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VERBAL NUMBER IN LO-TOGA AND HIW: THE EMERGENCE OF A LEXICAL PARADIGM

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ABSTRACT

Several languages around the world encode number through a regular alternation between verb roots, in a pattern sometimes called "verbal number suppletion" (Veselinova 2006). Lo-Toga and Hiw, two Oceanic languages of Vanuatu (Torres Islands), thus alternate certain verbs according to their absolutive argument's number – e.g. Hiw *tō* 'go:Sing' vs. *vën* 'go:Plural'. The pattern affects 17 verb pairs in Lo-Toga, 33 in Hiw. This rich system is a local innovation in the Torres Islands, not found elsewhere in Oceanic.

This structure is here analysed for the first time. Verbal number is not just agreement: its principles and categories differ from nominal number. Despite its similarity with suppletion, the structure really involves separate words, organised into a "lexical paradigm" – a structured set of lexical pairs, contrasting individual vs. collective events. The comparative method helps reconstruct the system's development. A former circumfix encoding pluractionality was the source for the number alternation; yet most verbs encoded the contrast lexically, as near-synonyms were harnessed into the emergent paradigm. Crucially, even after it was recruited into the number paradigm, each verb remained an autonomous lexeme. While nominal number belongs to the morphology, the paradigm of verbal number in the Torres languages pertains entirely to the lexicon.

1. PRESENTATION

1.1. Some issues raised by verbal number in Hiw and Lo-Toga

While the grammatical category of Number is often associated with the domain of nouns and pronouns, contrasts in number may also affect the grammar of verbs. In many cases, number coding on verbs merely reflects a value that is initially assigned on a nominal argument, and reproduced morphologically on the verb through formal agreement. Yet in some systems, there are good reasons to acknowledge the existence of VERBAL NUMBER as a category of its own, distinct from nominal number (Corbett 2000:243–264).[1]

[1] This work was initially presented at the *11th International Conference on Austronesian Linguistics* (11ICAL). I wish to thank the various colleagues who gave me comments and advice on previous versions of this work; notably, Nicholas Evans and Mark Donohue. I am also grateful to Frans Plank and Nigel Vincent for their careful editorial advice. This study forms part of the programme *Empirical Foundations of Linguistics* overseen by the French Agence Nationale de la Recherche (ANR-10-LABX-0083) – and of its axis *Typology and dynamics of linguistic systems*.

"Verbal number" sometimes corresponds to the notion of pluractionality, reflecting the plurality of the event itself: one can contrast, for example, 'knock (once)' with 'knock (several times)'. The present study will examine a different type, namely "participant number": this is when the choice of a particular form of the verb indicates the number of one of its arguments. In quite a few languages scattered around the globe (Durie 1986, Mithun 1988, Veselinova 2013), this type of verbal number manifests itself as an alternation in the radical of the verb itself. Example (1) illustrates the contrast, in the same language, between two verbs meaning 'fall down' – one form ***sō*** which is reserved for non-plural subjects, and an unrelated form ***iw*** when the subject is plural:[2]

(1a) HIW Ne wō-metu mik ***sō***.
ART fruit-coconut APPREH fall.**NON.PLURAL**
'The coconut might fall.'

(1b) HIW Ne wō-metu mik ***iw***.
ART fruit-coconut APPREH fall.**PLURAL**
'The coconuts might fall.'

Example (1) is from Hiw, an Oceanic language spoken by about 280 speakers in the Torres islands of northern Vanuatu. A similar system of verb alternation is also present in its immediate neighbour Lo-Toga (580 speakers), yet absent from the fifteen languages of the nearby Banks Islands [*Map 1*].

Verbal alternations such as the one in (1) raise several questions, combining issues of morphology, syntax, semantics, lexicology and linguistic change. Does verbal number work in the same way as nominal number, or does it follow its own rules and categories? Is this a case of agreement? Does verbal alternation always encode the number of the subject, or can it index other arguments? How many verbs show that alternation in Hiw, how many in Lo-Toga? Does verbal number affect certain lexical domains more prominently than others?

Formal contrasts similar to this one have sometimes been described as cases of SUPPLETION (e.g. Veselinova 2006). And indeed, they are reminiscent of well-known suppletive patterns such as the French radicals for the verb 'go' (*vais, allais, irais*…) or the irregular plurals of Russian, e.g. *rebënok* 'child' → *deti* 'children' (cf. Corbett 2007:18). If verbal number in (1) is suppletion, then the two forms are to be considered allomorphs of a single verbal lexeme. The present case study will examine arguments pro and contra, and conclude that verbal number in the Torres languages does not constitute suppletion: rather, it is better analysed as a paradigmatic contrast in the lexicon, involving separate verbs.

Whether the paradigm in question is to be located in the morphology or the lexicon, a final research question is its historical development. What path did the two Torres languages follow in creating such a rich system of verbal number, when none of their immediate neighbours did? As we shall see, the comparative method provides us with tools to carefully reconstruct a likely scenario. Verbal number in the Torres likely arose from an early process of morphological derivation affecting, initially, posture verbs. The first verbs impacted paved the way for a number paradigm to emerge in the lexicon, contrasting individual events with collective ones. Over time, more and more pairs of near-synonyms were harnessed into that emergent paradigm, giving rise to the solid verbal-number subsystem we can observe today in Hiw and Lo-Toga.

After a short presentation of the two Torres languages [§1.2], Section 2 will provide a brief overview of Hiw morphosyntax, focusing on the organisation of nominal number in noun

[2] Examples are cited in the languages' orthographies. A phonetic key is provided in the Appendix.

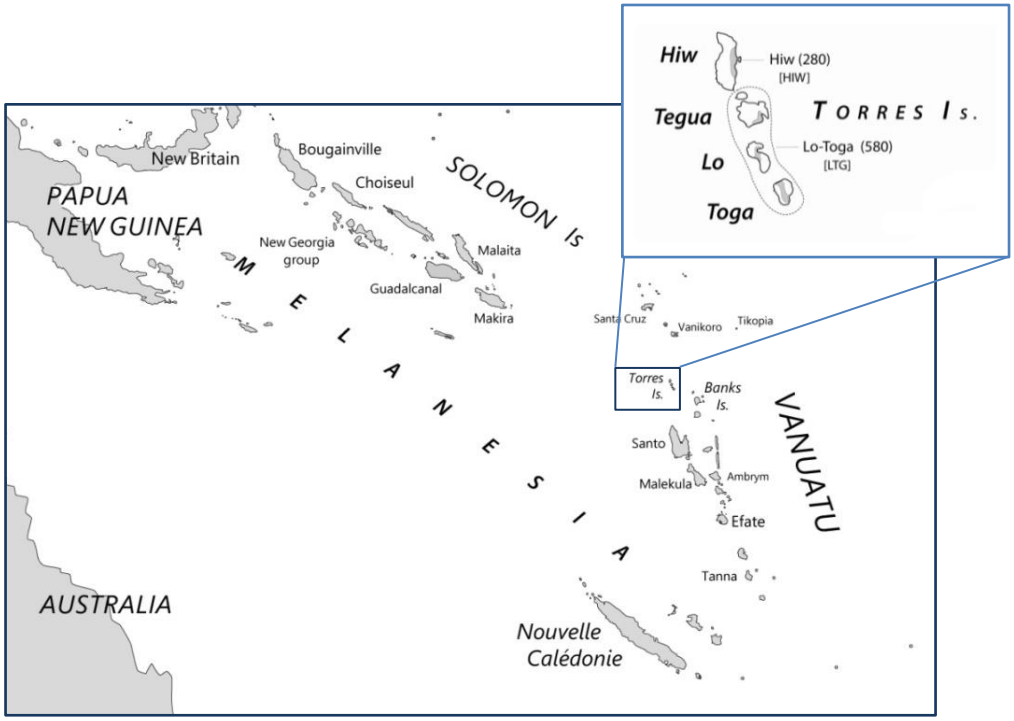
phrases and pronouns. Section 3 will present the rules of verbal number in both languages, and Section 4 will provide the inventory of all attested verb pairs. Section 5 will situate Hiw and Lo-Toga in their areal and typological contexts, and discuss whether the structure should be analysed as suppletion, or as a "lexical paradigm".

Section 6 will take a diachronic perspective and reconstruct, based on the comparative method, a likely historical scenario for the development of verbal number in the Torres languages. Finally, the discussion in Section 7 will show that verbal number involves not allomorphs of a single word, but separate lexemes, each endowed with its own properties. All in all, this study will highlight the capacity of a language to reshape its word meanings as it adapts them to an emerging paradigm in the lexicon.

1.2. The languages of the Torres islands

Map 1 shows the location of the Torres Islands, north of the Vanuatu archipelago, in the heart of Island Melanesia. Hiw and Lo-Toga are the only languages spoken in that small island group. The island of Tegua being hardly inhabited, the southern language is called Lo-Toga, after the names of the two islands Lo and Toga. The two dialects Lo and Toga are close enough (François 2016:41) that their difference is irrelevant for the present study.

Map 1 – Location of Hiw and Lo-Toga (Torres Islands) in northern Vanuatu



Like the rest of the 138 languages of Vanuatu (François et al. 2015), Hiw and Lo-Toga belong to the Oceanic subgroup of the larger Austronesian phylum. The first settlers of Vanuatu, about 3,200 years ago, were speakers of Proto Oceanic, or "POc" (Pawley 1973, 2008; Ross et al. 1998; Posth et al. 2018). The last three millennia have seen the development of intermediate protolanguages, namely PNCV (Proto North Central Vanuatu, cf. Clark 2009), and PTB in the north (Proto Torres–Banks, cf. François 2011a, 2016).

The two Torres languages show a long history of shared development, with a pairwise "cohesiveness rate" of 83 percent (Kalyan & François 2018:79-80). That is, out of a sample of 116 linguistic innovations that have taken place in the Torres languages – in Hiw and/or in Lo-

Toga – 83% were shared between the two languages. In spite of their genetic closeness, these are now clearly separate languages, with no mutual intelligibility.

Several fieldwork trips (1998–2011) have allowed me to collect data on the 15 languages of the Banks Islands, and on the two languages of the nearby Torres group. Elicitation based on conversational questionnaires (François 2019a) was always complemented by extensive periods of language immersion during which I learned the languages in their daily context, took field notes, and recorded native speakers. Among the recordings of spontaneous speech I made in the Torres, I have transcribed 25 texts in Lo-Toga and 18 in Hiw, totalling respectively 21,300 and 17,600 words. The examples cited in the present study originate either from my field notes or from the text corpora – sometimes with links to their online presentation.[3]

2. NOMINAL NUMBER IN HIW

This section proposes a grammatical overview of Hiw, with a focus on nominal number. Lo-Toga has very similar structures, which cannot be detailed here for reasons of space;[4] I will get back to this language again when discussing verbal number per se [§3.4 sqq.].

2.1. Essentials of Hiw morphosyntax

Hiw shows strict SVO order, and nominative-accusative syntax [see §3.3]. Tense-Aspect-Mood encoding takes the form of particles that precede and/or follow the predicate – whether this is a verb, an adjective or a noun. Verbs do not inflect morphologically for person or number, other than the lexical alternation that is the focus of the present study.

Sentences (2–3), taken from my corpus, illustrate simple clauses:

(2) HIW *Sörörö* rōn̄ rakn̄a-*se* ve putput.[5]
3DU hear mother-3NPL IPFV sing
'They (both) heard their mother sing.'

(3) HIW *Törröqate megoye =nome* rak vogmamerö ti-*ke*.[6]
HUM:MIX:DU child:NPL POSS:2sg make sad DAT-2sg
'Your two children really did you harm.'

Before we turn to verbal number, it is useful to observe the somewhat intricate way in which the Torres languages structure the domain of NOMINAL NUMBER. This term encompasses the grammatical properties of argument phrases in general, whatever their syntactic function: subject of a verb or other predicate; object of a transitive verb; object of a preposition; topic; possessor; vocative. These argument phrases can show various morphological exponents in Hiw:

- FREE PERSONAL PRONOUNS, whether subject or object (for certain verbs or prepositions),
  → 3DU *sörörö* 'they two' in (2)

[3] My audio recordings are freely accessible at *http://tiny.cc/Francois-archives*. My field notes are also archived online, at *http://www.odsas.net*.

[4] François (2010a) provides essential grammatical information on Hiw and Lo-Toga; François (2017) has more on Hiw.

[5] The link https://doi.org/10.24397/pangloss-0003259#S19 gives access to that sentence [ref: Hiw.Brothers.19] in its original context, with sound.

