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# Root Alternation and Verbal Plurality in Ranmo

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# Root Alternation and Verbal Plurality in Ranmo

## **Abstract**

This paper investigates morphological alternation between so-called extended and restricted roots in Ranmo, leading to a new proposal about the nature of pluractional predicates. Extended roots show properties associated with ‘pluractional’ verbs attested crosslinguistically; in particular, they are associated with both plural participant and iterative interpretations. However, they differ from typical pluractionals in the following two ways: (i) they are not morphologically formed on the basis of their restricted counterparts (which are associated with singular, punctual readings) and (ii) they are compatible with numeric modifiers. I propose that these differences can be understood under the proposal that all pluractionals obligatorily involve two components which are always distinctly represented in the semantics—PL(ural) and DEG(ree). The latter contributes a large quantity (as opposed to a simple plural) reading. However, languages vary with respect to whether these two can form a single syntactic unit (and hence be bundled into a single morpheme). This predicts a simple typology in which only a subset of so-called pluractional verbs yield a necessarily large quantity reading.

# Root Alternation and Verbal Plurality in Ranmo\*

Jenny Lee

## 1 Introduction

This paper investigates the morphological, syntactic, and semantic properties of root alternation in Ranmo (Papuan), exemplified in (1).

(1) RESTRICTED-EXTENDED ROOT ALTERNATION

- a. √LÈFÈR – √LÈFÈN ‘jump’
- b. √FIT – √FITAR ‘wash’
- c. √BINT – √BI ‘bark’

As will be discussed in detail in Section 3, that “extended” roots, as opposed to “restricted” roots, show the characteristics of so-called ‘pluractional’ verbs. Pluractionality commonly refers to the phenomenon in which verbs are morphologically marked for plurality, where ‘plurality’ covers a range of meanings, whether in connection to multiple participants, times or locations. According to Newman (1990), “[t]he essential semantic characterization of [pluractional] verbs is almost always *plurality* or *multiplicity* of the verb’s actions” (p. 53) (emphasis mine). The most common means of forming pluractional verbs is via reduplication, as exemplified by Niuean (2). Vowel alternation is another way to indicate pluractionality, exemplified by Chechen (3).

(2) NIUEAN

(Haji-Abdolhosseini et al. 2002:483)

- a. Ne **noko** e ia e gutuhala.  
PAST **knock** ERG 3SG ABS door  
‘She knocked on the door (probably once).’
- b. Ne **nokonoko** e ia e gutuhala.  
PAST **knock.REDUP** ERG 3SG ABS door  
‘She knocked on the door (many times).’

(3) CHECHEN

(Yu 2003:294)

- a. as q’iigashna twop-**qwessira**.  
1SG crow.PL.DAT gun-**throw.WP**  
‘I shot crows.’
- b. as q’iigashna twop-**qissira**.  
1SG crow.PL.DAT gun-**throw.PLR.WP**  
‘I shot crows many times.’

A closer look at Ranmo root alternation will reveal that extended roots differ from so-called pluractional verbs in important ways. This will lead to a new proposal about the typology of pluractional predicates. In particular, based on the interaction of extended roots with the degree morpheme *-an*, I argue that pluractional predicates are composed of two semantic components, PL(ural) and DEG(ree). Languages vary with respect to whether or not these components can form a syntactic unit and hence be packed into a single morpheme.

The rest of this paper is structured as follows. In Section 2, I briefly discuss Ranmo verbal morphology. In Section 3, I provide a descriptive account of the phonological and semantic properties of root alternation. In Section 4, I discuss two important ways in which extended roots deviate from

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\*I would like to thank first and foremost the people of Yenthoroto for sharing their language with me. Special thanks also to Isabelle Charneval, Maria Polinsky, Nina Radkevich, and the audience of the 39th Penn Linguistics Conference. This research was supported by the NSF Doctoral Dissertation Research Improvement Grant #1263754. Abbreviations used: APPL = applicative, DI = derived intransitive, M = middle, MULT = multiplicity, NON.FUT = non-future, O = object, RED = reduplicate, S = subject.

pluractionals found cross-linguistically. In Section 5, I show how these differences are made sense of in light of their interaction with the degree morpheme *-an*. In Section 6, I propose a new characterization of the ‘pluractional’ exploiting the independence of two semantic components, PL(ural) and DEG(ree). Section 7 concludes.

