nominal Plurality. In Matthew S. Dryer and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Martins, S. (2004). Fonologia e gramática Dâw. PhD dissertation, Vrije Universiteit, Amsterdam. Amsterdam: LOT.
- Mattiola, S. (2019). *Typology of Pluractional Constructions in the Languages of the World*. Amsterdam: John Benjamins.
- Mithun, M. (1999). *The Languages of Native North America*. Cambridge: Cambridge University Press.
- Newman, P. (2012). Pluractional Verbs: An Overview. In Patricia Cabredo Hofherr and Brenda Laca (eds.), *Verbal Plurality and Distributivity*, (pp. 185-210). Berlin/Boston: De Gruyter.
- Obert, K. (2021). The Mass/Count Distinction in Nadëb. *LLAMES*, 21, 1-22.
- Ospina, A. M. (2002). Les structures élémentaires du yuhup maku, langue de l’Amazonie colombienne: Morphologie et syntaxe. PhD dissertation, Université Paris 7 – Denis Diderot.
- Salanova, A. (2007). Nominalizations and Aspect. PhD dissertation, MIT.
- Silva, C.ácio and Silva E. (2012). *A Língua dos Yuhupdeb: Introdução etnolinguística, dicionário yuhup-português e glossário semântico-gramatical*. São Gabriel da Cachoeira: Pró-Amazônia.
- Simmons, ark. (2021). Reconstructing Proto-Naduhup Prosody. BA thesis, University of Texas at Austin.
- Urban, G. (1985). Ergativity and Accusativity in Shokleng (Ge). *International Journal of American Linguistics*, 51(2), 164-187.
- Veselinova, L. N. (2013). Verbal Number and Suppletion. In Matthew S. Dryer and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Weir, E. M. H. (1984). *A negação e outros tópicos da gramática Nadëb*. MA Thesis, Universidade Federal de Campinas, Brazil.
- Weir, E. M. H. (1986). Footprints of Yesterday’s Syntax: Diachronic Development of Certain Verb prefixes in an OSV Language (Nadëb). *Lingua*, 68(4), 291-316.

Weir, E. M. H., Senn R., and Senn B. (2011). Dicionário nadëb-português, português-nadëb. Unpublished manuscript.