[6] Link: https://doi.org/10.24397/pangloss-0003259#S37 = [Hiw.Brothers.37]

- DETERMINER PHRASES, of the form {Determiner + Noun}:
  → {Article + noun} *NE wake* 'a/the boat'
  {Gender classifier + noun} *TŌRŌQATE megoye* '(the) two children' in (3)
- OBJECT SUFFIXES, added to transitive verbs or prepositions:
  → 2sg suffix *-ke* in *ti-ke* 'to you' in (3)
- POSSESSIVE SUFFIXES on transitive (obligatorily possessed) nouns,
  → 3NON.PLURAL suffix *-se* on *r̄akn̄a-se* 'their mother' in (2)
- POSSESSIVE CLITICS on intransitive nouns
  → 2sg clitic *=nome* 'your' in (3)

As we'll see now, the domain of nominal number is organised in different ways depending on the morphological status of their exponent. For example, while free pronouns contrast three numbers, pronominal suffixes contrast only two.

2.2. Personal pronouns: three numbers

Free, stressed personal pronouns are used for the syntactic functions of subject, as well as object of certain verbs and prepositions. These free forms contrast three numbers: SINGULAR; DUAL; PLURAL (*Table 1*).

Table 1 – Paradigm of free personal pronouns in Hiw

	SINGULAR	*DUAL*	*PLURAL*
1 INCL		tōr̄ō	tite
1 EXCL	noke	kamar̄e	kama
2	ike	kimir̄e	kimi
3	nine	sōr̄ō	sise

"Plural" refers to groups of three members or more. Trial pronouns – i.e. special pronouns for groups of exactly three members – are common in the neighbouring Banks Islands (François 2016:34, 51–54); but they are absent from the Torres languages, which use the plural instead. They also lack a paucal number.

2.3. Possessors and objects: two numbers

While free personal pronouns contrast three numbers {SING–DUAL–PLURAL}, other personal paradigms oppose only two, as they merge DUAL and PLURAL under a single NON-SINGULAR category. These paradigms are: (a) object suffixes; (b) possessive suffixes; (c) possessive clitics – see Table 2.

Table 2 – Three personal paradigms of Hiw contrasting only two numbers: object suffixes; possessive suffixes; possessive clitics

		OBJECT	*POSSESSIVE*	
		suffixes	*suffixes*	*clitics*
SINGULAR	1	—	-k	=kye
	2	-ke	-Ø	=nome
	3	-e	-ne	=na
NON-SINGULAR	1inc	-te	-te	=ta
	1exc	—	-ma	=ma
	2	—	-mi	=mi
	3	-se	-se	=sa

Example (4a) shows a transitive noun taking a possessive suffix; (4b) is an intransitive noun taking a possessive clitic:

(4a) HIW ne wiyga-**se**
ART:COM character-**3NSG**
'their characters' [POSSESSOR ≥2]

(4b) HIW n' ēñwe **=sa**
ART:COM house =**3NSG**
'their house(s)' [POSSESSOR ≥2]

The morphology of object marking in Hiw is complex (François 2014), and goes beyond the present overview. Note simply that Hiw has Differential object marking (DOM) for human objects. An object pronoun may be suffixed either directly onto the verb, or onto a DOM particle *i*:

(5a) HIW Nine yeřyëař **i-te** ti.
3sg CONT~seek DOM-1inc:NSG PAST
'He was looking for us (≥2).'

The paradigm of object suffixes is defective. If the object is 1inc or 3rd person, then it may take the form of a non-singular suffix – respectively *-te* or *-se*, as in (5a). Younger speakers show a preference for an analytical strategy for all persons. Because it involves free pronouns (*Table 1*), the pattern distinguishes three numbers, {SINGULAR–DUAL–PLURAL}. As a result, the non-singular (5a) may correspond either to a dual (5b) or to a plural (5c):

(5b) HIW Nine yeřyëař **i** **töřö** ti.
3sg CONT~seek DOM 1inc:DU PAST
'He was looking for us (two).'

(5c) HIW Nine yeřyëař **i** **tite** ti.
3sg CONT~seek DOM 1inc:PL PAST
'He was looking for us (>2).'

Object suffixes will be mentioned later in this paper, in our discussion of *constructed number* [§3.3].

2.4. Gender markers and nominal suppletion

The set of nominal determiners in Hiw includes a paradigm of gender classifiers for humans (François 2017:322-4). These contrast three genders (masculine, feminine, mixed) and four numbers : {SING, DUAL, PAUCAL, PLURAL} – though the paucal is only optional, and rare.

Table 3 – The gender classifiers of Hiw

	SINGULAR	DUAL	PAUCAL	PLURAL
MASC	—	töřate	tuwesate	teñwaře
FEM	řëtëgë	töřöřë	tuwutgë	tuñwuyegë
MIXED	—	töřöqate	tuwesate	tekñwa

A gender classifier can cooccur with a noun – as in (3), where the noun *megoye* 'child' is determined by the classifier *töřöqate* 'HUM:MIX:DU' (i.e. 'two human referents of mixed [or unspecified] gender'). But a classifier can also head an argument phrase (a DP) on its own, as in (7) below *tekñwa te Hiw* 'the people of Hiw', or simply (27) *tekñwa* 'people'.

In addition to their function as noun determiners, gender classifiers operate as *de facto* suppletive number forms for the three nouns *teñwën* 'man'; *yeqën* 'woman'; *tayö* 'person': see Table 4. To these nouns, one may add the word *megoye* 'child', whose dual is regular [cf. ex. (3)], but whose plural is a suppletive form *tuqunkë*.

Table 4 – Number suppletion for four nouns in Hiw

SINGULAR		DUAL		PLURAL	
ne teñwën	'a man'	*tör̄ate*	'two men'	*teñwar̄e*	'men'
ne yeqën	'a woman'	*tör̄ör̄ë*	'two women'	*tuñwuyegë*	'women'
ne tayö	'a person, s.o.'	*tör̄öqate*	'two people'	*tekñwa*	'people'
ne megoye	'a child'	—		*tuqunkë*	'children'

2.5. Nominal number and the referential hierarchy

As is common in Oceanic languages of the area (cf. François 2005b:122-126 for Mwotlap), this rich specification of number is reserved to referential human arguments.

Non-human referents do not encode number. The determiner they take is usually the noun article *ne*, which for human nouns encodes the singular, yet here is unspecified for number:[7]

(6) HIW Owëne ***ne*** *votwu* =kye.
PRSTV ART:COM knife =my
'Here is my knife. ~ Here are my knives.'

Likewise, generic reference to humans commonly uses a phrase *ne tayö* (cf. Table 4) which is formally singular, regardless of the underlying meaning [see also §5.4]:

(7) HIW Tekñwa te Hiw, yö meyigeyige, sise tati
HUM:PL ORIG Hiw LOC darkness 3pl NEG
qur̄qur̄ ***ne*** ***tayö*** ti. [8]
HAB~crunch ART:COM person PAST
'The people of Hiw, during heathen times, they were not cannibals.'
[*lit.* they did not eat *a man* / they did not eat *people*.]

In sum, the only case when noun phrases are regularly marked for number is when they refer to a human, referential argument. Such an organisation of number categories is common typologically, and follows a referential hierarchy based on animacy (Smith-Stark 1974, Corbett 2000:90):

Figure 1 – The coding of nominal number in Hiw is governed by a referential hierarchy

inanimate < animate < human generic < **human referential**
no contrast in number SG-DU-(PC)-PL

2.6. Conclusion: Nominal number

In sum, nominal number in Hiw is only specified for referential human arguments. For these, the number domain is either divided into two categories {SING–N.SING}, three {SING–DUAL–

[7] See also *wō-metu* 'coconut(s)' in (1) above.
[8] Link: https://doi.org/10.24397/pangloss-0003252#S1 [Hiw.Religion.04]

PLURAL}, or four {SING–DUAL–PAUCAL–PLURAL}. The number of emic contrasts depends on the grammatical nature of the morphological exponents of number.

Table 5 – Summary: The categories of nominal number in Hiw

<table>
<tr><th>Number of referent</th><th>Gender classifiers, Human specific NP</th><th>Subject pronouns, Object pronouns</th><th>Object suffixes, Possessive markers</th><th>Human generic NP, non-human NP</th></tr>
<tr><td>1</td><td colspan="2">SINGULAR</td><td>SINGULAR</td><td rowspan="4">(no number contrast)</td></tr>
<tr><td>2</td><td colspan="2">DUAL</td><td>DUAL</td><td rowspan="3">NON-SINGULAR</td></tr>
<tr><td>3-10</td><td>PAUCAL</td><td rowspan="2">PLURAL</td><td rowspan="2">PLURAL</td></tr>
<tr><td>≥3</td><td>PLURAL</td></tr>
</table>

3. VERBAL NUMBER IN HIW AND LO-TOGA

3.1. Verbal number: presentation

Hiw shows a regular pattern of "verbal number". It takes the form of an alternation in the radical of certain verbs, which encodes a contrast in argument number:

(8) *a*. Nine **sō**.
3sg fall:NPL
'He fell.'

b. Sise **iw**.
3pl fall:PL
'They$_{(>2)}$ fell.'

c. **Nine iw*.
3sg fall:PL

d. **Sise sō*.
3pl fall:NPL

No morphology can help derive one form from the other; these are two distinct roots, with distinct etymologies [§6.3].

The alternation is obligatory: as (8c-d) show, the combination of each verb stem with the opposite number results in an ungrammatical sentence. The obligatoriness of the alternation makes it tempting to describe it as a phenomenon of suppletion coding for number: the two forms effectively behave like two inflectional forms of a single verb lexeme, depending on the number of its subject – yet see the discussion in §5.5 below.

In (8), the number of the subject is encoded both by the form of the verb and by the personal pronoun [§2.2]. Yet sometimes – as in our early example (1) – the form of the verb is the only formal encoding of number in the clause. I will come back to this observation when discussing whether or not verbal number is "agreement" [§5.4].

We saw in §2.4 that non-human noun phrases are underspecified for number. But as shown in (1) with 'coconut', the restriction relative to the feature [±human] was only relevant to *nominal number*. Verbal number, in turn, is not subject to the referential hierarchy of animacy [*Figure 1*], and applies equally to any sort of argument.[9]

3.2. The special case of dual referents

A noteworthy property of verbal number in Hiw is that dual referents pattern with singular rather than plural. Compare the verb forms for 'sit' when the subject refers to two individuals (9a) with the form found with three people or more (9b):

[9] That said, there are sometimes restrictions specific to individual verbs. Thus, for the meanings 'stay' and 'go', we'll see that Hiw encodes verbal number only with animate referents [§7.3].

(9a) HIW Ne yeqën viɾ̄ö pe vën ***sag*** ɾ̄ë
ART woman two REL DIR:thither sit:NPL there
'The two women ***sitting*** over there…'

(9b) Ne yeqën vitöy pe vën ***voɾ̄saseɾ̄ēg*** ɾ̄ë
ART woman three REL DIR:thither sit:PL there
'The three women ***sitting*** over there…'

For the meaning 'sit', verbal number here contrasts two forms:

- *sag*, glossed 'sit:**NPL**' for NON-PLURAL,
  for arguments referring strictly to one or two individuals;
- *voɾ̄saseɾ̄ēg*, glossed 'sit:**PL**' for PLURAL,
  for arguments referring strictly to three or more individuals.

The pattern is regular in Hiw, and quite original:[10] as we shall see, it is absent from its neighbour Lo-Toga, where duals align with plurals [§3.4]. Table 6 combines the subject pronouns of §2.2 with the verb 'fall' we saw in (8), contrasting *sō* 'fall:NPL' vs. *iw* 'fall:PL'.

Table 6 – In Hiw verbal number, dual arguments pattern with singular: e.g. the verb 'fall'

	SINGULAR	*DUAL*	*PLURAL*
1 INC		töɾ̄ö *sō*	tite *iw*
1 EXC	noke *sō*	kamaɾ̆e *sō*	kama *iw*
2	ike *sō*	kimiɾ̆e *sō*	kimi *iw*
3	nine *sō*	söɾ̄ö *sō*	sise *iw*

Among the various patterns of categorisation attested for nominal number (Table 5 in §2.6), none corresponds to the semantic contrast that verbal number draws between plural and non-plural (Table 7).

Table 7 – Number categorisation in the nominal vs. verbal domains in Hiw.

