

## **UC Berkeley**

### **Proceedings of the Annual Meeting of the Berkeley Linguistics Society**

**Title**

Pluractionality and the Stative vs. Eventive Contrast in Ranmo

**Permalink**

<https://escholarship.org/uc/item/2tq589nm>

**Journal**

Proceedings of the Annual Meeting of the Berkeley Linguistics Society, 41(41)

**ISSN**

2377-1666

**Author**

Lee, Jenny

**Publication Date**

2015

**DOI**

10.20354/B4414110020

Peer reviewed

PROCEEDINGS OF THE FORTY-FIRST ANNUAL MEETING OF THE  
**BERKELEY LINGUISTICS SOCIETY**

February 7-8, 2015

**General Session**

**Special Session**  
Fieldwork Methodology

**Editors**

Anna E. Jurgensen  
Hannah Sande  
Spencer Lamoureux  
Kenny Baclawski  
Alison Zerbe

Berkeley Linguistics Society  
Berkeley, CA, USA

Berkeley Linguistics Society  
University of California, Berkeley  
Department of Linguistics  
1203 Dwinelle Hall  
Berkeley, CA 94720-2650  
USA

All papers copyright © 2015 by the Berkeley Linguistics Society, Inc.

All rights reserved.

ISSN: 0363-2946

LCCN: 76-640143

# Contents

Acknowledgments . . . . .	v
Foreword . . . . .	vii
<i>The No Blur Principle Effects as an Emergent Property of Language Systems</i>	
Farrell Ackerman, Robert Malouf. . . . .	1
<i>Intensification and sociolinguistic variation: a corpus study</i>	
Andrea Beltrama . . . . .	15
<i>Tagalog Sluicing Revisited</i>	
Lena Borise . . . . .	31
<i>Phonological Opacity in Pendau: a Local Constraint Conjunction Analysis</i>	
Yan Chen . . . . .	49
<i>Proximal Demonstratives in Predicate NPs</i>	
Ryan B. Doran, Gregory Ward . . . . .	61
<i>Syntax of generic null objects revisited</i>	
Vera Dvořák . . . . .	71
<i>Non-canonical Noun Incorporation in Bzhedug Adyghe</i>	
Ksenia Ershova . . . . .	99
<i>Perceptual distribution of merging phonemes</i>	
Valerie Freeman . . . . .	121
<i>Second Position and “Floating” Clitics in Wakhi</i>	
Zuzanna Fuchs. . . . .	133
<i>Some causative alternations in K’iche’, and a unified syntactic derivation</i>	
John Gluckman . . . . .	155
<i>The ‘Whole’ Story of Partitive Quantification</i>	
Kristen A. Greer . . . . .	175
<i>A Field Method to Describe Spontaneous Motion Events in Japanese</i>	
Miyuki Ishibashi . . . . .	197

<i>On the Derivation of Relative Clauses in Teotitlán del Valle Zapotec</i> Nick Kalivoda, Erik Zyman . . . . .	219
<i>Gradability and Mimetic Verbs in Japanese: A Frame-Semantic Account</i> Naoki Kiyama, Kimi Akita. . . . .	245
<i>Exhaustivity, Predication and the Semantics of Movement</i> Peter Klecha, Martina Martinović. . . . .	267
<i>Reevaluating the Diphthong Mergers in Japono-Ryukyuan</i> Tyler Lau . . . . .	287
<i>Pluractionality and the stative vs. eventive contrast in Ranmo</i> Jenny Lee . . . . .	307
<i>Labial Harmonic Shift in Kazakh: Mapping the Pathways and Motivations for Decay</i> Adam G. McCollum . . . . .	329
<i>Reference to situation content in Uyghur auxiliary ‘bolmaq’</i> Andrew McKenzie, Gülnar Eziz, Travis Major . . . . .	353
<i>Case-Marking in Estonian Pseudopartitives</i> Mark Norris . . . . .	371
<i>Discourse Coherence and Relativization in Korean</i> Sang-Hee Park. . . . .	397
<i>Negotiating Lexical Uncertainty and Speaker Expertise with Disjunction</i> Christopher Potts, Roger Levy . . . . .	417
<i>Patterns of Misperception of Arabic Consonants</i> Chelsea Sanker. . . . .	447
<i>The Imperative Split and the Origin of Switch-Reference Markers in Nungon</i> Hannah Sarvasy . . . . .	473
<i>Asymmetries in Long-Distance QR</i> Misako Tanaka. . . . .	493
<i>The cross-linguistic distribution of sign language parameters</i> Rachael Tatman . . . . .	503

<i>Homophony and contrast neutralization in Southern Min tone sandhi circle</i> Tsz-Him Tsui . . . . .	.515
<i>Cultural Transmission of Self-Concept from Parent to Child in Chinese American Families</i> Aya Williams, Stephen Chen, Qing Zhou . . . . .	.533
<i>Fruits for Animals: Hunting Avoidance Speech Style in Murui</i> Katarzyna Izabela Wojtylak . . . . .	.545
<i>A Quest for Linguistic Authenticity: Cantonese and Putonghua in Postcolonial Hong Kong</i> Andrew D. Wong. . . . .	.563



# Acknowledgments

As the Executive Committee of the 41st Annual Meeting of the Berkeley Linguistics Society, we would like to express our gratitude to the conference participants, volunteers, session chairs, faculty, and staff members for their participation. It was your contributions that made the conference a success. We are especially grateful for the patience, hard work, and support of Paula Floro and Belén Flores, without whom BLS 41 would not have been possible. We would also like to thank the following departments and organizations of the University of California, Berkeley for their generous financial support:

Department of Linguistics  
Student Opportunity Fund  
Graduate Assembly  
Department of Philosophy  
Department of Psychology  
Department of Ethnic Studies  
French Department  
Department of Spanish and Portuguese  
Berkeley Language Center  
Office of Academic Affairs Vice President





# Foreword

This monograph contains a number of the talks given at the 41st Annual Meeting of the Berkeley Linguistics Society, held in Berkeley, California, February 7-8, 2015. The conference included a General Session and the Special Session *Fieldwork Methodology*. The 41st Annual Meeting was planned and run by the second-year graduate students of the Department of Linguistics at the University of California, Berkeley: Kenny Baclawski, Anna Jurgensen, Spencer Lamoureux, Hannah Sande, and Alison Zerbe.

The original submissions of the papers in this volume were reviewed for style by Anna Jurgensen and Hannah Sande. Resubmitted papers were edited as necessary by Anna Jurgensen and Kenny Baclawski, and then compiled into the final monograph by Anna Jurgensen. The final monograph was reviewed by Spencer Lamoureux. The endeavor was supported by Alison Zerbe's management of the Berkeley Linguistic Society's funds for publications.

The BLS 41 Executive Committee  
July 2015



# Pluractionality and the stative vs. eventive contrast in Ranmo

JENNY LEE

*Harvard University*<sup>\*†</sup>

## 1 Introduction

The goal of this paper is two-fold: (i) to provide an in-depth look at the phenomenon of root alternation in Ranmo, which will be shown to be an instance of verbal plurality driven by properties of aspect and (ii) to use the morphology of root alternation of as a probe into the syntax of eventive and stative predicates in Ranmo.