## 2 Ranmo Basics

Ranmo is a Papuan (non-Austronesian) language, spoken by approximately 300 people in Yen-thoroto village, Western Province, southwest Papua New Guinea.<sup>1</sup> It is an agglutinative, pro-drop, morphologically ergative SOV language, with the following major typological characteristics shared by other members of the Morehead-Maró family.

- (4) MAJOR GRAMMATICAL FEATURES OF RANMO
- a. Intransitive verbs split into two types, unaccusatives and middles; the latter are essentially antipassive, derived by demoting the transitive object.<sup>2</sup>
  - b. Independent systems of case and agreement.
  - c. A complex system of root alternation (the focus of this paper).

The Ranmo verb consists of (i) the verb stem (the root plus any valency-changing morphology such as the applicative), (ii) TAM-related material (in two slots), and most peripherally, (iii) agreement affixes.

Inflectional prefixes		Stem			Suffixes	
Absolute agreement	TAM	Valency	(Directional)	Root	TAM	Ergative agreement

Table 1: Ranmo basic verbal template.

Most of the examples used in this paper are drawn from the unaccusative class, which show (prefixal) absolutive agreement only. Any other predicate type (the transitive or the middle, for example) could have been chosen to illustrate the same points about root alternation to be presented below.

## 3 Ranmo Root Alternation

### 3.1 Phonology of Root Alternation

On the surface, the precise nature of the phonological relationship between the extended and the restricted root varies from verb to verb. A given lexical item will fit one of the five descriptions in (5). Examples illustrating each of these relationships (or ‘root classes’) is provided in Table 2.

- (5) PHONOLOGICAL RELATIONSHIPS BETWEEN  $\sqrt{\text{EXT}}$  AND  $\sqrt{\text{RST}}$
- a.  $\sqrt{\text{EXT}}$  is an **augmented** version of  $\sqrt{\text{RST}}$
  - b.  $\sqrt{\text{EXT}}$  is a **truncated** version of  $\sqrt{\text{RST}}$
  - c. The two forms differ only by the final consonant (**mutation**)
  - d. The two forms are **suppletive**
  - e. **Non-alternating** ( $\sqrt{\text{EXT}}$  only)

<sup>1</sup>Ranmo is endangered and undocumented; all data presented in this paper come from the author’s own fieldwork conducted between 2013 and 2014.

<sup>2</sup>See Lee (to appear) for an analysis.

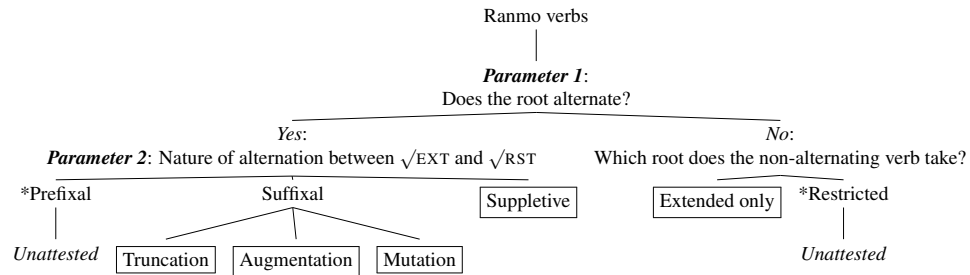
Root class	Infinitive form	Translation	√/EXT	√/RST
AUGM.	fitase kolase lorase metrase sèluwase	clean/wash agree with arrive graduate burn	fitar kolar lorar metrar sèluwa	fit kol lor metar sè
TRUNC.	bise mbèrse nangguser? nggarse yilèngguse lèrse mituase	bark play/laugh catch/fork break lose/disappear tear seesaw	bi mbèr nanngu nggar yilènggu lèr mitua	bint mbrèt nanngut nggarat yilènggut lèrant mituel
MUTAT.	fakalkase manggalkase rikèlkase yibalkase fangse tringganse	be/put on top feed hide steal and hide show break	faklèk mangglèk riklèk yiblak fangg tringgan	faklèm mangglèm rikèm yiblam fants trinngents
SUPPLET.	luarse yikanse rinse rurse	go inside carry/bring give shine on/shoot	luar yikan lèn rur	lèmb yiramb fèk mèngg
NON-ALT.	fiyakanse/yèfiyankanse mayukse mikuse mirase rirse yibarkase	push/crawl wash/bathe creep up on/look for swim scrape dance	fiyakan mayuk miku mirar rir yibrek	- - - - - -

Table 2: Phonological relationships between extended and restricted roots.