Number of referent	**NOMINAL NUMBER**			**VERBAL NUMBER**
	Free pronouns, Classifiers	*Object, Possessive suffixes*	*human generic NP/ non-human NP*	
1	SINGULAR	SINGULAR	*(no number contrast)*	NON-PLURAL
2	DUAL	NON-SINGULAR		
≥3	PLURAL			PLURAL

Evidently, the structural and grammatical properties of verbal number in Hiw are quite distinct from those that govern nominal number: these are two separate domains (see Newman 2012:203).

3.3. Indexing the patient's number

Like other Oceanic languages of Vanuatu, alignment in Hiw shows consistent accusative alignment in its clausal syntax: an intransitive subject S (e.g. *nine* in 8a) patterns the same way as the transitive subject A of bivalent verbs (e.g. *nine* in 5a). And yet, verbal number in Hiw follows an ergative pattern – arguably the only trace of ergativity in this language.

[10] Among languages with grammatical verbal number, a handful (particularly in northern America: Kiowa, Ute, Navajo…) also group duals with singulars rather than with plural (Veselinova 2006:152).

Indeed, for most bivalent verbs,[11] stem alternation indexes the number of the patient rather than the agent. For example, the two forms meaning 'kill' are *not* <kill:NPL> 'kill (1 or 2 patients)' vs. *qētn̄og* <kill:PL> 'kill (>2 patients), massacre':

(9a) Temaɾ̄ëɾ̄ë peon **not** i noke!
old.man FUT kill.NPL DOM 1sg
'The Ogre will *kill*$_{NPL}$ me!'

(9b) Temaɾ̄ëɾ̄ë peon **qētn̄og** i tite! [12]
old.man FUT kill.PL DOM 1inc:pl
'The Ogre will *kill*$_{PL}$ us!'

Among languages that encode verbal number, ergative alignment is indeed the default pattern, regardless of the system's usual clause syntax (Durie 1986:357). The verb agrees with its 'internal' argument, its "participant most affected" (Comrie 1982:112, Mithun 1988:214).

A corollary of this semantic organisation is the possibility to combine a NON-PLURAL verb stem with NON-SINGULAR morphology in the nominal domain. This rare configuration is found when the patient of a verb refers to a pair of individuals, and is indexed on the verb using an object suffix [§2.3].

Thus, compare the two following sentences with *-se* '3NSG':

(10a) HIW Ne temët ***qētn̄og*** i-**se**.
ART ghost kill:**PL** DOM-3**NSG**
'The ghost killed them (≥3).'

(10b) Ne temët ***not*** i-**se**.
ART ghost kill:**NPL** DOM-3**NSG**
'The ghost killed them (two).'

The verb form in (10a) specifically entails a plural patient. By contrast, (10b) combines a non-plural verb with a non-singular object. Even though (10b) has no morpheme that specifically encodes dual number, the dual meaning is inferred from the combination of non-plural with non-singular. This rare configuration is sometimes called "indirect dual" (Plank 1997), "constructed dual" or "constructed number" (Corbett 2000:169; Arka & Dalrymple 2016) – or "Frankendual" (Harbour *in press*).

3.4. The different status of dual referents in Hiw vs. Lo-Toga

Lo-Toga, the language spoken in the southern part of the Torres Islands, has also developed verbal number. Thus the verb 'hit, kill' will be *not* with a singular patient (11), and *rohe* with a plural (12):

(11) LTG Rōw lëre li tet vetël, nihe ge ***not*** **nie**. [13]
jump disappear LOC tree banana 3pl AO:PL kill:**SG** 3sg
'He tried to escape in a banana tree, but they *killed him*.'

(12) LTG Ne n̄wië ne ve gel ve dedagerë të ni ***rohe*** **nihe**.[14]
ART monster DEM IPFV stay IPFV try COMP AO:3sg kill:**NSG** 3pl
'The monster was trying to *kill them*.'

[11] Section §4.2.2 will discuss some exceptions to the ergative alignment in Hiw verbal number.
[12] Link: https://doi.org/10.24397/pangloss-0003256#S138 [Hiw.Meravtit.138]
[13] Link: https://doi.org/10.24397/pangloss-0003287#S57 [Ltg.Mrwh-oven.57]
[14] Link: https://doi.org/10.24397/pangloss-0003289#S60 [Ltg.Mrwh-canoe.60]

Unlike Hiw, dual referents in Lo-Toga regularly pattern with the plural. In other words, the semantic contrast defined by verbal number in this language is not PLURAL vs. NON-PLURAL as in Hiw, but SINGULAR vs. NON-SINGULAR:

(13) LTG Nie tat ho ***rohe*** **hōr** ē ne wuñor.[15]
3sg NEG:IRR POT kill:**NSG** 3du OBL ART club
'He was unable to *kill them* (two) with his club.'

As a corollary, Lo-Toga does not present the sort of "constructed dual" patterns attested in Hiw [§3.3].

Other than the behaviour of the dual, verbal number in Lo-Toga follows the same principles as in Hiw.

4. INVENTORY OF VERBAL NUMBER PAIRS IN HIW AND LO-TOGA

Verbal number affects a closed list of lexemes in the two Torres languages; these belong to certain semantic domains in particular: verbs of posture, motion, impact… By contrast, many verbal meanings lack any stem alternation, and do not encode verbal number at all. To take just an example, the Hiw verb *yerīyëarī* 'seek' in (5a-c) remains unchanged, regardless of the number of its arguments: this word belongs to the large, open set of verbs that are non-sensitive to contrasts in verbal number.

4.1. List of verbal number pairs

Table 8 lists all the form pairs attested in my corpus, for Lo-Toga and for Hiw, organised by meaning. I indicate in bold those forms that can be shown, based on regular phonological correspondences (François 2005a, 2016), to be cognate between Lo-Toga and Hiw: e.g. LTG *vërtur* [βɛrtʉr] = HIW *vorturī* [βɔg͡ʟtʉg͡ʟ]. These links will be useful when reconstructing the historical development of verbal number in the two Torres languages [§6.1].

Table 8 – Verbal number pairs in Lo-Toga and Hiw

Meaning	LO-TOGA		HIW		*Word class*
	SG	non-SG	non-PL	PL	
small	reri	wureri	kkë	këkkë	ADJ
big, large	luwō	**liliave**	mesō	**yyave**	ADJ
stay, dwell			yöy	toge	V.INTR.
sit	**hag**	**vërhagir**	**sag**	**vorsasērēg**	V.INTR.
stand	**tu**	**vërtur**	**tu**	**vorturī**	V.INTR.
lie	**in**	vërenev	**ēn**	monerīög	V.INTR.
sleep	**metur**	metmetur	**mitirī**	motrīig	V.INTR.
fall			sō	iw ~ siw	V.INTR.
run	**velag**	rerōw	**vëyag**	voyi	V.INTR.
jump	wël	wuwël			V.INTR.
go (on land)			tō	vën	V.INTR.
go back			tō ñwuye	ñwuye	V.INTR.
fetch			törīön	vënñrīön	V.INTR. DER.

[15] Link: https://doi.org/10.24397/pangloss-0003292#S60 [Ltg.Demon.60]

Meaning	LO-TOGA		HIW		*Word class*
	SG	non-SG	non-PL	PL	
leave behind			teɾ̄og	vënɾ̄og	V.INTR. DER.
bring, carry			tevog	vënn̄og	V.INTR. DER.
take, give	**ole**	**vile**	**oye**	**viye**	V.TR.
pick up, collect			oye	möwe	V.TR.
alive; escape	ah	uah			V.INTR.
die, (be) dead	**mēt**	(pe)pun	**mët**	qēt	V.INTR.
(V) to.death	**mēsi**	punpun	**mati**	qētqēt	ADVERB
cry, weep	kerë	vërkari	woge	wogig	V.INTR.
be hanging			sëm	quy	V.INTR.
hang s.th.			vasëm	quy	V.TR.
(be) broken			meyēt	mōɾ̄ōt	V.INTR.
asunder			yēt	ɾ̄ōt	ADVERB
cut, chop			taɾ̄e	ɾ̄ōt	V.TR.
plant	**ton**	**va**	**ton**	**va**	V.TR.
throw away			wötog	tɾ̄og	V.TR.
shoot s.o.			vēnie	kaɾ̄e(ñi)	V.TR.
stone s.o./s.th.	let(ñi)	gōh	ove(ñi)	pyot	V.TR.
tie, bind			soy	ɾ̄öt	V.TR.
stow			gön	pɾ̄og	V.TR.
hit w/ stick	lēñwe	rohe	not	tɾ̄añwe	V.TR.
hit, kill	**not**	**rohe**	**not**	**ɾ̄ote**	V.TR.
kill			not	qētn̄og	V.TR.

4.2. Comments on the inventory of verbal pairs

4.2.1. A note on word classes

Table 8 calls for several comments. First, a note on word classes (last column).

Throughout this study, I refer to "verbal number" and to verbs; and indeed, the vast majority of forms listed in Table 8 qualify as verbs, whether transitive or intransitive [see §4.2.2]. There are two exceptions however.

First, the meanings 'small' and 'big' are lexified using ADJECTIVES; these are the only adjectives that supplete for number in the Torres languages. Adjectives are distinct from verbs in Hiw, due to their ability to directly modify a noun in an NP; yet they share all their other grammatical properties with verbs (François 2017:309–315) – whether their predicativeness, their combinatorics with TAM markers, etc. The number-related stem alternation found with size adjectives follows the same pattern as verbs in the two Torres languages, which justifies including them in our list.

The meanings '(hit…) to death' and '(hit…) asunder' are associated with an emic word class labelled ADVERB, which is distinct from verbs. In these languages, lexical adverbs or "post-verbs" only ever occur as modifiers to a verb (François 2017:311), and do not synchronically qualify as full verbs; yet they generally originate in former verbs that have specialised in a V2 position in resultative serial verb constructions – See the examples (14a-b) below. Thus the adverb 'to death' is historically the verb 'die', yet with morphological changes that have slightly altered its form. Besides their origin as verbs, the reason I include these adverbs in this list is that their number-related stem alternation clearly follows the same pattern as their cognate

verbs: the pair *mati – qētqēt* clearly parallels *mët – qēt* ‘die’; and *yēt – rōt* ‘asunder’ mirrors the verbal derivatives *meyēt – mōrōt* ‘be broken’.

In sum, these adjectives and adverbs have enough similarities with lexical verbs to justify being listed with other verbs, under the global heading *verbal number*. By contrast, I choose not to include here the few nouns that also supplete for number (Table 4 p.7), as they arguably follow distinct grammatical patterns.

4.2.2. On transitivity

The verbal pairs listed in Table 8 generally conform to the principle of *absolutive indexing* exposed in §3.3. Thus, intransitive verbs index the number of their sole argument (the subject), whereas transitive verbs (identified as “V.TR.” in the table’s last column) usually encode the number of their patient:

(14a) HIW

Noke	**not**	**mati**-ke! [16]
1sg	hit:NPL	to.death:NPL-2sg

‘I will kill you$_{SG}$!’

(14b) HIW

Noke	**trāñwe**	**qētqēt**	i	kimi!
1sg	hit:PL	to.death:PL	DOM	2pl

‘I will kill you$_{PL}$!’ [AF.EP2-42a]

Note here that the alternation affects the verbal head ‘hit’ (*not* vs. *trāñwe*) but also the resultative adverb ‘to death’ (*mati* vs. *qētqēt*), yielding two quite different-sounding sentences. Both word classes here follow the same ergative alignment, indexing the number of the patient.

That said, a handful of verb-number pairs form an exception to this principle: these are the bivalent verbs obtained historically through morphological derivation out of intransitive verbs. In Table 8, these are the forms labelled ‘V.INTR. DER.’, i.e. “intr. verb derived [into a transitive]”.

For example, the verbal pair *törön* → *vënrön* ‘fetch ‹s.o., s.th.›’ is not sensitive to the number of its patient, but of its agent:

(15a) HIW

Noke	peon	**törön**	i-ke	me.
1sg	FUT	fetch:NPL	DOM-2sg	hither

‘**I** will pick you$_{SG}$ up.’ [AF.EP2-36a]

(15b) HIW

Kema	peon	**vënrön**	i-ke	me.
1exc:pl	FUT	fetch:PL	DOM-2sg	hither

‘**We**$_{PL}$ will pick you$_{SG}$ up.’ [AF.EP2-36a]

The reason for this accusative pattern is the connection that exists between this pair and the pair of basic motion verbs *tō* → *vën* ‘go (on foot)’. That connection is originally one of morphological derivation, involving a former applicative suffix **-rön* – equiv. of Eng. ‘go *after* ‹s.o., s.th.›’; however, that suffix is found nowhere else in the modern language, and the vowel harmony in *törön* [tʊg͡ʟʊn] has made this form now unanalysable.