In particular, I argue that alternating roots indicate the presence of [-b(ounded)] and [+b(ounded)] features on a low aspectual head that is sandwiched between VP and vP. It is essentially an instance of Travis (2010)'s Inner Aspect. Stative predicates, in contrast to eventive predicates, are characterized by the absence of this aspectual head.

Root alternation will remind the reader of what has been referred to as “pluractionality” or “verbal number” in the literature—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.

Crosslinguistically, pluractional verbs are often formed via derivational processes such as reduplication, as in Niuean and Chechen (1)-(2), and vowel alternation, as in Chechen (3). Note that these verbs may signal the plurality of participants (2) or of events ((1), (3)).

(1) 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 but not necessarily).’

b. Ne **nokonoko** e ia e gutuhala.

PAST **knock.REDUP** ERG 3SG ABS door

‘She knocked on the door (many times).’

(2) HAUSA (Součková and Buba 2008:94)

a. Mùtumìn yaa **fitoo**.

man.the 3M.SG.PF **come.out**

‘Audu came out.’

b. Mutàanênsun sun **fiĩ-fitoo**.

people.the 3PL.PF **RED-come.out**

---

\*This research was funded by the NSF Doctoral Dissertation Research Improvement Grant #1263754. I thank first and foremost the people of Yenthoroto village for sharing their language with me, most especially my late host brother Sèu Sataia. Special thanks also go to the audience of BLS 41, as well as to Isabelle Charnavel, Maria Polinsky, and Nina Radkevich for their valuable feedback.

†Abbreviations used: ABL = Ablative, APPL = Applicative, DEG = Degree, DI = Derived Intransitive, EXT = Extended, M = Middle, NON.FUT = Non-future, nsg = Non-singular, IPFV.RPST = Imperfective Recent Past, RST = Restricted, sgm/f = Singular masculine/feminine.

‘The people have come out.’

(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.’

According to Newman (1990), “the essential semantic characterization of [pluractional] verbs is almost always plurality or multiplicity of the verb’s actions” (p. 53). In other words, there is crosslinguistic variation as to whether so-called pluractional verbs signal a *large* number of events/participants or any plural number of events/participants (including just two or three). This issue does not bear directly on the topic of this paper, but I do return to it again briefly in section 5, as it helps to clarify what we mean by “pluractional” (also see Lee to appear a).

In any case, pluractional verbs (whether denoting plural events or more specifically, a large number of events) must be distinguished from verbs that are marked for plural *agreement*. Pluractional morphology is often derivational in nature, while agreement is inflectional. Moreover, pluractional verbs show an absolutive pattern, occurring only with transitive objects and intransitive subjects. This is the case irrespective of the agreement alignment of the language, ergative or accusative. For example, Huichol (Uto-Aztecan) has an accusative system of person/number agreement, which nevertheless interacts with an absolutive pattern of root suppletion, as shown in (4).

(4) HUICHOL (Comrie 1982)

- a. ne-**nua**  
1sgS-**arrive:sg**  
‘I arrived.’
- b. tiiri yi huuta-ti me-**niu?aziani**  
children two-SUBJ 3nonsgS-**arrive:nonsg**  
‘Two children have arrived.’
- c. Wan Maria maa-ti me-neci-**mieni**  
Juan Maria and-SUBJ 3nonsgS-1sgO-**kill:sg**  
‘Juan and Maria are killing me.’
- d. nee Wan Maria maa-me ne-wa-**qiini**  
I Juan Maria and-OBJ 1sgS-3nonsgO-**kill:nonsg**  
‘I am killing Juan and Maria.’

The independence of verbal plurality and number agreement is especially clear in languages like Ranmo, in which plural agreement inflection is present *alongside* root forms denoting plural events, as shown in (5).

(5) RANMO<sup>1</sup>

<sup>1</sup>The Greek symbols in the glosses ( $\alpha$ ,  $\beta$ ,  $\gamma$ ) refer to distinct object agreement series in Ranmo, showing allomorphy for “low” TAM features. See section 2.2.

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

The paper is structured as follows. Section 2 discusses some basic properties of Ranmo morphosyntax. Section 3 presents the phenomenon of root alternation and what it reveals about the nature of eventive vs. stative predicates in Ranmo. Section 4 provides an analysis of the eventive/stative contrast. Section 5 discusses one prediction made by the analysis with regard to the distribution of the degree suffix *-an*, which contributes a large quantity interpretation. Finally, section 6 concludes.

## 2 Ranmo basics

Ranmo is a Papuan (i.e., non-Austronesian) language belonging to the Tonda subgroup of the Morehead-Upper Maro family<sup>2</sup>, which consists of about seventeen languages spoken throughout a region known as the Trans Fly in Western Province, Papua New Guinea.

It is an endangered and undocumented language, spoken by fewer than 300 people in two villages, Yenthoroto and Menggeti. The vast majority of Ranmo speakers reside in Yenthoroto. All the data presented in this paper are from my fieldwork conducted in this village.

Ranmo is an agglutinative, pro-drop, morphologically ergative flexible SOV language with productive morphological voice/valency alternation between transitive verbs and so-called middle intransitive verbs. Some of its major typological features, which are shared by other languages in the Morehead-Maró family, are as follows. I discuss each in turn below.

### (6) SOME MAJOR TYPOLOGICAL FEATURES OF RANMO

- a. An (apparent) split-intransitive (“split-S”) system of verbal agreement paralleling the active/middle voice contrast (§2.1)
- b. Multiple encoding of TAM distinctions in the verbal complex (§2.2)
- c. A phonologically and semantically complex system of root alternation (§3) (the focus of this paper)

### 2.1 “Split-S” agreement

The Ranmo verb consists of (i) the verb stem (which contains the root, plus any directional and/or valency/voice-related morphology such as the applicative (APPL) and the derived intransitive (DI) marker), (ii) TAM-related material (for which there are two slots, one on either side of the stem), and most peripherally, (iii) agreement affixes.

The transitive verb is inflected for agreement with both the subject and object. The ergative-marked subject (the external argument) is cross-referenced as a suffix and the absolutive case-marked internal argument is cross-referenced by a prefix, as exemplified in (7).

<sup>2</sup>More recently, an alternative name has been suggested by Evans and colleagues: the “Yam” family. See Evans (2012).

Inflectional prefixes		Stem			Suffixes	
Object agreement	TAM	Valency	(Directional)	Root	TAM	Subject agreement

Table 1: Ranmo verbal template

(7) TRANSITIVE

Kèn ndótar s-rèfunt-Ø. (>sèrfunt)  
 1sg.ERG door 3sgmO.γ-open.RST-sgS

‘I opened the door.’

Intransitive verbs are divided into two classes on the basis of their agreement morphology. They show either “subject” agreement or “object” agreement, depending on whether they are inherent intransitives or derived from transitive verbs.