The assignment of a given verb into one of these root classes is idiosyncratic. That is, neither the phonological nor the semantic properties of a verb can be used to predict which root class it will belong to (i.e., which rule of alternation it will be subject to). Note that with the exception of the NON-ALT. and SUPPLET. classes,  $\sqrt{\text{EXT}}$  and  $\sqrt{\text{RST}}$  differ in shape only at the right edge of the roots. This hints at an operation targeting a suffixal position. This will be discussed in more detail in Section 6. In summary, the classification of Ranmo verbs classes according to their alternation pattern is determined on the basis of the parameters in (6). This is captured in (7).

- (6) a. Does the verb alternate? (alternating or non-alternating)  
 b. If alternating, what is the position/nature of the alternation? (augmentation, truncation, mutation, or suppletion)

(7)



### 3.2 Semantics of Root Alternation

We now consider the semantic relationship between extended and restricted roots. Consider the paradigm in (8), which shows alternation between *lèfèr* and *lèfèn*.

- (8) a. Fi s-a-**lèfèr**.  
 3ABS 3sgmO.γ-APPL-**jump.RST**  
 ‘He jumped.’
- b. Fi th-a-**lèfèr**.  
 3ABS 3nsgO.γ-APPL-**jump.RST**  
 ‘They(2) jumped.’
- c. Fi th-f-a-**lèfèn**. (>thwalfèn)  
 3ABS 3nsgO.β-NON.FUT-APPL-**jump.EXT**  
 ‘They(3+) jumped.’
- d. Fi s-f-a-**lèfèn**. (>swalfèn)  
 3ABS 3sgmO.β-NON.FUT-APPL-**jump.EXT**  
 ‘He jumped repeatedly.’

First, in (8a–c), argument number appears to be determined by the interaction between (i) the type of root (extended vs. restricted) and (ii) agreement inflection (singular vs. non-singular). The restricted root, *lèfèr*, gives rise to a singular or dual subject interpretation, depending on the agreement morphology: If subject agreement is singular, an overall singular subject interpretation results (8a). If subject agreement is non-singular, then a dual subject interpretation results (8b). The extended root, *lèfèn*, on the other hand, gives rise to a plural (i.e., 3+) participant reading (when combined with non-singular subject agreement) (8c). Based on (8a–c) alone, root alternation appears to mark argument number distinctions (that is, in conjunction with agreement morphology). But consider (8d). In this example, we find that the same extended form associated with the plural participant reading in (8c) is now used to signal plurality on the axis of time (i.e., repetition); there were multiple events of one person jumping. Table 3 is a summary of what has just been discussed.

Crosslinguistically, iterativity and participant-based distributivity are features commonly associated with ‘pluractional’ verbs (as we saw for Niuean and Chechen above). We therefore arrive at the (tentative) generalization in (9).

	$\sqrt{\text{RST}}$	$\sqrt{\text{EXT}}$
Singular	<b>Singular</b>	<b>Singular-Iterative</b>
Non-singular	<b>Dual</b>	<b>Plural</b>

Table 3: Semantic interpretations determined by “crossing” root type and agreement.

- (9) THE RELATIONSHIP BETWEEN THE EXTENDED AND RESTRICTED ROOTS (tentative)  
 The extended root is the ‘pluractional’ counterpart of the restricted root.

#### 4 “Non-Pluractional” Characteristics of Ranmo Extended Roots

While extended roots are associated with the two canonical interpretations of pluractional verbs (iterative and plural participant), there are two important ways in which the behavior of extended roots deviates from that of pluractional verbs found in other languages (10). I discuss them below.

- (10) NON-PLURACTIONAL BEHAVIOR OF  $\sqrt{\text{EXT}}$
- a. Extended verbs are not morphologically built on the basis of their restricted counterparts.
  - b. Extended verbs are compatible with numeric adverbials.