A similar reasoning would apply to the pairs *terog* → *vënrog* ‘leave behind ‹s.o., s.th.›’ and *tevog* → *vënñog* ‘carry, bring ‹s.o., s.th.›’. These are all pairs of verbs derived from the motion pair *tō* → *vën*, using former applicatives that are no longer productive.[17] They inherit from their intransitive roots (*tō*, *vën*) the assignment of plurality to the agent of the underlying motion.

[16] Link: https://doi.org/10.24397/pangloss-0003259#S38 = [Hiw.Brothers.38]

[17] The suffixes *-rog* [-g͡ʟɔɣ], *-ñog* [-ŋɔɣ], *-vog* [-βɔɣ], all reflect the POc applicative suffix **-(C)akin* (Evans 2003).

4.2.3. Comparing Lo-Toga and Hiw

Several verb pairs are shared between Lo-Toga and Hiw. This is the case when the forms themselves are cognate, as indicated in bold. In some cases, the two languages present a verbal-number pair for the same meaning, yet the forms have different etymologies – see the verb forms for 'cry' (LTG *kerë* → *vërkari*, HIW *woge* → *wogig*) or 'stone ‹s.o., s.th.›' (LTG *let* → *gōh*, HIW *ove* → *pyot*).

One may also reverse the perspective, and pay attention to the differences between the two neighbours. It is in fact striking how many pairs are found only in one language and not the other: thus 'jump' or 'escape' are sensitive to verbal number only in Lo-Toga; as for 'hang', 'throw', 'tie', 'stow'…, they encode verbal number only in Hiw.

Altogether, Lo-Toga has 17 verbal-number pairs; Hiw has a total of 33. As we shall now see, these are high figures compared to typological tendencies.

5. ANALYSING HIW AND LO-TOGA IN A BROADER PERSPECTIVE

5.1. The Torres languages in their Oceanic context

Hiw and Lo-Toga stand out among their Oceanic neighbours. In their immediate vicinity, the Banks languages show virtually no lexical pair related to number (François, pers. data); the only exception being perhaps the equivalent of 'take', which tends to be lexified by one form for a singular object (e.g. Mwotlap *lep* 'take') and by another form for plural objects (Mwotlap *vēl* 'collect'); however, this distribution remains optional, and is nowhere so entrenched and grammaticalised as it is in the Torres languages, e.g. with the Hiw pair *oye* 'take:NPL' vs. *viye* 'take:PL'.

The case most similar to the Torres languages is the language Daakaka (Ambrym island, Central Vanuatu) which has 12 pairs of verbs coding for argument number (von Prince 2015: 57–59). This similarity cannot reasonably be assigned to language contact, considering the distance, both geographic and linguistic, between Ambrym and the Torres islands [*Map 1*]: among the ≈100 languages spoken in the interval zone (François et al. 2015:3), none appears to have grammaticalised verbal number in the same way. The Torres languages and Daakaka thus constitute cases of parallel historical development.

Among the languages of Island Melanesia, it is not uncommon to find a few suppletive lexical pairs related to number, but more often among nouns [see §2.4] and adjectives:[18]

- Tamambo (Vanuatu) has two pairs *vorivori* 'small:SG' ≠ *waririhi* 'small:PL';
  tawera 'big:SG' ≠ *watitina* 'big:PL' (Jauncey 2011:277)
- Teanu (Solomon Is.) has 9 pairs like *emele* 'woman' ≠ *daviñevi* 'women';
  aplaka 'small:SG' ≠ *wamtaka* 'small:PL' (François *in prep.*)

The only Oceanic languages that have been discussed in the general literature on verbal number belong to the small branch of Polynesian languages. Durie (1986) cites Kapinga-marangi; Veselinova (2006), in her sample of 12 Austronesian languages, has Samoan as the only one that would show any trace of verbal number. Hiw and Lo-Toga would deserve to be added to such a sample.

[18] Ross (1998:98-99) discusses irregular and suppletive plurals among various Oceanic languages.

5.2. The Torres languages in typological perspective

Beyond the Austronesian family, the alternation of verb stems coding for participant number has been discussed for other languages around the world – see the syntheses in Durie (1986), Mithun (1988), Corbett (2000), Veselinova (2006, 2013), Mattiola (2019).

From a sample of 193 languages, Veselinova (2013) found such structures in 34 languages, corresponding to 18% of her sample. The phenomenon is mostly prevalent in northern America (see Swanton 1911:276 on Haida; Harley, Tubino & Haugen 2017 on Hiaki; and Durie 1986, Mithun 1988 for broader syntheses), but it has been reported also in scattered places of South America (e.g. Queixalós 1998 on Sikuani), eastern Africa (e.g. Mattiola 2019 on Beja), or New Guinea (e.g. Arka & Dalrymple 2016 on Marori; Carroll 2016 on Ngkolmpu).

Each language differs in the number of suppletive verbal pairs it has. Veselinova (2006:207) reports generally low numbers, ranging from 1 or 2 pairs to a dozen; she found the language with the highest number of suppletive pairs to be !Xũ (Namibia), with 18 verb pairs. With 17 pairs for Lo-Toga and 33 pairs for Hiw, the two Torres languages thus stand out not only within their own family, but also compared with worldwide tendencies.

Verbal number tends to target the same lexical domains across the world (Veselinova 2006: 154):

- physical size (‘big’, ‘small’);[19]
- posture and position (‘sit’, ‘stand’, ‘be located’…);
- motion (‘go’, ‘run’…), caused motion (‘carry’, ‘give’…);
- intense physical impact (‘die/dead’, ‘hit’, ‘kill’, ‘break’…);

These semantic domains also verify for the two Torres languages: out of the 34 verb meanings listed in our inventory, 24 have also been reported for other languages (Veselinova 2006:208). To these already attested meanings, the Torres data add a few more : ‘be alive, escape’; ‘hang [INTR]’, ‘hang [TR]’; ‘shoot ‹s.o., s.th.›’, ‘stone ‹s.o., s.th.›’; ‘tie’; ‘plant’; ‘fetch’; ‘leave behind’; ‘cry’.

As to the reason why verbal number targets these semantic domains in particular, the best explanation is that these correspond to the types of events for which the semantic contrast is most salient between what could be called “individual” vs. “collective” configurations. Indeed, a group of people standing together evokes a certain type of image, which cannot just be equated with the situation of a single person standing. Whether considered visually, spatially or socially, a *collective* posture (a group of people sitting, standing or lying) really constitutes a different kind of event from its *individual* counterpart. The same can be said of other events such as motion or impact. As Mithun (1988:214) puts it:

> Walking alone is classified lexically as a different activity from walking in a group; speaking is different from conversing; murdering an individual is different from massacring a village.

These are the semantic domains for which the nuance between “individual” and “collective” is most significant. Such events are most likely to undergo separate lexification, because speakers intuitively find their participant-number configurations more “nameworthy” – to quote another key concept by Mithun (1984:848). By contrast, for lexemes such as ‘wash’, ‘hear’ or

[19] The domain of size is central to a unique case of number-related suppletion attested in Europe: namely, the inflection of the adjective ‘small’ in Danish – *lille* ‘small:SG’ vs. *små* ‘small:PL’ (Börjars & Vincent 2011). While the words ‘big’ and ‘small’ are also adjectives in the Torres languages, the parallelism with verbs justifies including them under the concept of verbal number [§4.2.1].

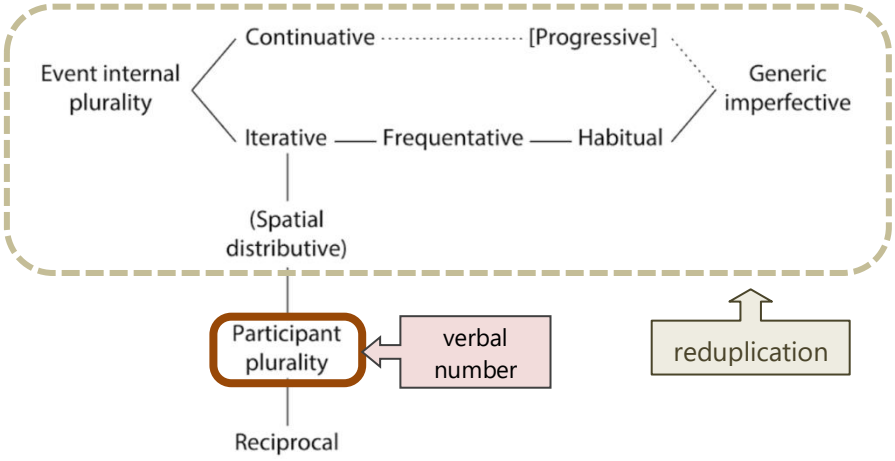
'remember', numerical configuration is semantically less prominent, and is thus less likely to materialise in the form of separate lexification.

5.3. Is this pluractionality?

In many languages showing lexical alternation linked to number, the structure can be ambiguous between encoding the number of a participant (typically, the absolutive argument) and expressing the plurality of the event itself. Thus, 'run:PL' may sometimes mean that many people run at once; or that a single person performs repeated running – in an iterative or habitual sense, for example. Such ambiguity is sometimes captured using the broad concept of PLURACTIONALITY (cf. Newman 2012).

As far as the two Torres languages are concerned, the alternation of verb radicals corresponds strictly to the number of participants. Other types of pluractionality are encoded using a different strategy, namely REDUPLICATION: e.g. *yëar̄* [jeag͡L] 'seek' → *yerȳëar̄* [jəg͡Ljeag͡L] 'PLURAC~seek' – see (5). While verbal number is restricted to a closed set of verbs, reduplication is open to all lexemes. In the Torres languages as much as their close neighbours,[20] verb reduplication may encode distribution in space or time; iterative or frequentative; continuous aspect (progressive, habitual); gnomic or infinitive. Figure 2 is based on the semantic map of the "pluractional conceptual space" proposed by Mattiola (2019:56); it shows the respective roles of reduplication and verb alternation in the Torres languages.

Figure 2 – Map of the PLURACTIONALITY domain (after Mattiola 2019) showing the functions of verb alternation vs. reduplication in the Torres languages



A couple of verbal plurals in the Torres are formed by morphological reduplication: e.g. LTG *metur* 'sleep:SG' → *metmetur* 'sleep:NSG'; HIW *kkë* 'small:NPL' → *këkkë* 'small:PL' [Table 8]. But these are the exception rather than the rule: in general, the two devices are formally distinct. For example, the verb 'sleep' in Hiw, *mitir̄*, reduplicates as *mitmitir̄* 'PLURAC~sleep:NPL';[21] this is different from the plural-subject form *motr̄ig* 'sleep:PL'.

Pluractionality (coded by reduplication) and verbal number (coded by lexical alternation) are two orthogonal dimensions, which can occasionally combine:

[20] See François (2004) on Mwotlap; Schnell (2011:116–8) on Vera'a; Malau (2016:172-197) on Vurës.

[21] As per the Leipzig rules, glosses use a tilde '~' to indicate the meaning associated with reduplication. A general gloss like '**PLURAC**~sleep' may be rendered more specific depending on the context of a particular example: e.g. (16b) '**HAB**~sleep' points to the Habitual sense, one of the possible subcases of pluractionality [Figure 2].

(16a) HIW Keko =kye ve **mitīr.**
child:NPL =my IPFV sleep:NPL
'My child is sleeping.' [–PLURAL], [–PLURACTIONAL]

(16b) Keko =kye në **mitmitīr** gö.
child:NPL =my STAT **HAB**~sleep:NPL fast
'My child sleeps easily.' [–PLURAL], [+PLURACTIONAL]

(16c) Tuqunkë =kye ve **motr̄ig**.
child:PL =my IPFV sleep:PL
'My children are sleeping.' [+PLURAL], [–PLURACTIONAL]

(16d) Tuqunkë =kye në **motmotr̄ig** gö.
child:PL =my STAT **HAB**~sleep:PL fast
'My children sleep easily.' [+PLURAL], [+PLURACTIONAL]

5.4. Is this agreement?

While pluractionality – marked by reduplication – is independent from the number of participants, the same cannot be said for verbal number. Insofar as the stem alternation is determined by participant number, it is tempting to see it as a form of agreement. Thus in (16a-b), the non-plural radical *mitīr* agrees with non-plural subject *keko* 'child'; plural *motr̄ig* in (16c-d) agrees with plural subject *tuqunkë* 'children'.