Verbs belonging to the *unaccusative* class are inherent intransitives (failing to undergo transitivity alternation) and pattern with the objects of transitive verbs in showing an absolutive alignment of agreement (hence “object” agreement) and case marking, as shown in (8a).

On the other hand, intransitive verbs belonging to the so-called *middle* class pattern with the subjects of transitive verbs in showing what appears to be a nominative alignment of agreement, as in (8b). In addition, they take a “middle” marker which always co-occurs with a “derived intransitive” marker. This sequence of morphemes indicates the status of middle verbs as being derived from their transitive counterparts via valency reduction, specifically, antipassivization. Compare (8b) with (7).

In this way, Ranmo is, descriptively, a “split-S” language<sup>3</sup>.

(8) a. UNACCUSATIVE

Fi s-lor.  
 3ABS 3sgmO.γ-arrive.RST  
 ‘He arrived.’

b. MIDDLE

Ndótar t-a-rfunt-Ø.  
 door M.γ-DI-open.RST-sgS  
 ‘A/the door opened.’

<sup>3</sup>But see Lee (to appear b) for an analysis: It is in fact not accurate to characterize this division in agreement as reflecting a split-S system. First, the split is not conditioned by either aspect or person (some of the major factors conditioning split ergativity crosslinguistically; see Dixon 1979, 1994). Rather, the morphological split underlies a *structural* distinction between unaccusative predicates whose sole argument is an underlying direct object and those predicates which are *derivationally* transitive (i.e., in all respects transitive) but express unergative semantics. Under this analysis, middle verbs do not show a “nominative” alignment of agreement as such, but rather a full ergative-absolutive alignment *with default/failed object agreement*, which gets morphologically instantiated as the middle marker.

## 2.2 Multiple encoding of TAM

Another notable feature of Ranmo is that it makes TAM distinctions in multiple morphological slots in the verbal complex. Consider the examples below.

- (9) a. Ngaf y-a-lilar-**ndar**.  
 father 3sgmO. $\alpha$ -APPL-die.EXT-IPFV.RPST  
 ‘Father was dying (recently).’
- b. Yekal th-**f**-a-lirar. ( $>$ thwalirar)  
 man 3nsgO. $\beta$ -NON.FUT-APPL-die.EXT  
 ‘The men died (recently).’
- c. Fi nèmaiùè s-**f**-a-lèfèn-**ente**. ( $>$ swalfènete)  
 3ABS always 3sgmO. $\beta$ -NON.FUT-APPL-jump.EXT-IRR  
 ‘He kept jumping (long ago).’

In (9a), the imperfective recent past is indicated by a suffix (*-ndar*), while in (9b), a prefix (*f-*) is used to give rise to the perfective recent past interpretation. It is also possible to have both slots filled in a given clause: in (9c), for example, the non-future prefix can co-occur with the irrealis mood marker *-ente* to create other TAM values such as distant past. Since one is a prefix and the other a suffix, they are on opposite sides of the stem, as the verbal template in Table 1 shows.

Moreover, object agreement<sup>4</sup> shows allomorphy for the features of *prefixal* TAM markers. That is, the particular phonological exponent chosen to realize the object agreement morpheme is determined (in part) by these features. The co-variance is indicated by the Greek symbols  $\alpha$ ,  $\beta$ , and  $\gamma$ , and the conditioning environment associated with each object agreement series is represented in the rules of allomorphy shown in (10).

- (10) CONTEXTUAL ALLOMORPHY OF OBJECT AGREEMENT
- a.  $v \leftrightarrow \beta$ -series / \_\_\_ [unbounded, non-future]
- b.  $v \leftrightarrow \gamma$ -series/ \_\_\_ [bounded, perfective past]
- c.  $v \leftrightarrow \alpha$ -series elsewhere

Table 2 contains the phonological exponents of each object agreement series in Ranmo. Subject agreement affixes, on the other hand, are invariant across TAM, as in Table 3.

<sup>4</sup>By “object” agreement, I mean agreement shown by both the objects of transitive verbs and the subjects of unaccusative verbs.



	$\alpha$	$\beta$	$\gamma$
1SG	w-	b-	tw-
1NSG	n-	ngg-	ntèn-
2SG	n-	ngg-	ntèn-
2NSG	th-	th-	th-
3SG.MASC	y-	s-	s-
3SG.FEM	ng-	k-	tè-
3NSG	th-	th-	th-

Table 2: Object agreement prefix series

1/2/3SG	- $\emptyset$
1NSG	-e
2/3NSG	-ai

Table 3: Subject agreement suffix series

### 3 Root alternation in Ranmo

In this section, I discuss the phonological and semantic properties of root alternation in Ranmo. The crucial take-home message of this section is that extended roots in Ranmo show properties which characterize pluractional verbs crosslinguistically<sup>5</sup>.

#### 3.1 Phonology of root alternation

Table 4 shows a representative sample of Ranmo verbs which undergo (or do not undergo) alternation between what I will call, following Döhler (in prep), ‘**extended**’ ( $\sqrt{\text{EXT}}$ ) and ‘**restricted**’ ( $\sqrt{\text{RST}}$ ) roots<sup>6</sup>. In the table, the verbs are grouped according to the informal **phonological rule**<sup>7</sup> relating the two variants of each pair. I will refer to each row (subject to the same phonological rule) as a ‘root class.’

The assignment of a given verb into one of the root classes seems to be mostly idiosyncratic. That is, neither the phonological nor 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).

<sup>5</sup>However, see Lee (to appear a) for a discussion of important ways in which the behavior of Ranmo extended roots diverges from that of so-called pluractional verbs found crosslinguistically. In particular, Ranmo extended roots, unlike most pluractionals in other languages, are not built on the basis of their restricted counterparts and are compatible with numeric modifiers like *six times*. These generalizations lead me to propose that extended roots merely encode an *aspectual* property, namely, unboundedness, and what has been described as instances of “pluractionality” additionally require a *degree* component which contributes the meaning “a lot”.

<sup>6</sup>These terms are purely descriptive and do not relate to any theoretical concepts. Their distribution will be described below. The extended vs. restricted contrast is also evident in Kómnozo, another language belonging to the Morehead-Upper Maro family (Döhler in prep).

<sup>7</sup>These rules do not reflect any deep derivational processes in the phonology; they are just descriptive statements capturing the formal relationships we see on the surface.