##### 4.1 Not Built on the Simple (Non-Pluractional) Root

Crosslinguistically, pluractional verbs are often formed on the basis of their non-pluractional (singular) counterparts, often via reduplication, as exemplified by Niuean above in (2). Based on this characteristic, traditional analyses posit that in pluractional verbs, the reduplicative (or some other affixal) material introduces a Plural Operator in the semantics which pluralizes the event argument of the verb (cf. Lasersohn 1995).

- (11)  $V\text{-PA}(X) \leftrightarrow \forall e \in X [V(e)] \ \& \ \text{card}(X) \geq n$ , where  
 V: verb  
 PA: pluractional marker  
 X: variable over sets of events  
 e: variable over atomic events  
 n: variable over the natural numbers

In (11), pluractional verbs denote sets of events of the type denoted by the corresponding non-pluractional verbs, i.e., a verb (V) with a pluractional affix (PA) will hold true of a set of events (X) iff its corresponding simple, non-pluractional verb holds of each individual event in the set. In addition, there is a cardinality restriction in (11)— $\text{card}(X) \geq n$ . It is required to ensure that X is not a singleton or empty, i.e., the number of events must be no less than 2. Lasersohn suggests leaving *n* to “be pragmatically fixed” since “pluractional markers often carry an implication of not just two events, but “many,” where exactly how many are needed to count as many is left somewhat **vague** and open to pragmatic considerations” (p. 241).

Ranmo root alternation is not easily amenable to the analysis in (11). This is because while extended roots often do appear to be formed on the basis of their restricted counterparts (12), the reverse is also frequently attested, i.e., restricted roots appear to be morphologically built on their extended counterparts (13).

- |                                                                                                                                                                                        |                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(12) EXTENDED – RESTRICTED</p> <ol style="list-style-type: none"> <li>a. fitar – fit ‘clean, wash’</li> <li>b. kolar – kol ‘agree with’</li> <li>c. lorar – lor ‘arrive’</li> </ol> | <p>(13) EXTENDED – RESTRICTED</p> <ol style="list-style-type: none"> <li>a. ba – bar ‘tell, turn into’</li> <li>b. bi – bint ‘bark’</li> <li>c. lèr – lèrant ‘Tear’</li> </ol> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Thus, it is difficult to generalize that the presence of some affixal morphology is behind the plural participant/iterative interpretation in Ranmo. The verb form denoting a plural event cannot be said to be a combination of some base form denoting a singular event plus a “pluractional” affix.

#### 4.2 Compatibility with Numeric Adverbials

Another way in which extended roots deviate from pluractional verbs in other languages is with respect to compatibility with numerical quantifiers. Xrakovskij (1997) notes that crosslinguistically, pluractional verbs are incompatible with numeric expressions. This is illustrated by Chechen.

- (14) CHECHEN (Yu 2003:303)
- a. Adama takhan **yttaza** chai **melira**.  
Adam.ERG today **ten times** tea **drink.WP**
- b. \*Aadama takhan **yttaza** chai **miillira**.  
Adam.ERG today **ten times** tea **drink.PLR.WP**  
'Adam drank tea ten times today.'

Yu (2003) states, “A priori, there is no reason to think that pluractional verbs...should be incompatible with the explicit mention of the number of iterations, as long the number of iterations is more than one” (p. 303). He accounts for the ungrammaticality of (14b) by proposing that verbal pluralization must yield a *mass interpretation*. That is, “the plural operator (involved in verbal pluralization) does not just map a singular entity into another garden-variety plural entity, it specifically *maps a singular entity into a mass*” (p. 303). On this account, (14b) is ruled out because the use of a pluractional verb—which denotes an *uncountable mass* event is incongruous with explicit mention of the number of iterated events.

A comparable pattern can be illustrated for English: when a situation is “frequentivized” (presumably involving a Plural Operator), the use of a numeric adverbial is prohibited.

- (15) a. John used to go fishing with his father (\*four times).  
b. The light flashed (\*ten times) until dawn. (Yu 2003:304)

On Yu’s account, the sentences in (15) can be ruled out on the postulation that the aspectual/adverbial phrases (*used to*, *until dawn*) contain a silent Plural Operator, which yields a mass interpretation.