Things can be slightly more complex, though. Sentence (1) in §1.1 illustrated a case where the subject NP, namely *wōmetu* 'coconut(s)', was inanimate and thus underspecified for number. The proper verb form for 'fall' had then to be chosen based on the actual quantity of the referent, rather than based on a morphological number feature that would have been already assigned to the subject NP, and then simply copied – by syntactic agreement – onto the verb. And indeed, we saw that nominal number and verbal number follow different principles and patterns [Table 7 p.9]. Likewise, the constructed dual in (10b) was made possible precisely due to a mismatch between verbal and nominal categorisations.

Rather than syntactic agreement strictly speaking (when a morphological feature is assigned to one constituent and simply copied onto other constituents), it is more accurate to speak of *semantic agreement* (Corbett 1979, Plank 1984). Another way to express the nuance is to say that what verbal-number alternation really does is to *select for* a certain subtype of (absolutive) argument, rather than agree formally with it (Durie 1986).

Both analyses are in fact compatible. Thus, a non-plural verb in Hiw will select for a singular or dual absolutive argument. If the latter is formally marked as singular or dual, then this is a case of "agreement" (if only semantic) between verbal number and nominal number. But if the NP is itself underspecified for number, then the verb stem does effectively "project" a certain number value onto that NP.

The following pair of sentences, taken from my corpus, illustrates the semantic selection that is operated by verbal number. As we saw in §2.5, Hiw commonly employs a singular phrase *ne tayö* (lit. 'a/the person') for generic reference to humans, whatever its intended number. Interestingly, while the NP itself is formally singular, it may combine with verbs selecting both for plural and for non-plural arguments, depending on the semantic interpretation in context. Sentence (17) refers generically to an individual person, and hence combines *ne tayö* with non-plural verbs (*mët* 'die:NPL', *ēn* 'lie:NPL') and singular possessive markers (*-ne*, *=(e)na*):

(17) HIW Taketimerën pe **ne** **tayö** on ***mët*** ,
moment REL ART:COM person SBJV **die.NPL**

tite tivig n' opë-*ne* ve ***ēn*** yö ñwët *=ena*.
1inc:pl bury ART:COM body-3sg IPFV lie.NPL LOC grave =3sg
'Every time SOMEONE dies, we bury their body in their grave.' [Hiw.d06.Ghosts:02]

While (18) is also semantically generic, it refers to events such as wars – involving massacres, collective deaths and funerals. As a result, the formally singular phrase *ne tayö* combines with the plural forms of verbs (*qētñog* 'kill:PL', *qēt* 'die:PL', *viye* 'take:PL'):

(18) HIW Tomñwëtom se on vën yö veřoye,
if 3pl SBJV go.PL LOC war

s' on ***qētñog*** *ne* *tayö* *ne* *tayö* on ***qēt***,
3pl SBJV **kill.PL** ART:COM person ART:COM person SBJV **die.PL**

sise ***viye*** n' opë-***se*** me, se mok eřē qoř. [22]
3pl take.PL ART:COM body-3pl hither 3pl lay on tomb
'Whenever they would go to war, as PEOPLE were *massacred* and *died-in-numbers*, [their countrymen] would *collect their* bodies and lay them in tombs.'

The contrast between these two sentences illustrates the sort of classifying effect (Plank 1984, Mithun 1989) that results from the choice of a given verb form: while some verbs select for a [+individual] argument, others force an interpretation as [+collective].

In sum, verbal number does more than just agree with an argument. What it does is classify its referent as individual or collective, whether or not nominal number is explicit in this respect.

5.5. Is this suppletion?

The alternation of verb radicals coding for participant number has occasionally been described as SUPPLETION (e.g. Veselinova 2006:150, 2013; Harley, Tubino & Haugen 2017). And indeed, such a formal alternation is reminiscent of suppletion in noun plurals, such as Russian *ребёнок* /rebënok/ 'child' → *дети* /deti/ 'children', or Standard Arabic مرأة /marʔa^{h}/ 'woman' → نساء /nisāʔ/ 'women';[23] or in adjectives, e.g. Danish *lille* 'small:SG' → *små* 'small:PL' (Börjars & Vincent 2011).

The number-triggered alternation of radicals found in Hiw is obligatory for verbs just like it is for nouns, and it would be quite tempting to analyse it as a case of suppletion indeed; this would capture the strong paradigmatic effect that is effectively observed between the two members of each pair. And yet, the status of such alternations remains controversial. Several authors – particularly Mithun (1988), Corbett (2000) – have pointed out that the term "suppletion", strictly speaking, should be reserved to the case when the alternation of non-cognate stems is an exception to an otherwise regular pattern of morphological inflection. For example, Arabic /marʔa^{h}/ vs. /nisāʔ/ is suppletion, because this change of stem is an exception to a more regular paradigm of plural formation – e.g. صديقة /ṣadīq-a^{h}/ 'FEM.friend:SG' → صديقات /ṣadīq-āt/ 'FEM.friend:PL'. As a corollary, /marʔa^{h}/ and /nisāʔ/ are to be analysed, synchronically, as two allomorphs of a single lexeme in complementary distribution, rather than two separate lexemes.

[22] Link: https://doi.org/10.24397/pangloss-0003252#S4 [Hiw.Religion.04]

[23] We saw in §2.4 that Hiw too has number suppletion for some of its nouns. Compare in (16) *keko* 'child:NPL' (a synonym of *megoye*) vs. *tuqunkë* 'children:PL'.

And indeed, if one sets aside reduplication (which only concerns a couple of verbs), the Torres languages lack any morphological pattern of inflection that would regularly turn a singular verb into a plural form. Most verbs in the lexicon do not vary depending on any participant: verbs like Hiw *yō* 'see' or *yëarˉ* 'seek' never change according to the number of their arguments. In that sense, the regular alternation illustrated in this study is not, strictly speaking, a suppletive pattern. Instead, the two members of each pair should be considered different verbs altogether, two lexemes that are "related lexically but not inflectionally" (Mithun 1988:214). As is often pointed out, the contrast could be compared with such pairs as Eng. *kill* vs. *massacre*, which are clearly two distinct lexemes, each showing a preference for a different type of object.

That said, a weak analogy with lexical pairs such as Eng. *kill* vs. *massacre* would ultimately fail to capture the phenomenon at stake here. The selection of argument number in this English example is mostly a matter of statistical preference, and the alternation is nowhere as systematic as it is in languages with proper verbal number; a sentence like *He killed everybody* remains perfectly grammatical in English, and the version *He massacred everybody* is merely a stylistic variant. By contrast, the alternation illustrated in (9) above [§3.3] for the verb pair meaning 'kill' is systematic and obligatory; it is ungrammatical to use *qētn̄og* with a singular patient, or *not* with a plural one. The formal constraint here is as strong as any morphosyntactic rule of agreement, and the effect is clearly one of a paradigmatic contrast in number.

Let us synthesize these various observations. Verbal number in the Torres languages does not constitute proper morphological suppletion, since it does not fit within a broader pattern of regular plural formation. The contrast is not between two allomorphs of a single word, but between two separate lexemes; these share the same basic verbal meaning, yet differ as to what number each verb assigns to its absolutive participant, as part of its lexical profile. Our final discussion [Section 7] will indeed provide empirical evidence that the members of each pair constitute distinct lexical items, endowed with their own morphosyntactic or semantic properties. And yet, we need to find a way to acknowledge the formal, systematic aspect of verbal number alternation, which is more than just a matter of lexical "preference".

5.6. A lexical paradigm

My proposal would be to analyse verbal-number pairs as instances of what I'd call a LEXICAL PARADIGM. This would capture the fact that the contrast in number defines a paradigmatic distribution which is as systematic as any other morphological contrast in the language; *and yet*, the contrast takes place not in the morphology, but in the lexicon.

While the term "paradigm" is most often associated with inflectional morphology, it can legitimately be applied to certain systematic relations among lexemes. An example of a lexical paradigm in English would be certain zoonymic terms: {*cow:calf*}, {*pig:piglet*}, {*sheep:lamb*}, {*horse:colt*}, {*goat:kid*}, {*dog:puppy*}, {*cat:kitten*} form together a paradigmatic set in which the semantic relation is parallel across all pairs (see Cruse 1986:118 sqq). This can be stated as a relation of proportionality or analogy, reading "*cow* is to *calf* what *pig* is to *piglet*, what *sheep* is to *lamb*," and so on. Another, smaller paradigm is formed by the English pairs {*cow:beef*}, {*pig:pork*}, {*sheep:mutton*}. Words like *cow* and *beef* would hardly be analysed as two allomorphs of a single abstract lexeme, that would alternate by suppletion: evidently they are separate words, yet ones that form part of a regular semantic pattern in the language. Such "lexical configurations" (Cruse 1986:112) remind us that the lexicon has its own internal regularities and structural principles, independent of the grammar.

I propose the following definition of a LEXICAL PARADIGM:

(19) A LEXICAL PARADIGM is a set of word pairings such that the semantic relationship between their components is identical across all pairs:
$\{a_1{:}b_1\}=\{a_2{:}b_2\}=\{a_i{:}b_i\}\ldots=\{a_j{:}b_j\}$

One basic example of a paradigmatic relationship between lexemes is the relation of antonymy, e.g. {*open:shut*} = {*deep:shallow*} = {*broad:narrow*} = {*thick:thin*} = {*bright:dark*}…, involving words of the same word class. But a lexical paradigm may involve lexemes of different classes. Take, for example, the subsystem found in the Japanese lexicon, between names of clothing and the corresponding verb describing how to "put on" that clothing. The paradigm deploys as follows:[24]

(20) JAP {*bōshi* 'hat' : *kaburu* 'put on [hat]'}
= {*tebukuro* 'gloves' : *hameru* 'put on [gloves]'}
= {*shātsu* 'shirt' : *kiru* 'put on [shirt]'}
= {*zubon* 'trousers' : *haku* 'put on [trousers]'}
= {*beruto* 'belt' : *shimeru* 'put on [belt]'}

This lexical paradigm shows a relation of proportionality across noun/verb pairs: a hat is to the verb *kaburu* what gloves are to the verb *hameru*, etc.

Lexical paradigms are language-specific. A semantic relation can be made paradigmatic in one language, yet ignored in another language. For example, the various ways one can put on a piece of clothing are lexified separately in Japanese, and organised into a solid lexical paradigm (20); by contrast, English colexifies all these actions using a single verb *put on*, and lacks any noteworthy lexical configuration here.

In languages that make systematic use of verbal number, I propose to analyse the pattern of alternation not as suppletion, but as a manifestation of a lexical paradigm involving separate lexemes. To quote some Hiw forms from Table 8, this paradigm can be represented as a relation of proportionality between individual vs. collective verbs: {*tō:vën*} = {*tu:vor̃tur̄*} = {*mët:qēt*} = {*gön:pr̃og*}… – that is, '*individual walking* is to *group walking* what *individual standing* is to *group standing*, what *individual death* is to *collective death*'… The words involved in that subsystem differ as to which number they project onto their prominent participant, yet they are semantically close enough to form coherent pairs, organised in a well-structured lexical paradigm.

5.7. Synthesis

Before we turn to the historical aspects of verbal number in the Torres languages, I will summarise here what we have learned so far.

Hiw and Lo-Toga, the two northernmost languages of Vanuatu, have developed a regular paradigm in their verbal lexicons, involving pairs of synonyms. These verb pairs come in complementary distribution in speech, depending on the number of their most prominent participant (generally, their absolutive argument).

Verbal number encodes a contrast in participant number; it differs from pluractionality, which is coded by reduplication. Yet rather than being a mere case of syntactic agreement, the alternation follows rules that are specific to verbal number, and only partially coincide with nominal number. While both languages can be said to oppose "individual" vs. "collective"

[24] I am grateful to Sawako Nishimura-François for this example.

events, they differ in how they divide these two emic categories: thus Hiw classifies duals as [+individual], but Lo-Toga treats them as [+collective].

While such a pattern is attested in scattered areas around the globe, it is rarer in the Pacific, and makes the two Torres languages original within their area (Vanuatu) and their family (Oceanic). Particularly worthy of notice is the high number of verb pairs that constitute each language's verbal number paradigm: 17 pairs for Lo-Toga, 33 for Hiw.