Rule	Infinitive form	Translation	√EXT	√RST
√EXT ONLY	fiyakanse/yèfiyankanse mayukse mirase yibarkase	push/crawl wash/bathe swim dance	fiyakan mayuk mirar yibrek	- - - -
√RST+ar	fitase kolase lorase metrase	clean/wash agree with arrive graduate	<b>fitar</b> kolar lorar metrar	<b>fit</b> kol lor metar
√EXT+t	mbèrse nangguser? nggarse yilèngguse	play/laugh catch/fork break lose/disappear	mbèr nanngu nggar yilènggu	mbrèt nanngut nggarat yilènggut
√EXT+S	- bise lèrse mituase	turn into/tell bark tear seesaw	ba <b>bi</b> lèr mitua	bar <b>bint</b> lèrant mituel
k-m	fakalkase manggalkase rikèlkase yibalkase	be/put on top feed hide steal and hide	<b>faklèk</b> mangglèk riklèk yiblak	<b>faklèm</b> mangglèm rikèm yiblam
SUPPLETE	luarse yikanse rinse rurse	go inside carry/bring give shine on/shoot	luar yikan <b>lèn</b> rur	lèmb yiramb <b>fèk</b> mèngg

Table 4: The formal relationship between extended and restricted roots

Furthermore, note that with the exception of the roots in the  $\sqrt{\text{EXT ONLY}}$  and SUPPLETE root classes (the top and bottom rows of Table 4),  $\sqrt{\text{EXT}}$  and  $\sqrt{\text{RST}}$  differ in shape only at the right edge of the roots. The two forms share a common base, as in *fitar* vs. *fit* and *faklèk* vs. *faklèm*. In summary, root classes may be defined on the basis of the interaction between the following two parameters:

(11) PARAMETERS FOR THE CLASSIFICATION OF RANMO ROOTS

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

The parameter in (11a) concerns whether the verb alternates at all. As shown in Table 4, verbs in all but the  $\sqrt{\text{EXT ONLY}}$  root classes alternate between extended and restricted forms. If the verb is non-alternating, the extended form is used, suggesting that the extended rather than the restricted form is “default” in some sense<sup>8</sup>. It also raises the question what properties set apart those verbs which only appear in the extended form from those that can appear in both forms. This will be taken up in section 4.2.

The second parameter (11b) is used to further categorize the class of alternating verbs into subtypes according to their phonological shape. Four subtypes are distinguished by this parameter. First,  $\sqrt{\text{EXT}}$  may be an **augmented** version of  $\sqrt{\text{RST}}$ , as in *fitar* vs. *fit* (belonging to the  $\sqrt{\text{RST+ar}}$  root class). Second,  $\sqrt{\text{EXT}}$  may also be a **truncated** version of  $\sqrt{\text{RST}}$  as in *bi* vs. *bint* (belonging to the  $\sqrt{\text{EXT+Sonorant}}$  root class). Third, the two forms may be identical in syllable structure, but differ by the choice of final consonant, i.e., they may represent a case of **mutation**, as in *faklèk* vs. *faklèm*. Finally, the relationship can also be **suppletive**, as in *fèk* vs. *lèn*).

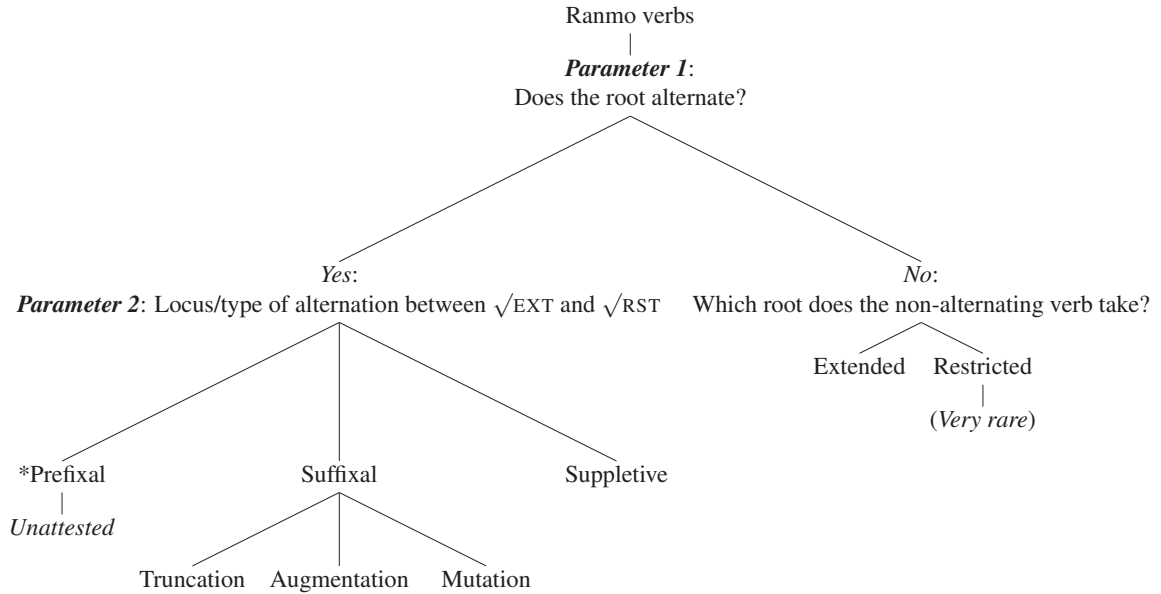
The classification of Ranmo verbs according to whether/how they alternate is schematized in (12).

<sup>8</sup>Strictly speaking, this is only *virtually* true. That is, there *is* at least one verb—*leave*—for which only the restricted form is available. The restricted form is compatible with either a singular or dual participant reading, as in (1a-b). In order to express the plural meaning (‘they(3+) left’), a different verb (lexical item) must be used altogether, as in (1d). There is no extended counterpart of *laf* ‘leave.RST’ in the lexicon of Ranmo (1c).

- (1) a. Fi t-a-**laf**-Ø.  
3ABS M.γ-DI-**leave.RST**-sgS  
‘S/he went/left.’
- b. Fi t-a-**laf**-ai.  
3ABS M.γ-DI-**leave.RST**-2/3nsgS  
‘They(2) went/left.’
- c. \*Fi k-f-a-(??)-ai.  
3ABS M.β-NON.FUT-DI-**leave.EXT**-2/3/nsgS  
‘They(3+) went/left.’
- d. Fi th-f-**ia**.  
3ABS 2/3nsgO,β-NON.FUT-go  
‘They went/left.’

$\sqrt{\text{RST}}$ -only verbs in Ranmo are probably rare for the same reasons that *singularia tantum*—lexical items that are mostly or exclusively used in the singular form, e.g., *third estate*—are rare. I do not discuss  $\sqrt{\text{RST}}$ -only cases in this paper, but I do want to mention that they are in principle possible and are in fact attested.

(12)



### 3.2 Semantics of root alternation

In this section, I address the semantics and distribution of extended and restricted roots in Ranmo.

Consider first (13a-c). Argument number is determined by the interaction between (i) the type of root and (ii) agreement inflection.

- (13) a. Fi s-a-lèfèr. (>salfèr)  
3ABS 3sgmO.γ-APPL-jump.RST  
'He jumped.'
- b. Fi th-a-lèfèr. (>thalfèr)  
3ABS 3nsg.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.'

The **restricted** root is compatible with either a **singular or dual** subject (13a-b). If subject agreement is singular, it gives rise to an overall singular reading, as in (13a); if subject agreement is non-singular, then a dual reading results, as in (13b). The **extended** root, when combined with non-singular subject agreement, gives rise to a **plural (i.e., 3+)** participant reading, as in (13c).