Curiously, the same facts do *not* hold for Ranmo extended roots. Extended roots *are* compatible with both a numeric adverbial modifier (16a) and with DP objects modified by numerals (16b).

- (16) a. Ndótar **tambloi num** k-f-a-rfu-∅. (>kwarfu)  
door **five time** M,β-NON.FUT-DI-open.EXT-sgS  
'A/the door opened five times.'
- b. Traue buk kèn th-f-wartar-∅. (>thèfwartar)  
**six book** 1sg.ERG 3nsgO.β-NON.FUT-burn.EXT-sgS  
'I burnt six books.'

In the next section, I show that these two aberrant characteristics of extended roots discussed can be made sense in light of their interaction with the multiplicity/degree morpheme *-an*.

### 5 Interaction with the Degree (Multiplicity) Morpheme *-an*

Until now I have put off the discussion of another type of verbal pluralization in Ranmo, namely, one that signals a large number of events or a large quantity interpretation. This is indicated by the presence of the *-an* suffix: (17a) vs. (17b).

- (17) a. Ke k-f-a-mblafèr-an-∅. (>kwamblafan)  
1sg.ABS M,β-NON.FUT-DI-wake.up.EXT-MULT-sgS  
'I woke up many times.'



- b. Ke k-f-a-**mblafèr**-∅. (>kwamblafèr)  
 1sg.ABS M.β-NON.FUT-DI-**wake.up**.EXT-sgS  
 ‘I woke up repeatedly.’

The distribution of the *-an* suffix is as follows. First, *-an* cannot co-occur with restricted roots, as illustrated in (18) vs. (17a).

- (18) \*Ke t-a-**mblaf-an**-∅.  
 1sg.ABS M.γ-DI-**wake.up**.RST-MULT-sgS  
 Intended: ‘I woke up many times.’

The second restriction is that *-an* is generally incompatible with the explicit mention of the number of iterated events. The use of *-an* is most natural when the number of iterations is high but unspecified, as in (19a) vs. (19b). Recall that this is precisely the characteristic of pluractional (reduplicated) verbs in languages like Chechen (14).

- (19) a. Ke (tabatha num) k-f-a-mblafèr-an-∅ (>kwamblafraan).  
 1sg.ABS a lot time M.β-NON.FUT-DI-wake.up.EXT-MULT-sgS  
 ‘I woke up many times.’  
 b. Ke **tambloi num** k-f-a-mblafèr-(?**an**)-∅.  
 1sg.ABS **five time** M.β-NON.FUT-DI-wake.up.EXT-MULT-sgS  
 ‘I woke up five times.’

## 6 Proposal

Broadly speaking, there are two things to be addressed: **(i)** the relationship between restricted and extended roots and **(ii)** their interaction with the *-an* suffix. Below I show that these can be captured under the proposal that pluractional predicates are composed of the two semantic components in (20). Essentially, I am proposing a new definition of the ‘pluractional verb/predicate.’

- (20) TWO SEMANTIC COMPONENTS OF PLURACTIONAL PREDICATES  
 a. A pluralizing component (**PL**)  
 b. A degree component (**DEG**)

### 6.1 PL: Inner Aspect [-b]

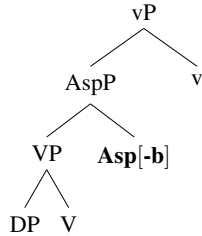
First, I argue that the extended, but not the restricted, root, contains a pluralizing component (PL). PL is the semantic counterpart of the syntactic aspectual head encoding unboundedness, represented by the feature [-b]. Its absence indicates the merger of a head containing [+b]. The [-b]/[+b] distinction was introduced by Jackendoff (1991) to distinguish verbs denoting processes and iterated events (unbounded [-b] events) (21) from verbs denoting completed events (bounded [+b] events) (22).

- (21) UNBOUNDED EVENTS  
 a. John is swimming. (process)  
 b. The light was flashing. (iterated completed event)  
 (22) BOUNDED EVENTS  
 a. John ate an apple.  
 b. John woke up an hour ago.