6. THE HISTORICAL DEVELOPMENT OF VERBAL NUMBER IN THE TORRES LANGUAGES

The question arises of how this number-based lexical paradigm may have originated historically. What can we know of the etymology of these pairs? Can we reconstruct a plausible scenario of their development? As we'll see, the comparative method can be of considerable help here.

6.1. A hidden morpheme

The historical path followed by number-related verb alternation in Hiw and Lo-Toga can be reconstructed by comparing the two languages, and observing what they have in common in light of their known historical phonology.

An analysis of Table 8 in §4.1 shows that Hiw and Lo-Toga share certain verbal pairs, but not all [§4.2.3]. For some meanings, shown as bold in Table 8, the modern forms are cognate. For example, the sense 'to plant ‹s.th.›' is encoded by a pair *ton* 'plant:SG' → *va* 'plant:PL' that is shared by the two languages. The principle of Occam's razor suggests that the system of verbal alternation must have begun at an early time of shared development between the two languages. The stem pairs that are cognate between the two Torres languages can then be assigned to that early phase of development, which may be named "Proto-Torres" [PT].

Knowledge of regular sound correspondences in the area (François 2005a, 2010b, 2016) allows us to reconstruct the form for each verb in the protolanguage, and sometimes retrieve its etymology. Thus for the sense 'to plant', one can recognise SG *ton* < POc **tanum* 'bury, plant (tuber)'; and PL *va* < POc **pasok* 'plant (tubers+) by making holes' (Ross et al. 1998: 132).

Several verbal pairs point to a pattern of morphological derivation, in the form of a circumfix that can be reconstructed as Proto-Torres **ßari-… -i* (Table 9). The prefixal part is the source of the syllable LTG *vër-*/HIW *vor̄-* in various forms. As for the suffix **-i*, it entailed a shift in word stress, with notable impact upon the phonological form of each radical (François 2005a:481).

Table 9 – Some verb plurals reflect the POc pluractional circumfix *paRi-… -i

meaning	SINGULAR				PLURAL		
	lg	IPA	p-Torres	POc	IPA	p-Torres	POc
'stand'	LTG	/tʉ/	*túu	*tuqur	/**β**ɐrtʉr/	*βári-tuúr-i	***paRi**-tuqur-**i**
'sit'	LTG	/haɣ/	*sáɣe	*sake	/**β**ɐrhaɣir/	*βári-sásaɣér-i	***paRi**-sasake(r)-**i**
'lie down'	LTG	/in/	*éno	*qenop	/**β**ɐrənəβ/	*βári-enóβ-i	***paRi**-qenop-**i**
'cry'	LTG	/kərɛ/	*ᵑgarái	…	/**β**ɐrkari/	*βári-ᵑgáraí-i	***paRi**-…-**i**
'stand'	HIW	/tʉ/	*túu	*tuqur	/**β**ɔg͡ʟtʉg͡ʟ/	*βári-tuúr-i	***paRi**-tuqur-**i**
'sit'	HIW	/saɣ/	*sáɣe	*sake	/**β**ɔg͡ʟsasəg͡ʟɪɣ/	*βári-sásaɣér-i	***paRi**-sasake(r)-**i**
'sleep'	HIW	/mitig͡ʟ/	*matíru	*matiruR	/mɔtg͡ʟiɣ/[25]	*mátirúr-i	*matiruR-**i**

[25] The plural form for 'sleep' does not reflect the prefixal element **paRi-*, but unambiguously retains traces of the suffix **-i*. The sound change in /mɔtg͡ʟiɣ/ is explained in François (2011b:152).

The origin of that structure is easy to retrieve. It reflects the circumfix **paRi-…-i* which Pawley (1973:152) reconstructs for Proto Oceanic, and glosses "*combined or repeated action by a plurality of actors, or affecting a plurality of entities*" – that is, what would now be called 'pluractional' [§5.3]. The prefix **paRi-* is preserved in the neighbouring Banks languages (François 2011b:158), albeit vestigially, with a reciprocal or pluractional meaning: e.g. Mwotlap *tit* 'punch ‹s.o.›' → ***vēy-titit*** '*‹non-SG subject›* punch each other, fight' (François 2001:250). In the Banks languages, the prefix is optional, and a plural subject remains compatible with the unaffixed verb:

(21a) MTP Ige susu kēy **siseg** yow ale.
HUM:PL children 3pl play out on.beach
'The kids are *playing* on the beach.'

(21b) MTP Ige susu kēy ***vēy*-siseg** yow ale.
HUM:PL children 3pl PLURAC-play out on.beach
'The kids are playing (in a competitive way) on the beach.'
'The kids are *outplaying each other* on the beach.'

In most northern Vanuatu languages, reflexes of **paRi-* add a semantic nuance of reciprocity or competitiveness. Its association with a plural actor is an implicature, but is not the primary function of that morpheme.

6.2. An emergent paradigm

Based on these observations, we can propose a possible scenario to account for the historical development of verbal number in the Torres languages.

The remote ancestor Proto-Oceanic had optional morphology to highlight the plurality of participants (subjects or objects) for certain states or events. While a single person standing would be described with the verb **tuqur* 'to stand', a group of people in the same position could be described either (1) using the exact same form **tuqur*; or (2) using a reduplicated form; or, optionally, (3) resorting to a dedicated morpheme of pluractionality, in the form ****paRi-tuqur-i*** 'to stand (as a group)'. Along with this heavier form, the simple form **tuqur* always remained possible even with a plural subject – in line with the Mwotlap examples (21a-b).

The ancestor of Hiw and Lo-Toga went through a process of grammaticalisation, whereby the circumfix **paRi-…-i* became associated with plurality in such a systematic way that – for certain verbs – it ended up being obligatory with plural arguments. The alternation between the short and the long forms became conditioned grammatically by the number of the subject, resulting in complementary distribution: the simple form **tuqur* 'stand' was reserved to a singular subject (> LTG/HIW *tu*), while a plural argument entailed the use of the affixed form **paRi-tuqur-i* 'stand collectively' (> LTG *vërtur*, HIW *vorr̄tur̄*).

There was evidently some hesitation when the argument was a dual. Eventually, this question would be settled differently in each language, as Lo-Toga was to categorise dual referents together with plurals [§3.4], whereas Hiw would end up treating them in the same way as a singular, individual referent [§3.2].[26]

For the speakers, this incipient morphological alternation between singular and plural verb forms was capturing a subtle yet meaningful semantic contrast: namely, the one that opposes, for a certain action or state, an individual vs. a collective configuration. Such a semantic contrast

[26] In the remainder of this paper, I will simply contrast "singular" with "plural" forms, without mentioning the special case of dual arguments any more.

is highly salient for posture verbs, because a groupe of people standing, or sitting together, or lying on the ground, bring visual configurations and/or evoke social situations that differ quite strikingly from their individual equivalents. Such was the nuance captured by the formal contrast between a verb V and a derived plural form **paRi*-[V]-*i*.

The more this morphological alternation became entrenched in discourse, the more often speakers would mentally tune into the semantic contrast between individual and collective events. A natural outcome of this trend could have been the generalisation of the **paRi*-…-*i* morphology to many verbs – yet that is not what happened. Instead of exploiting that particular circumfix, what the Torres languages did was to identify existing pairs of synonymous verbs in the lexicon, and repurpose them so as to emulate the emergent semantic contrast between individual and collective events.

The amount of sound change that affected the two Torres languages, particularly the drastic evolution of vowels (François 2005a), may have acted as a force disfavouring the application of the **paRi*-… -*i* circumfix to other verbs. The pairs cited in Table 9 possibly became soon morphologically opaque: this would have discouraged the use of the circumfix, and fostered a strategy taking place in the lexicon instead, involving separate words.

For example, we saw that Proto Oceanic had two verbs meaning ‘plant ‹s.th.› in the ground’, **tanum* and **pasok*. As far as we can reconstruct, their semantics were very close, with possibly a subtle contrast between an event focused typically on a single tuber (**tanum* ‘bury, plant (tuber)’), vs. an activity repeated over several tubers (**pasok* ‘plant (tubers+) by making holes’ – Ross et al. 1998: 132). The latent opposition between single and plural arguments here was then systematised or “crystallised” in the Torres languages: eventually, the reflex of **tanum* (> *ton*), became restricted to singular patients, while **pasok* (> *va*) was used only with plural objects. In modern Hiw or Lo-Toga, these two verbs refer to essentially the same action, and only differ by the number of their absolutive argument (the patient):

(22a) HIW

Noke	**ton**	ne	pēta	ti	yöte	=kye.
1sg	plant:**NPL**	ART	yam	PAST	in.garden	=my

‘I planted a yam in my garden.’

(22b) HIW

Noke	**va**	ne	pēta	ti	yöte	=kye.
1sg	plant:**PL**	ART	yam	PAST	in.garden	=my

‘I planted some yams in my garden.’

There was evidently a snowball effect. The more pairs came to enrich the number paradigm, the more often the speakers felt the cognitive pressure to differentiate formally individual from collective events, for at least some prominent meanings. For some verbs, this process of number specialisation produced a “lexical gap”, as it were, that could only be filled by bringing in new lexical material from close synonyms. The mechanism that ensued may be described as a form of “hijacking” – as pairs of semantically close verbs in the lexicon became harnessed into the emergent paradigm of verbal number.[27]

6.3. Harnessing synonyms towards a paradigm

Hiw and Lo-Toga pursued the process of paradigmatic harnessing (“hijacking”) with more verb pairs. Among the forms in Table 8, several can be traced back to their etymon.

[27] The mechanism is, in fact, quite analogous to the lexical processes at stake in the development of actual suppletion (Rudes 1980; Börjars & Vincent 2011); see other papers in this volume.

For the meaning '**take, give**', the regular reflex of POc **alap* 'take' – namely LTG *ole* [ɔlə], HIW *oye* [ɔjə] – became restricted to singular absolutive arguments ('take:SG'). As for plural arguments, the common ancestor Proto-Torres exploited the PTB root **βile* 'collect, pick up, bring together (typic. several objects)'. As a result, the two verbs ended up forming together a singular–plural pair for the same set of meanings 'take, collect, give': HIW *oye* [ɔjə] vs. *viye* [βijə].

For the sense '**die, be dead**', Proto-Oceanic had a root **mate*. That root was retained in the Torres languages, but once again, restricted to singular referents: **mate* > HIW *mët*, LTG *mēt* 'die:SG'. In order to fill the perceived lexical gap for plural referents ('to die in numbers'), each language then created its own plural counterpart, by repurposing verbs whose initial meaning was different:

- PNCV **^{m}bunu* 'extinguish (fire); kill; poison (fish) in large numbers' (Clark 2009:90)
  → LTG *pun* [pʉn] ~ *pepun* [pəpʉn] 'die:NSG'
- PTB **^{m}b^{w}eti* 'be finished, vanish entirely' (François 2005a:494)
  → HIW *qēt* [k^{w}ɪt] 'die:PL'

The same roots appear in the resultative forms '(beat…) to death' that were illustrated in ex.(14). Reflexes of **mat-i* (> LTG *mēsi*, HIW *mati*) are exclusively singular; the resultative plural is a reduplicated version of the corresponding plural verb: LTG *punpun*, HIW *qētqēt*. As for the causative 'kill' (Table 8), its modern forms are of unclear origin; but the Hiw plural form *qētn̄og* [k^{w}ɪtŋɔɣ] 'kill:PL', is clearly derived from *qēt* via the POc applicative *-(*C*)*akin* [fn.17].

For the meaning '**fall**', Hiw *sō* [so] is a regular reflex of PNCV **zovi* 'fall, lean' (Clark 2009: 240). The verb became restricted to singular subjects; as for the plural meaning ('fall:PL'), it was created by hijacking, i.e. repurposing, the POc root **sipo* 'go down' – yielding the form *siw* or *iw* 'fall:PL'; see ex. (1), and the final discussion in §7.3.2.

The meaning '**go (on land)**' was initially expressed with a POc verb **pano* > [βen] (spelled *vën* in Hiw, *vēn* in Lo-Toga). In Hiw, that root became restricted to plural referents. As for its singular counterpart, it is now a verb *tō* [to], whose origin is PNCV **tua*(*-ki*) 'leave, go away' (Clark 2009:211).