Based on (13a-c) alone, the root alternation appears to mark argument number distinctions, opposing plural to non-plural, while agreement morphology marks the singular/non-singular opposition.

However, take a look at (13d). The same extended form associated with the plural participant reading in (13c) is now used to signal plurality on the axis of *time* (i.e., repetition): there were

multiple events of one person jumping<sup>9</sup>.

The full range of possible interpretations conveyed by “crossing” agreement morphology and root type is shown in Table 5<sup>10</sup>.

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

Table 5: Semantic interpretations determined by crossing root type and agreement

The two semantic interpretations (plural participant and iterative) are associated with what has been referred to as pluractional verbs crosslinguistically; this gives us the generalization in (14).

- (14) THE RELATIONSHIP BETWEEN EXTENDED AND RESTRICTED ROOTS  
The extended root is the “pluractional” counterpart of the restricted root.

### 3.3 Not all eventive verbs alternate

Before proceeding to the analysis, I would like to consider the class of eventive verbs which do not show root alternation, but only occur in extended form (this class corresponds to the  $\sqrt{\text{EXT}}$ -only root class in Table 4). Consider, for example, *mirar* ‘swim’ in (15). This is an extended root. We know this because of its distribution: it occurs in exactly those contexts in which the extended variants of alternating verbs occur, e.g., in the presence of the non-future marker *f-*. Even when an adverbial phrase like *one time* is introduced to coerce a bounded, singular reading, the extended root occurs. There simply isn’t a restricted root counterpart for this verb.

- (15) a. Ke k-f-a-**mirar**- $\emptyset$ .  
1sg.ABS M. $\beta$ -NON.FUT-DI-**swim**-sgS  
‘I swam.’
- b. Ni k-f-a-**mirar**-e.  
1nsg.ABS M. $\beta$ -NON.FUT-DI-**swim**-1nsgS  
‘We(2+) swam.’
- c. Ke ngambi num k-f-a-**mirar**- $\emptyset$ .  
1sg.ABS one time M. $\beta$ -NON.FUT-DI-**swim**-sgS  
‘I swam once.’

Other verbs belonging to the non-alternating class are shown in Table 6, alongside those belonging to the alternating class. What is it about the verbs in the right column that that they

<sup>9</sup>Also note that the non-future prefix *f-* only occurs in the environment of the extended root. I assume that some kind of checking relation is required between the root and the relevant TAM morpheme such that the latter must have its uninterpretable unbounded feature checked and valued by agreeing with an extended root which has a valued instance of the unbounded feature. *f-* gets spelled out (only) when the non-future TAM morpheme agrees with the extended root.

<sup>10</sup>The “Plural” cell also allows Plural-Iterative (and Dual-Iterative) given the right context. Iterativity, therefore, is always associated with extended roots, regardless of the number of the subject/object.

should lack restricted variants? The classification into either the alternating or non-alternating class seems to be determined in part by the lexical semantics of the verb. For example, no verbs that are inherently punctual/telic (e.g., *wake up*, *jump*, *arrive*) belong to the non-alternating class. However, the converse is not true. That is, a large number of verbs which are considered *not* to be punctual/telic—i.e., those classified as activity verbs—in many languages (e.g., *bark*, *drink*, *laugh*) also belong to the alternating class in Ranmo. Therefore, while lexical semantics plays an initial role in the classification of verbs into the alternating and non-alternating classes, it is also to a large degree idiosyncratic.

Alternating	Non-alternating
<i>wake up, jump, arrive, bark, drink, cross, win, fill, laugh</i>	<i>swim, scrape, chase, give birth to, dance, build, make</i>

Table 6: Alternating and non-alternating (eventive) verbs in Ranmo and their examples

### 3.4 Stative verbs do not alternate

Finally, it must be made explicit that root alternation is a property of only *eventive* predicates. Stative predicates—the majority of which denote positional or postural states—do not show alternation according to either argument number or aspect. Stative roots are identified by a special stative suffix, *-l*, as exemplified in (16).

(16) EXAMPLES OF POSITIONAL ROOTS IN RANMO

- a. *mil* ‘be hanging’
- b. *mol* ‘be leaning’
- c. *manggal* ‘be in the mouth’
- d. *fakal* ‘be on top’
- e. *yinal* ‘be horizontal/lying down’

Stative predicates, by nature, cannot express iterativity, which is a property of events. Moreover, they also do not show alternation for the number of the subject, as shown in (17). The form *mil* remains constant across all person/number combinations.

(17) STATIVE PREDICATES DO NOT SHOW ROOT ALTERNATION

- a. Mbumbu s-f-**mil**. ( $>$ soumil)  
fruit 3sgmO.β:STAT-NON.FUT-**hang.POS**  
‘A fruit was hanging.’
- b. Mbumbu l-f-**mil**. ( $>$ loumil)  
fruit 2/3dlO.β:STAT-NON.FUT-**hang.POS**  
‘Fruits(2) were hanging.’
- c. Mbumbu bw-f-**mil**. ( $>$ bwemil)  
fruit plO.β:STAT-NON.FUT-**hang.POS**  
‘Fruits(3+) were hanging.’

Compare this paradigm with its eventive counterpart *hang*. The latter does show alternation between extended or restricted, as in (18).

- (18) a. Nafo wanaku th-f-**ming**-∅. (>thoumingg)  
 3sg.ERG clothing 3nsgO.α-NON.FUT-**hang**.EXT-sgS  
 ‘He was hanging the clothes.’
- b. Kèn fari s-**mir**-∅ yere-ka. (>sèmir)  
 1sg.ERG rope 3sgmO.γ-**hang**.RST-sgS basket-LOC  
 ‘I hung a/the rope over the basket.’

Summarizing, there are three distinct root forms in Ranmo—extended, restricted, and positional—which share a common base (e.g., *mi* in the case of *hang/be hanging*). These roots are complex and differ in the suffix they take, as shown in (19).

- (19) a.  $\sqrt{\text{EXT}} = \text{mi} + \text{-ng}$   
 b.  $\sqrt{\text{RST}} = \text{mi} + \text{-r}$   
 c.  $\sqrt{\text{POS}} = \text{mi} + \text{-l}$

Moreover, each root type is associated with a distinct set of agreement prefixes. Crucially for our purposes, positional (and other stative) verbs occur with with a stative agreement series (indicated by ‘STAT’ in the glossing in (17)).

This raises questions about the locus of agreement. That (intransitive) eventive predicates and stative predicates would show distinct realizations of agreement suggests that different kinds of functional heads may be involved in agreement. I will take up this issue in the next section, which will address the following two main questions:

- (20) How should the alternation between extended and restricted roots be represented?  
 (21) What does the distribution of root alternation tell us about the nature of eventive and stative positional predicates in Ranmo?

## 4 Analysis

### 4.1 Inner Aspect

We first consider roots used to build eventive predicates in Ranmo. We have already seen that these roots are complex and decomposable, as shown in (22).