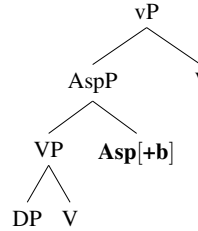
The question now arises *where* these features are realized on Ranmo verbs. Since the [±b] feature is aspectual in nature, one may suggest it goes on an Asp head. We immediately run into a problem, though: Aspectual heads project fairly high in the phrase structure, usually just below T(ense), but the realization of these features is on the roots themselves—very low in the structure.

The necessary insight to resolve this tension comes from Travis (2010), who, adopting the notion of the VP shells (cf. Larson 1988), argues that there is a functional projection that is sandwiched within these shells—between VP and vP. The main function of this head is to encode situation aspect—as opposed to viewpoint aspect, which is realized above vP. This is the inflectional element that is closest to the VP, and is referred to as Inner Aspect.<sup>3</sup> I propose that the extended and restricted suffixes are instances of Inner Aspect, as illustrated in (23).

(23) a. EXTENDED



b. RESTRICTED



Note that on this analysis, the extended root need not be “built” on the basis of the restricted root (as the Lasersohnian approach would incorrectly predict). This reflects the independent semantic and syntactic composition of “verbal plurality” and “verbal singularity” as shown by Ranmo root alternation. Both are constructed by merging a (low) aspectual projection which can enter the derivation with either a [-b] or [+b].

## 6.2 DEG: *-an* “a lot”

We now turn to the nature of *-an*. I propose that this suffix realizes another aspectual head which introduces a DEG(ree) component contributing a large quantity reading. Crucially, it is subject to the following selectional restriction: the introduction of *-an* (DEG) is dependent on the presence of a PL(uralized) predicate containing [-b] (i.e., an extended root).

The Lasersohnian approach misses precisely the above generalization, i.e., it only makes reference to a PL component, but not a DEG component, in its characterization of pluractionals. I think much of the pluractionality literature has missed the latter simply because the separability of the two components has been *obscured* by the fact that they are often expressed as a single morpheme in many languages with morphological pluractionals.

In other words, I argue that while *all* pluractional predicates are composed of PL and DEG, languages vary with respect to whether the two elements can form a syntactic unit and hence be packaged, or bundled, into a single morpheme. This yields a simple typology, discussed below.

### 6.2.1 Toward a Typology

The idea of “syntactic bundling” was first expressed in Pykkänen (2002)’s account of the relationship between CAUSE (the head introducing the causative relation) and Voice (the head introducing the external argument). She argues that CAUSE and Voice are *always* distinctly represented in the semantics; however, languages vary with respect to whether they are Voice-bundling or non-Voice-bundling.

That is, in “Voice-bundling” languages, CAUSE and Voice form a feature bundle (much like tense and agreement). The two are “bundled” into one morpheme in the lexicon of the language and are simultaneously expressed as one syntactic head. English is one such language. By contrast, in “Non-Voice bundling” languages, Voice is syntactically independent of CAUSE. Japanese and Finnish are non-Voice-bundling languages. The separability of CAUSE and Voice predicts the possibility of unaccusative causatives (causatives without an external argument causer). This, she

<sup>3</sup>Travis provides extensive empirical evidence for its existence, showing that its specifier serves as the landing site of certain derived objects and its head as the host of reduplication material. See her work for details.

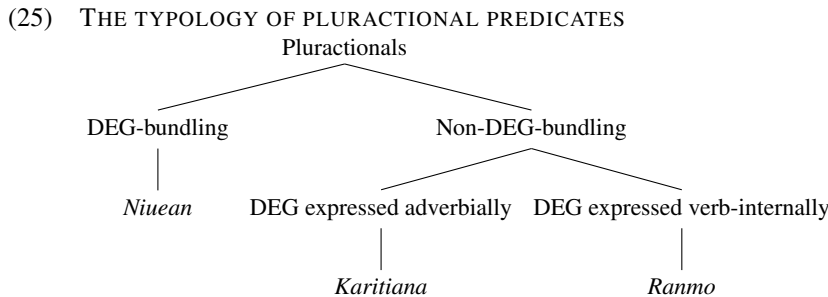
argues, is instantiated by the Japanese adversity construction, in which the event predicated of the an unaccusative subject has an adverse effect on an applied argument.