As we saw in §4.2.2, the verbal-number contrast between *tō* 'go:NPL' and *vën* 'go:PL' is prevalent in the Hiw lexicon, and mirrored in various pairs of derived verbs – e.g. *tō me* vs. *vën me* 'come'; *tevog* vs. *vënn̄og* 'bring'; *tōr̄ön* vs. *vënr̄ön* 'go fetch', etc. In a similar way, the Hiw verb *mule > *n̄wuye* 'return, go back' is now restricted to plural subjects. If the subject is non-plural, then one must use a verb compound (initially a serial verb) of the form *tō n̄wuye* (lit. 'go:NPL return'). For this sense, the paradigmatic contrast now opposes a compound *tō n̄wuye* for non-plural, vs. a simple verb *n̄wuye* that is restricted to plural agents.

As a last example, consider the meaning '**shoot** ‹s.o., s.th.› **with arrow**' – HIW *vēnie* vs. *kar̄e(ñi)*. In the neighbouring language Mwotlap, the cognate forms, respectively *vēn* and *kay*, are two synonymous verbs meaning both 'shoot with arrow', with no entailment with respect to number; *kay* is the verb used most commonly, and *vēn* is a more elegant, literary equivalent, with no semantic contrast.[28] Hiw, in turn, ended up harnessing these two synonyms so they would incorporate the emergent verbal-number paradigm, resulting in a contrast between *vēnie* 'shoot:NPL' and *kar̄e(ñi)* 'shoot:PL'.

[28] Mwotlap teems with synonyms, which only differ by stylistic register; these are called respectively *no-hohole vasapsawyeg* 'casual vocabulary' vs. *no-hohole map* 'respectful vocabulary' (François 2011a:206–207).

As for other verb pairs, we may also note the occasional pattern of reduplication (LTG *metur* → *metmetur* 'sleep'; HIW *kkë* → *këkkë* 'small'); and also, the existence of a prefix *wu-* in Lo-Toga, of unknown origin, that accounts for certain pairs (e.g. *reri* → *wureri* 'small'; *wël* → *wuwël* 'jump', and possibly *ah* → *uah* 'escape'). But in most cases, the two Torres languages encode verbal number through a change of lexical root, following a process whereby lexemes were repurposed to enter a number-based paradigm in the lexicon.

7. FINAL DISCUSSION: ONE OR TWO WORDS?

In many respects, it would be tempting to conclude that what were once separate lexemes have now merged into a single lexical unit. As mentioned in §5.5, this is what typically happens with actual suppletion (Rudes 1980; Börjars & Vincent 2011): to take a well-known example, the three distinct Latin verbs *īre*, *vadere*, and *ambulāre*, eventually merged into a single verb in Old French, surviving merely as allomorphs within the word's tense system (resp. *j'irai, je vais, j'allais*…). These three allomorphic radicals now instantiate one and the same lexeme; they share a single infinitive (*aller*), they show the same polysemy and phraseology, the same combinatorics and valency.

One could propose the same for the Torres languages and suggest that, for example, they now have a single verb 'to plant' with two allomorphs: *ton* for singular patients, and *va* for plural patients. This conclusion sounds even more logical for those forms that resulted historically from morphological derivation: LTG *tu* vs. *vërtur* could legitimately be analysed as two different morphological instances of a single lexical verb meaning 'stand'.

And yet, a number of facts require us to challenge that conclusion. First, we saw that verbal number in the Torres languages does not, strictly speaking, qualify as suppletion [§5.5]. Second, the final discussion below will discuss several verbal pairs that clearly behave like separate lexemes.

7.1. Separate nominalisation

Hiw has a nominalising suffix *-ove* [-ɔβə] that derives any verb into a noun (François 2017:335):

(23a) HIW Yöywye ti-ke ti ne *sag-**ove*** =nome mi kema.
thanks DAT-2sg DAT ART sit:**NPL**-NMLZR POSS:2sg with 1ex:pl
'Thank you$_{SG}$ for having sat with us.' [*lit.* 'for your sitting…']

Surprisingly, that suffix combines with each radical separately, depending on the number of the underlying argument:

(23b) HIW Yöywye ti kemi ti ne *vorsasērēg-**ove*** =mi mi kema.
thanks DAT 2pl DAT ART sit:**PL**-NMLZR POSS:2sg with 1ex:pl
'Thank you$_{PL}$ for having sat with us.' [AF.EP3-04a]

This contradicts the hypothesis that singular and plural verb forms constitute two allomorphs of a single lexeme. If this had been the case, we would have expected them to share a single nominalisation – just like the radicals of Fr. *vais, allais* and *irai*, in spite of their distinct etymologies, now share a single infinitive. Instead, the separate nominalisation of each radical in Hiw argues in favour of treating them as distinct lexemes.

7.2. Different morphosyntactic properties

In general, two verb forms linked to the same meaning are expected to share the same syntax, the same valency and case frames: this is suggested, in particular, by the righthand column ("word class") of Table 8. Thus, HIW *mesō* and *yyave* 'large' both behave like adjectives – a category distinct from intransitive verbs in this language [§4.2.1]; LTG *kerë* and *vërkari* 'cry' are both intransitive verbs; HIW *mati* and *qētqēt* 'to.death' fit the same postverbal slot [§4.2.1] reserved to resultatives [§4.2.2]; and so on.

One special case is found, however, with the verbal pair meaning 'hang' in Hiw. For the intransitive sense 'hang [INTR], be hanging', the forms are *sëm* for the non-plural, and *quy* for the plural. For the transitive (causative) meaning 'hang ‹s.th.›', the contrast is between *vasëm* and, again, *quy*. If each of these pairs were considered a single lexeme with two allomorphs, this would mean that the form *quy* is an "allomorph" both of an intransitive verb *sëm* 'hang:INTR' and of a transitive verb *vasëm* 'hang:TR'. Perhaps a case of homophony?

Yet there is another way to look at the same data, which is to consider each form as a verb in its own right. If analysed on its own, *quy* is simply a "labile" verb (Letuchiy 2009), just like English *hang*; that is, it can express, without derivation, both a stative predicate 'be hanging', and its causative counterpart 'hang ‹s.th.›'.[29] By contrast, the singular form *sëm* is exclusively stative; in order to form a causative, it had to be derived by means of a (former) causative prefix *va-*:[30] *sëm* → *va-sëm*. The situation is summarised in Figure 3.

Figure 3 – When members of a verbal pair differ in their grammatical properties: Words for 'hang' in Hiw

	INTRANSITIVE 'be hanging'		TRANSITIVE 'hang s.th.'
NPL	*sëm*	⇒	*va-sëm*
PL	***quy***	=	***quy***

Such a state of affairs suggests, again, that each member of a verbal-number pair is ultimately a lexeme of its own, endowed with its own formal properties. Under that analysis, Figure 3 shows not two but three verbal lexemes:

- *sëm* [NON-PLURAL SUBJECT] 'be hanging'
- *vasëm* [NON-PLURAL OBJECT] 'hang s.th.'
- *quy* [PLURAL ABSOLUTIVE ARGUMENT] 'be hanging; hang (things together)'

To take a different example, Table 8 has a form *rōt* which is a transitive verb ('to cut, chop (several objects)') but also an adverb or "postverb" [§4.2.1], similar to Eng. *apart* in the phrase *break apart*. This word *rōt* shows lexical flexibility, as it belongs both to the word class of Transitive verbs and of Adverbs, through simple conversion. Crucially, this lexical flexibility of *rōt* contrasts with the behaviour of its non-plural counterparts, which are two distinct words *tarē* and *yēt* (Figure 4): *tarē* is a transitive verb 'to cut ‹s.th.›', *yēt* is an adverb.

[29] Etymologically, *quy* is cognate with Mwotlap *qul* '[V] glue, join; [N] bunch, bundle (of fruit, branches+)' (François 2019b), from PNCV **ᵐbulu* 'sticky stuff; to stick, join'. Its semantics thus included the notion of plurality from the get-go.

[30] This prefix *va-*, which is no longer productive in Hiw, takes its origin in the POc causative **pa*[*ka*]- (Evans 2003: 254 sqq.).

Figure 4 – When members of a verbal pair differ in their grammatical properties: Words for 'cut' in Hiw

	TRANSITIVE V 'cut, chop'		ADVERB '(V1) asunder'
NPL	*taṟe*		*yēt*
PL	***ṟōt***	=	***ṟōt***

Because the property of multicategoriality belongs to the level of the lexeme (François 2017: 299 sqq), it brings a further argument for confirming that each radical here constitutes a lexical item with its own grammatical properties.

7.3. Different semantic properties

Finally, a similar conclusion can be reached by comparing the semantics of each verb form in the lexicon.

7.3.1. Verbs for 'hit' and 'kill'

Hiw has three verbs for 'hit' or 'kill' (Table 8) – at least in the plural. It contrasts:

- *tṟañwe* 'club ‹people›, hit them with a club or stick';
- *ṟote* 'kill ‹people› by hitting them: club them to death';
- *qētñog* 'massacre ‹people›, kill them using any means (violence, poison, etc.)'.

Yet interestingly, these three meanings are distinguished in the plural, but colexified in the non-plural, which has only a single, polysemous verb:[31]

- ***not*** [nɔt] 'hit ‹s.o., s.th.› w. club or stick, resulting or not in death; kill ‹s.o.›, whether by hitting them or by other means.'

The configuration is shown in Figure 5.

Figure 5 – When members of a verbal pair differ in their semantic properties: Words for 'hit' and 'kill' in Hiw

	'hit with stick'	'kill by hitting'	'kill'
NPL	***not***	***not***	***not***
PL	*tṟañwe*	*ṟote*	*qētñog*

In sum, the verbs found to contrast paradigmatically in terms of verbal number may differ not only in their morphosyntactic behavior [§7.2], but also in their semantic outline. While three senses are distinguished in the plural, they are expressed by a single verb in the non-plural. One way to analyse this situation is to consider that Figure 5 has not three but four lexical units, each endowed with its own semantic profile, and with its number restrictions.

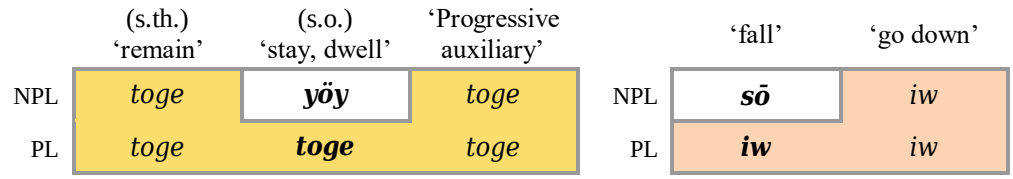
7.3.2. Verbs for 'stay' and 'fall'

Another situation is when a verb restricts the number of its arguments only for one of its meanings – in which case it contrasts paradigmatically with another verb – yet loses that restric-

[31] The colexification of 'hit' with 'kill' is common in Island Melanesia. It is witnessed, for example, by the Bislama verb *kilim* (< Eng. *kill him*) meaning 'hit, kill' – e.g. *kilim bambu* 'beat the drum'.

tion for its other meanings. Consider the examples given in Figure 6, around the meanings ‘stay’ and ‘fall’ in Hiw.

Figure 6 – When verbs have number restrictions for only some of their meanings



7.3.2.1. Stay

Hiw shows restriction on number for the meaning ‘stay’ – or more precisely, for the sense ‘‹s.o.› *stay, remain, dwell* [somewhere]’. If the subject is singular or dual, it is ungrammatical to use *toge*, and one must use *yöy* instead (24a); the opposite is true with a plural subject (24b).

(24a) Hiw **Sörörö** ve **YÖY** tañwöy yöñwe. [**Sörörö ve toge...*]
3du IPFV stay:**NPL** only in.house
‘They$_{DU}$ just stayed at home.’

(24b) Hiw **Sise** ve **TOGE** tañwöy yöñwe.[32] [**Sise ve yöy...*]
3pl IPFV stay:**PL** only in.house
‘They$_{PL}$ just stayed at home.’

But when ‘stay’ is used with inanimate subjects ‘‹s.th.› *stay, be located* [somewhere]’, the verb *yöy* is excluded, and *toge* becomes the only possible verb – with no restrictions on number.

(25) Hiw Suy i-e i n’ ov: ne temtomegë in ve **TOGE** që i-e.[33]
burn DOM-3sg OBL ART fire ART scar ANPH IPFV stay still OBL-3sg
‘She was burnt with fire: the scar still remains to this day.’