- (22) COMPLEX ROOTS IN RANMO  
 a.  $\sqrt{\text{EXT}} = \text{root core} + \text{extended suffix}$   
 b.  $\sqrt{\text{RST}} = \text{root core} + \text{restricted suffix}$

The morphological decomposability of roots can be related to Travis (2010)’s proposal about Inner Aspect. Specifically, drawing on the notion that the VP has shells (cf. Larson 1988), she proposes that there is a functional projection sandwiched within these shells, i.e., between VP and vP. This is the inflectional element that is closest to the VP and houses a morpheme that encodes situation aspect—hence the name “Inner Aspect.” This, of course, is distinct from the

part of the inflectional TAM morphology that is above vP, which has commonly been referred to as “grammatical” or “viewpoint” aspect (often concerned with the perfective/imperfective distinction) (cf. Smith 1997).

Travis provides extensive empirical evidence for the existence of this functional projection, showing that its specifier serves as the landing site of certain derived objects and its head serves as the host of reduplication material.

I propose that the extended and restricted suffixes are instances of Inner Aspect. As such, it is driven by properties of situations such as (un)boundedness. Here I additionally draw on Jackendoff (1991)’s proposal that verbs that denote processes and iterated events are unbounded, endowed with the feature ([-b]) (23). They are comparable to mass nouns and count plurals in the nominal domain in this respect (24).

(23) UNBOUNDED EVENTS

- a. John is swimming. (process)
- b. The light was flashing. (iterated completed event)

(24) UNBOUNDED ENTITIES

- a. There was water all over the table. (mass)
- b. There were books all over the table. (count plural)

In contrast, verbs which denote completed events are said to be [+b] (25). These are analogous to count singular nouns in the nominal domain, as in (26).

(25) BOUNDED EVENTS

- a. John ate an apple.
- b. John woke up an hour ago.

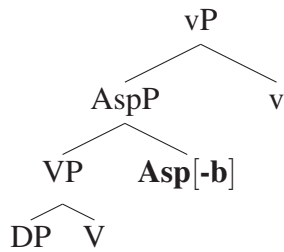
(26) BOUNDED ENTITIES

There was a book on the table. (count singular)

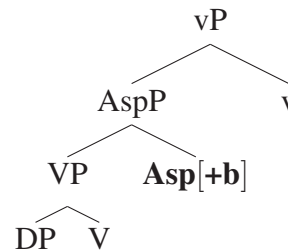
Returning to Ranmo, I propose that extended roots denote unbounded events; thus they encode [-b]. Restricted roots denote bounded, punctual events; they encode [+b]. Crucially, these features have syntactic realization on the Asp head sandwiched between V and v, Inner Aspect. The relevant structures are shown in (27).



(27) a. EXTENDED (EVENTIVE)



b. RESTRICTED (EVENTIVE)



The proposed analysis also provides a way to capture the nature of non-alternating verbs discussed above, i.e., those verbs which only occur in extended form. Such verbs differ from alternating ones only in that they lack the option to encode [+b], i.e., they are *inherently unbounded*. I elaborate on this in the next section.

#### 4.2 Some cross-categorial semantic generalizations (an aside)

At this point, there is an important cross-categorial parallel to be drawn, namely, that between the alternating/non-alternating root distinction in the Ranmo verbal domain and the mass/plural distinction in the nominal domain.

Semantic accounts of the count/mass distinction in the nominal domain invoke notions like ‘cumulativity’ and ‘quantization’—properties of predicates of eventualities. These can be used to distinguish mass nouns (*water*) and count plurals (*apples*) from count singulars (*apple*). Mass nouns and plurals are cumulative and non-quantized, whereas count singulars are non-cumulative and quantized. The formal definitions of the two properties are given below (cf. Krifka 1992, 1998).

(28) A predicate P is **cumulative** iff  $\forall x,y[P(x) \ \& \ P(y) \ \rightarrow \ P(x \ \wedge \ y)]$

(A predicate P is cumulative iff, whenever it applies to x and y, it also applies to the sum of x and y.)

(29) A predicate P is **quantized** iff  $\forall x,y[P(x) \ \wedge \ P(y) \ \rightarrow \ \neg y <_p x]$

(A predicate P is quantized iff, whenever it applies to x and y, y cannot be a proper part of x, i.e., iff no entity that is P can be a subpart of another entity that is P.)

Mass nouns and count plurals have cumulative reference because, for example, any sum of parts which are water is water, and any two sums of apples add up to a sum of apples. On the other hand, singular count nouns like *apple* have quantized reference: there is no proper part of an apple which itself qualifies as an apple.

On the issue of what distinguishes mass nouns and plural nouns, two opposing views have been proposed. According to Link (1983), Bunt (1985), and Landman (1989), mass nouns differ from count plurals in not specifying minimal parts. That is, they belong to a “non-atomic” domain in the universe of the discourse. In other words, mass nouns are said to not have atomic reference, defined in (30) (cf. Krifka 1992).

(30) a.  $\forall x,P[ATOM(x,P) \leftrightarrow P(x) \ \wedge \ \neg \exists y[y < x \ \& \ P(y)]]$

(x is a P-atom.)

- b.  $\forall P[\text{ATM}(P) \leftrightarrow \forall x[P(x) \rightarrow \exists y[y \geq x \ \& \ \text{ATOM}(y,P)]]]$   
 (A predicate P is **atomic** iff, given P(x), there is a proper part of x which is a P-atom.)

According to this definition, a mass noun such as *change* is not atomic because there is no set of atoms representing its smallest entities within its extension. The non-atomic view of mass nouns basically articulates Bunt (1985)'s *homogeneity reference hypothesis*: "Mass-nouns refer to entities as having a part-whole structure without singling out any particular parts and without making any commitments concerning the existence of minimal parts" (p. 46).

An alternative view has been defended by Chierchia (1998), who argues that no non-atomic domain need be separately posited for mass nouns. He offers an atomic, plural semantics for mass nouns, arguing that the extension of mass nouns is fundamentally no different from that of count plural nouns. In his view, both consist of minimal (atomic) parts. Thus, the extension of the mass noun *change* is essentially identical to that of a plural noun like *coins* (so there *is* a set of atoms corresponding to the smallest entities which fall into the extension of *change*, namely, singularities of coins). A mass noun simply denotes a set of singularities (atoms) *plus* all the pluralities of such entities.

Under this approach, count plurals and mass nouns differ only in the following respect: "while count nouns single out in the lexicon the relevant atoms or minimal parts (by making them the exclusive components of their extension), mass nouns do not" (p. 54). In other words, mass nouns are inherently plural (or lexical plurals). This is the *inherent plurality hypothesis*. It unites count plurals, count singulars and mass nouns under the rubric of atomic predicates.

Returning to Ranmo, I propose that Chierchia (1998)'s "atomistic" view of mass nouns can be naturally extended to the event domain to characterize non-alternating verbs in Ranmo. In other words, just as mass nouns are no different from plurals in consisting of atomic parts, non-alternating verbs are no different from alternating verbs in consisting of atomic parts. The only difference between the two is that alternating verbs single out in the lexicon their atoms, i.e., their restricted counterparts denoting singular, bounded events. Non-alternating roots, on the other hand, do not single out their restricted counterparts in the lexicon. They are, like mass nouns, inherently plural.