Applying the bundling/non-bundling distinction to pluractionals allows us to capture the full crosslinguistic variation in the representation and interpretation of pluractional verbs. In particular, the syntactic (as well as semantic) separability of PL and DEG predicts that there would be languages in which ‘pluractional’ verbs lack a large quantity (i.e., degree) interpretation. This is borne out, as illustrated by Karitiana.

- (24) KARITIANA (Brazil) (Müller and Sanchez-Mendes 2008:445, 449)
- a. Sypom-t Ø-naka-pon-pon-Ø João sojxaty kyn.  
two-OBL 3-DECL-shoot-REDUPL-NFUT J boar POS  
‘João shot twice at the/a/some boar(s)’/‘João shot at two boars.’
  - b. **Kandat** taso Ø-na-pon-pon-Ø sojxaty kyn.  
**a lot** man 3-DECL-shoot-REDUPL-NFUT boar POS  
‘Men shot at boars many times.’

In Karitiana, the presence of the reduplicative affix alone does not produce a large number/quantity interpretation, as shown by the compatibility of the reduplicated form *pon* with a numerically modified noun phrase containing a cardinality of two (24a). When expressing a necessarily *significant* number of events, the free-standing adverbial *kandat* ‘a lot’ is required, as in (24b). I argue that it is precisely this morpheme which contributes the DEG component. Therefore, in (24a), we are seeing a PLURALIZED (PL) rather than PLURACTIONAL (PL+DEG) verb (=24b)). It is only when *kandat* comes into the derivation that pluractional semantics (under the new definition) arises. Crucially, this is exactly parallel to how Ranmo pluractionals are formed, except that in Ranmo, the morpheme meaning ‘a lot’ is verb-internally encoded, as *-an*.

The analysis explains an important crosslinguistic puzzle, namely that ‘pluractional’ verbs are associated with either *plurality* or *multiplicity*. This variation arises in whether DEG (‘a lot’) forms a syntactic unit with the element contributing PL: if it does, then you get a large quantity meaning; if it doesn’t, then you get a simple plural meaning with no “many” implication. The typology of pluractional predicates predicted by the proposal is shown in (25).



**6.2.2 Languages without Morphological Pluractionals**

The above discussion has implications for how we understand languages that lack morphological pluractional verbs, like English and French. Consider the contrast below.

- (26) a. John woke up a lot.
- b. ??John woke up a few hours ago a lot.

(26) shows that the degree adverbial *a lot* is licensed only when the predicate is iterative, i.e., presumably when there is a silent PL component present (26a). When the predicate describes an eventuality that is bounded and singular, it cannot be modified by *a lot*, as in (26b). The same contrast is present in French (and many other languages lacking morphological pluractionals).

- (27) FRENCH (Doetjes 2007:698)

- a. Jean va beaucoup au Louvre.  
J goes a lot to the Louvre
- b. #Jeanne a beaucoup écrit la lettre.  
J has a lot written the letter

In (27), the degree adverb *beaucoup* ‘a lot’ is compatible with a predicate like *go to the Louvre*—which yields an iterative reading—but not with a ‘once only’ predicate like *to write the letter*. Again, this suggests that the count predicate in (27a) is in fact plural in nature, containing a PL element responsible for the unbounded reading. As in (26a), I assume that there is a silent PL component in (27a), which licenses *a lot*.

The implication of positing a silent PL component is that *all* languages mark verbal plurality (either overtly or covertly), creating PLURALIZED predicates. The introduction of ‘a lot,’ which is licensed only in the presence of PLURALIZED predicates, creates PLURACTIONAL predicates.

This would place English and French in the non-DEG-bundling class where DEG is expressed adverbially rather than verb-internally, along with Karitiana.

## 7 Conclusion

This paper investigated morphological root alternation in Ranmo, which at first seems to instantiate what has commonly been referred to as pluractionality. However, extended roots were shown to deviate in significant ways from pluractional verbs attested crosslinguistically.

In light of these differences, I proposed that a two-part analysis of pluractionals is required, one requiring (i) a PL(ural) component introduced by a [-b] syntactic feature on Inner Aspect and (ii) a DEG(ree) component which yields a large quantity reading and whose introduction depends on the presence of [-b]. This analysis explains the selectional relationship between extended roots and the multiplicity morpheme *-an* in Ranmo. Under the proposal, even languages without overt/morphological pluractional verbs can be brought into the typology of pluractional predicates.

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