The verb ‘stay’ has also grammaticalised into an auxiliary marker coding for Progressive aspect – a typologically common process (Heine & Kuteva 2002). In that case too, *yöy* remains excluded even for human subjects, and the only possible form is *toge*, regardless of argument number:

(26) Hiw (**Noke ve YÖY vegevage...*)
Noke ve **TOGE** vegevage i Sintia pe në ain.
1sg IPFV AUX:**PROG** talk OBL Sintia REL STAT other
‘I am (right now) talking about another Sintia.’ [d12.Sintia:05]

As Figure 6 suggests, we can propose that Hiw had historically a single verb *toge* to encode the sense ‘stay’, compatible with subjects of all numbers and types – just like its POc etymon **toka* ‘stay’. However, for one – and just one – of its uses (verb of spatial location with animate subjects) that verb *toge* shrank its scope to only plural subjects, while non-plural arguments were assigned to a separate verb *yöy* with the same meaning ‘stay’.[34] The two verbs were harnessed into a paradigmatic contrast of number, yet only for one particular meaning.

[32] Link: https://doi.org/10.24397/pangloss-0003252#S28 [Hiw.Religion.28]

[33] Link: https://doi.org/10.24397/pangloss-0003264#S41 [Hiw.Grouper.41]

[34] Cognate with Hiw *yöy* [jəj] is Lo-Toga *gel* [ɣəl], a verb which also means ‘stay, be located somewhere; Progressive auxiliary’ (François 2010a:512), yet with no number restrictions on arguments – see ex.(12). Those two verbs point to a protoform *ɣoli, of unknown origin.

7.3.2.2. Fall

The same demonstration could be made for the contrast *sō* vs. *iw* – see ex. (1) in §1.1. When *iw* keeps it original meaning 'go down' (< POc **sipo*), then it loses any number restrictions, and remains compatible with all numbers. But when used to mean 'fall down', then it is restricted to plural subjects, in contrast with *sō*.

The two verbs are in a complementary distribution, but only for one particular sense. Historically speaking, this gives us a fair idea of how the process of lexical "harnessing" or "hijacking" must have taken place in the language. Pre-Hiw was surely similar to its neighbours, in having one verb for the meaning 'fall' (PNCV **zovi* > *sō*), and another one for 'go down, descend' (POc **sipo* > *iw*)[35] – both compatible with any number. As the emergent paradigm of verbal number gained momentum in the lexicon, speakers felt the pressure to encode number contrast on even more verbs – particularly, those for which number configuration is the most salient semantically [§5.2]. And indeed, the falling of one or two individuals is quite distinct from the mental image of a "collective falling" of many objects or people – enough to warrant the search for some extra lexical material.

The inherited verb **zovi* (> *sō*) ended up referring strictly to the "prototypical" representation of an individual falling; in parallel, the semantically close verb *iw* 'go down' was recruited for the purpose of filling the gap that resulted from the lexical specialisation of **zovi*. This is how the verb 'go down' was harnessed into the semantic territory of 'fall' – so as to populate, as it were, the "cell" created by the new lexical paradigm.

That process was likely shared by the other lexical verbs mentioned in Table 8. What makes the verb *iw* original is the fact that it was coopted into the paradigm for the sense 'fall', yet also kept its original meaning 'go down' – this time with no number restrictions.

7.3.3. Verbs for 'go'

Finally, Figure 7 illustrates the particular configuration around the generic motion verb 'go'.

Figure 7 – When two verbs form a number paradigm only for one of their senses: the case of 'go'

	'walk'	'go (on land)'	'go (not on land)' boat, plane…	'go' (metaph.)	Directional 'thither, SE'
NPL	*tō*	***tō***	*vën*	*vën*	*vën*
PL	*tō*	***vën***	*vën*	*vën*	*vën*

In daily conversation, the vast majority of occasions when that action is expressed, is for an animate being to go on foot from point A to point B on land.[36] For that frequent meaning, the rule is absolute that *tō* must be used in the non-plural, and *vën* in the plural:

(27) HIW *Tekīwa* on **vën** ti ne rekov' i yöte, *sörö* **tō** ëtwë.[37]
HUM:MIX:PL SBJV go:PL DAT ART work LNK garden 3du go:NPL together
'Whenever people **went**$_{PL}$ to work in their gardens,
the two of them **went**$_{NPL}$ along together.'

The same is true of their derivatives 'bring', 'fetch', 'leave'… [§6.3] whenever they also imply the same sort of pedestrian motion.

[35] The very name of the island "Hiw" [hiw] is another reflex of the same root **sipo* 'go down' – via its directional meaning 'downwind, towards NW' (François 2015).

[36] To this day, due to their small size, the Torres islands have no motorised vehicles on land.

[37] Link: https://doi.org/10.24397/pangloss-0003265#S54 [Hiw.Eel.54]

That said, the paradigmatic contrast of number between *tō* and *vën* is only used for that prototypical meaning of 'go'. For all other senses of 'go', only the form *vën* is possible, this time with no number restriction:

- 'go' from one point to another, but not on foot:
  e.g. *go on a car, a boat or a plane*

(28) HIW Ike peon ***vën*** Vila timeɾ̄ën evo?
2sg FUT go Vila moment where
'When will you go to [the capital] Vila?' (by boat + plane)

- 'go' in a figurative sense, e.g. with an abstract subject:

(29) HIW Tameɾ̄ën *ne Christianity ve* ***vën*** *me,* nine afektem n' asuve ti. [38]
when ART Christianity IPFV go hither 3sg affect ART life PAST
'When Christianity came to us, it had a great impact on our lives.'

- 'go' grammaticalised as a discourse marker for durative:

(30) HIW Söɾ̄ö yöy ***vë~n*** ***vën***, söɾ̄ö ɾ̄ak nösa megoye tuwë. [39]
3du stay:NPL DUR DUR 3du make their child one
'They lived like that *for a lo—ng time* [LIT. it went on], until they had a baby.'

- 'go' grammaticalised as a directional particle, meaning *thither* (ex. 9) or *southeast*:[40]

(31) HIW Ike tati sesö uw ! Ike sö ***vën***, ti ne Yugemëne.
2sg NEG paddle DIR:NW 2sg paddle DIR:SE DAT ART (village)
'Don't paddle north! You must paddle south, towards Yugemëne.' [FG2-14b]

For all these peripheral uses of 'go', the form *vën* must be used, including when the underlying subject of that motion event is singular; *tō* would be excluded. Quite symmetrically, *tō* also loses its number restriction when it means specifically 'walk' rather than 'go (on land)': for example, *They can no longer walk* will use the verb *tō*, despite its plural subject.

We can summarise the whole situation by saying that Pre-Hiw had two distinct verbs, *tō* 'walk' and *vën* 'go', that were initially compatible with all numbers – just like in other Vanuatu languages. At some point though, the emergence of a number-based contrast in the verb lexicon added pressure upon speakers to identify a potential pair of verbs for various meanings, including the generic motion word 'go'. Besides the inherited form for 'go' *vën* (< POc **pano*), the verb *tō* 'walk' was hijacked into the semantic domain of 'go', at least for the meaning that was the most obviously connected to the initial sense 'walk' – namely, for an animate subject to 'go somewhere on foot'.

One way to interpret Figure 7 would be to see it as an instance of semantic change in progress: the verb *tō* 'walk' has already begun to impinge upon the territory of *vën* 'go', and to form a valid number contrast. Yet the progression of *tō* has only affected part of that semantic territory, and left several senses (28)–(31) untouched …yet. The absence of any number contrast for the meaning 'go' in Lo-Toga [*Table 8*] confirms that the development of verbal number in this lexical field is internal to Hiw, and possibly recent.

How can we then describe Figure 7 in synchronic terms? Evidently, it would be inaccurate to see *tō* and *vën* as two allomorphs of a single putative lexeme. Rather, Hiw has two lexemes *tō*

[38] Link: https://doi.org/10.24397/pangloss-0003252#S32 [Hiw.Religion.32]
[39] Link: https://doi.org/10.24397/pangloss-0003265#S2 [Hiw.Eel.02]
[40] On the semantics and history of the Hiw directional *vën*, see François (2015:176-183).

and *vën*, with distinct meanings. They have one sense in common (‘go on land’), and for that particular sense, the two verbs are in complementary distribution depending on the number of their subject.

8. SUMMARY AND CONCLUSION

This study examined the verbal system of Lo-Toga and Hiw, two languages of northern Vanuatu. I described a grammaticalised phenomenon of verb alternation triggered by argument number. For a certain set of meanings – specific to each language – the system presents not one but two verbs, depending on the number of its main participant, generally the absolutive argument (subject of intransitives, object of transitives). The binary contrast opposes, in Lo-Toga, a singular form to a non-singular, with the latter lumping dual and plural referents; more originally, Hiw treats dual arguments together with the singular: its verb pairs contrast a non-plural with a plural.

Lo-Toga has 17 such verbal pairs, and Hiw 33; these are high numbers by typological standards, showing that the two Torres languages have gone further than most other languages in the world. The list includes posture verbs (‘lie’, ‘sit’, ‘stand’, ‘hang’, ‘stay’), motion verbs (‘go’, ‘run’, ‘jump’, ‘fall’…), stative verbs or adjectives (‘small’, ‘large’, ‘alive’), verbs of high physical impact (‘kill’, ‘beat’, ‘shoot’, ‘stone’, ‘chop’, ‘die’…) as well as other verbs (‘bind’, ‘stow’, ‘plant’, ‘sleep’, ‘cry’…).

An initial analysis could propose, following some approaches in the literature, to see there a case of SUPPLETION: each lexical verb would present two allomorphs, one for singular, one for plural arguments. However, our discussion concluded that suppletion was not the best way to describe the pattern. Various facts have helped us establish that each verb form is really a separate lexeme, a unit of its own in the lexicon. Just like any lexeme, each lexical verb involved in number contrasts is endowed with its own meanings, its own grammatical properties such as valency or case frame, its own derivation…, which do not necessarily match with their counterpart. Simply, for at least one of their senses, these verbs engage in a LEXICAL PARADIGM: they are used as perfect synonyms for that particular sense, differing only in their compatibility with a given argument number.

While such systems of lexical alternation are attested around the world, they are absent from the languages around Hiw and Lo-Toga, and hardly developed in the Oceanic family. In order to explain the local development of such an elaborate system of verbal number in the Torres languages, I proposed a scenario in which the initial trigger was a circumfix already present in Proto Oceanic, and used occasionally to encode pluractionality. That derivational process, which initially affected mostly posture verbs, became the source of an increasingly salient contrast between individual and group events. Over time, more and more lexical items in the language were recruited into populating the emergent paradigm. The result was the separate lexification of individual vs. collective events for a growing number of verbal concepts – particularly those for which the number configuration of participants was most significant and “nameworthy”.

In our final discussion, we examined several cases where the paradigmatic relationship has only come to affect a subset of a word’s senses, while leaving intact its other meanings and constructions. While the system of verbal number seems to be well established in Hiw and Lo-Toga, the existence of words that are affected only partially by the number contrast may well be the sign of a historical process that is still evolving right before our eyes.

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APPENDIX

Orthography

Here are the spelling conventions for Hiw :

orth	*a*	*e*	*ë*	*ē*	*g*	*i*	*k*	*m*	*n*	*n̄*	*n̄w*	*o*	*ö*	*ō*	*p*	*q*	*r̄*	*s*	*t*	*u*	*v*	*w*	*y*
IPA	a	ə	e	ɪ	ɣ	i	k	m	n	ŋ	ŋʷ	ɔ	ɵ	o	p	kʷ	g͡ɾ	s	t	ʉ	β	w	j

… and for Lo-Toga:

orth	*a*	*d*	*e*	*ë*	*ē*	*g*	*h*	*i*	*k*	*l*	*m*	*n*	*n̄*	*n̄w*	*o*	*ō*	*p*	*q*	*r*	*s*	*t*	*u*	*v*	*w*
IPA	a	t̪	ə	ɛ	e	ɣ	h	i	k	l	m	n	ŋ	ŋʷ	ɔ	o	p	kʷ	r	s	t	ʉ	β	w

Glosses

Glosses follow the *Leipzig glossing rules*. Additional glosses include the following.

AO	aorist aspect
APPREH	apprehensive modality
ART:COM	article for common nouns
COMP	complementiser
CONT	continuous aspect
DEM	demonstrative
DIR	directional
DOM	differential object marking
DUR	durative
HAB	habitual aspect
HUM	gender classifier for humans
IPFV	imperfective
IRR	irrealis
LNK	linker
LOC	locative
MIX	mixed gender
NMLZR	nominaliser
NPL	non-plural
NSG	non-singular
OBL	oblique
ORIG	originative
PLURAC	pluractional
POSS	possessive classifier
POT	potential
PRSTV	presentative
REL	relativiser
STAT	stative aspect
SBJV	subjunctive