In this section, I have made some descriptive generalizations concerning the status of extended vs. restricted roots as they relate to the count/mass distinction in the nominal domain. In particular, I have generalized Chierchia (1998)'s "atomistic" view of mass predicates to the domain of events, arguing that what differentiates non-alternating extended roots from alternating extended roots is essentially the same as what differentiates mass nouns from count plural nouns. The discussion in this section is summarized in Table 7.

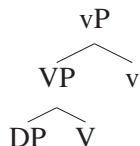
	<b>Non-alternating extended</b>	<b>Alternating extended</b>	<b>Restricted</b>
Cumulativity	Cumulative	Cumulative	Quantized
Boundedness	Unbounded	Unbounded	Bounded
Nominal parallel	Mass noun	Count plural	Count singular

Table 7: Semantic properties of Ranmo roots

### 4.3 Stative predicates lack Inner Aspect

Returning to the main focus of this paper—the eventive/stative contrast in Ranmo—I further propose that in contrast to eventive predicates, stative predicates lack Inner Aspect. This immediately accounts for why the latter do not show root alternation—they simply lack the syntactic projection which is the locus of alternation between [+b] and [-b]. The tentative structure for stative predicates is shown in (31)<sup>11</sup>. Here, *v* directly selects for VP, whereas in the structure for eventive predicates in (27), *v* selected for AspP.

(31) STATIVE (tentative)



On the proposed analysis, a verb is eventive *by virtue of projecting Inner Aspect*. That is, Inner Aspect functions as a kind of “eventivizer,” which takes a predicate of individuals and turns it into a predicate of events. This will be discussed further in the next section.

In summary, Ranmo predicates can be classified into the following aspectual classes based on their interaction with Inner Aspect.

(32) RANMO ASPECTUAL CLASSES

- a. Alternating eventive predicates may be unbounded or bounded, depending on the syntactic feature merged ([-b] or [+b]) on Inner Aspect.
- b. Non-alternating eventive predicates are inherently unbounded (lexically specified to project only [-b] on Inner Aspect).
- c. Stative positional predicates are inner aspectually unspecified.

#### 4.3.1 Positional suffix *-l*

As mentioned above, the stative class in Ranmo consists largely of positional verbs which denote spatial positions and postures, e.g., *be on top*, *be in the mouth*, *be horizontal*, etc. Such verbs are expressed using adpositions in many other languages, including English, as exemplified in (33).

(33) English “formulaic” PPs (Coon and Preminger 2009:12)

- a. The car is [out front]<sub>PP</sub>.
- b. The bat is [upside-down]<sub>PP</sub>.

Coon and Preminger (2009) suggest that positionals can in fact be seen as “a surrogate method to achieve the expressive richness that other languages achieve by varying the head of PP or AP” (p. 12). In particular, they point out that Chols’s (Mayan) rich lexicon of positional verbs is correlated with its extremely impoverished prepositional system (amounting to just one preposition). Ranmo is the same way: its large number of positional verbs is juxtaposed by a very small class of adpositions (e.g., *banènbanem* ‘underneath,’ *warfa* ‘above’).

<sup>11</sup>Therefore, contrary to some previous claims, statives are not inherently atelic on a par with activity verbs; rather, they must be aspectually unspecified.

However, the authors observe an important contrast between positional verb phrases on the one hand and adpositional phrases on the other. Consider the English examples below. The contrast between (34b) and (35b) shows that VPs can be integrated into the clause structure directly while PPs cannot; the latter require a copula, as in (35a).

- (34) a. The jar is [<sub>VP</sub> sitting on the table].  
 b. The jar [<sub>VP</sub> sat on the table].
- (35) a. The jar is [<sub>PP</sub> on the table].  
 b. \*The jar [<sub>PP</sub> on the table].

The authors attribute this difference between VPs and PPs to the fact that the latter are predicates of *individuals*, i.e., they lack an event argument slot in their neo-Davidsonian semantic representation. VPs, on the other hand, are inherently predicates of *events* (they have an event argument slot in their semantics). They propose the following semantics for the copula required in the case of PPs.

- (36) PUTATIVE SEMANTICS FOR EVENTIVIZER/COPULA (Coon and Preminger 2009:12)  
 $[[copula(e.g., is)]] = \lambda Q_{\langle e,t \rangle} . \lambda x_e . \lambda e_d . e$  is a (minimal) event in which  $Q(x)$

I argue that the same can be said of positionals in Ranmo: they are non-eventive predicates of individuals (just like PPs in English and positional verbs in Chol). In order to eventivize a positional predicate, a copula-like element is required. I suggest that the copula-like element is the positional suffix *-l*, which performs the eventivizing function, on a par with the obligatory copula found with PPs in English. The updated structure of stative predicates is shown in (37a).

- (37) a. STATIVE (REVISED)                      b. EVENTIVE
- 

Note that the projection responsible for introducing the *-l*- suffix (the Positional Phrase, PoP) is in the same position in the clause structure as Inner Aspect in eventive verbs, repeated in (37b). Thus, where Inner Aspect introduces an event argument (creating extended and restricted verbal roots), the positional root suffix *-l* eventivizes predicates of individuals (creating positional roots).

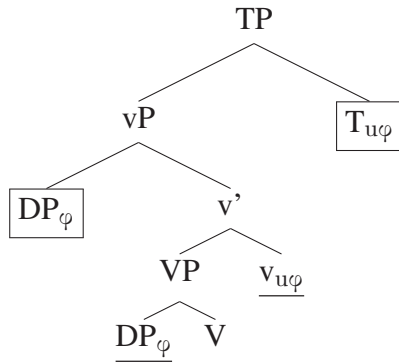
The two structures also differ in the flavor of *v* they project (stative vs. eventive). This will have consequences for the spellout of agreement morphemes, which is the topic of the next section.

#### 4.4 *v* as the locus of agreement

In this section, I argue that *v* is the locus of subject agreement in unaccusative predicates (of both the eventive type and the stative/positional type) in Ranmo. This is interesting in light of the

robust tendency of finite *Tense* to show agreement with the subject in languages that have verbal agreement (cf. Chomsky 2000, 2001). This is not to say that Tense does not ever agree in Ranmo—it does, in *transitive* clauses (where *v* also agrees with the object). The two agreement relations in transitive clauses are shown in (38).

(38) AGREEMENT IN TRANSITIVE CLAUSES<sup>12</sup>



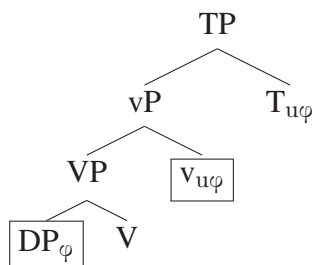
I propose that in the case of unaccusative clauses, T does not agree with the sole argument because of the combination of the following two facts:

- (39) a. Agreement in Ranmo is (parameterized to be) downward, as per the negative setting of (40).
- b. Unaccusative *v*<sup>13</sup> (as well as transitive *v*) is a phase.

- (40) THE DIRECTION OF AGREEMENT PARAMETER (DAP) (cf. Baker 2008)  
 F agrees with DP/NP only if DP/NP asymmetrically c-commands F (i.e., F must agree upward).

In the unaccusative structure in (41), both *v* and T are probes, bearing unvalued instances of  $\phi$ -features. However, *v*, being the first to merge, will probe first, searching its c-command for a goal to agree with. It will probe downward due to (39a), and agree with the first (and only) DP target that it locates, namely, the DP in the complement position of VP. This is the same derivation as object agreement in transitive clauses. Therefore, unaccusative verbs will show “object” agreement, i.e., the same agreement prefixes used to reference the objects of transitive verbs.

(41) AGREEMENT IN UNACCUSATIVE CLAUSES



Moreover, by (39b), T will not *also* be able to agree with this DP goal; it is inaccessible for agree by T by the Phase Impenetrability Condition. Crucially, this implies that T will be unable

<sup>12</sup>I have omitted the Inner Aspect projection from this structure as well as from all subsequent structures for simplicity.

<sup>13</sup>Unaccusative *v* comes in two flavors, as stated above, stative or eventive

to value its  $u\phi$ -features, which are “illicit” elements under Chomsky’s (2000, 2001) view and therefore should result in ungrammaticality.

Nevertheless, unaccusative verbs (which do not show agreement on T) are perfectly grammatical in Ranmo. I suggest that this is not surprising under—and therefore provides support for—Preminger (2011, 2014)’s “obligatory-operations” approach to agreement. On this view, the obligatory nature of agreement is “best handled in terms of an *operation*—one whose *invocation* is obligatory, but whose successful *culmination* is not enforced by the grammar” (Preminger 2011:175) (emphasis mine).

The proposal that  $v$  is the only locus of agreement in unaccusative clauses in Ranmo would explain a number of related facts. First, it would explain why the subjects of (unaccusative) eventive verbs and stative verbs use different sets of agreement prefixes (compare the agreement exponents in (17) and (18), for instance). If the locus of agreement is  $v$  rather than T, we may expect the shape of agreement to vary depending on the lexical semantics of the verb, i.e., depending on the particular flavor of  $v$  merged (stative vs. eventive). Second, it would explain why agreement is realized as a prefix on the verb, whereas (outer) TAM is a suffix in Ranmo (see, for example, (9a,c)). Third, and relatedly, it would explain why agreement is not morphologically related to (outer) TAM in Ranmo in contrast to many other languages, i.e., why variations in (outer) Tense do not condition allomorphy of the agreement prefixes in this language.

## 5 Explaining the distribution of the degree suffix *-an*

Before closing the paper, I would like to briefly mention how it interacts, in particular, with the degree quantifying morpheme *-an*. This morpheme is of special interest in the general discussion of verbal pluralization in Ranmo because its presence adds another more nuanced layer of pluralized meaning, namely, a large number of events/large quantity reading. This immediately raises the question of how it relates to each of the root types (extended and restricted) in Ranmo, and also has the potential to shed light on the nature of pluractionality more broadly.

In Lee (to appear a), I analyze the *-an* morpheme as the degree quantifier corresponding to the adverbial *a lot* in English and other languages. Now, it is well-known that the degree expression *a lot* can only combine with unbounded predicates. This is the case in both the nominal and verbal domains, as shown in (42)-(44).

(42) FRENCH (Doetjes 2004:90)

- a. beaucoup de soupe  
‘a lot of soup’
- b. beaucoup de théières  
‘a lot of teapots’
- c. #beaucoup de théière  
#‘a lot of teapot’

- (43) a. John ran a lot.  
b. John woke up a lot.  
c. ??John woke up a few hours ago a lot.

(44) FRENCH (Doetjes 2007:698)

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

Turning to the contrast between the (b) and (c) examples in (43) and (44), we see that *a lot* is licensed only when the predicate is iterative (i.e., unbounded). When the predicate describes an eventuality that is bounded and singular, it cannot be modified by *a lot*.

If *-an* is no different from *a lot* in languages like English and French, then the analysis proposed for extended and restricted roots above makes the following predictions with regard to its distribution, namely:

(45) PREDICTIONS FOR THE DISTRIBUTION OF *-an*

- a. *-an* should only occur with extended roots (since only they are [-b]).
- b. *-an* should not be able to take stative predicates since they lack an inner aspectual specification altogether (at least not directly<sup>14</sup>).

Indeed, both predictions are borne out, as shown in (46).

(46) a. EVENTIVE

Fi s-f-a-**lèfèn**/\*lèfèr-**an**. (>swalfèn)  
3ABS 3sgmO.β-NON.FUT-APPL-**jump**.EXT/\*jump.RST-DEG  
'He jumped many times.'

b. STATIVE

\*Mbumbu s-f-**mil-an**.  
fruit 3sgO.β:STAT-NON.FUT-**hang**.POS-DEG  
'A lot of fruits were hanging.'

What this section is intended to illustrate is that predicates which denote a large number of events consist of an aspectual component ( $\pm b$ ) and a degree component contributing the meaning 'a lot.' Crucially, there is a selectional restriction on the degree morpheme: it can only select for extended roots. This is precisely the prediction we make under the analysis that extended roots are [-b].

<sup>14</sup> The use of *-an* with stative predicates becomes grammatical only with the additional suffix *-war*, which introduces [-b] to stative predicates.

- (1) Ngatha fur b-f-a-rikal-\*(**war**)-an. (>bwarikèlwaran)  
dog baby plO.β:stat-NON.FUT-APPL-hide.POS-WAR-DEG  
'A lot of puppies were hidden on me.'



## 6 Conclusion

This paper investigated the phenomenon of morphological root alternation in Ranmo. The alternation between extended and restricted roots was shown to correlate with distinct semantic interpretations: plural participant and iterative readings on the one hand and singular, bounded readings on the other.

Extended and restricted suffixes were shown to be internally complex, consisting of the core base and a low aspectual head which encodes [ $\pm$ b(ounded)] feature, Asp. This functional category is located inside the lexical domain of the VP (i.e., below little vP), and thus, I have identified another instance of Inner Aspect, in support of Travis (2010).

Crucially, the distribution of root alternation serves as a probe into the nature of stative vs. eventive predicates in Ranmo. Specifically, I proposed that stative predicates differ from eventive predicates in lacking Inner Aspect. This account explains (i) why they do not show root alternation and (ii) why they cannot (directly) combine with the degree suffix *-an*. Since low Asp is absent in Ranmo positional verbs, they require a copula-like element (the *-l* suffix) in order to eventivize the predicate—the same way English PPs require the copula *be*.

## 7 References

- Baker, M. C. (2008). *The syntax of agreement and concord*. Cambridge University Press Cambridge.
- Bunt, H. C. (1985). *Mass terms and model-theoretic semantics*. Cambridge University Press, Cambridge.
- Chierchia, G. (1998). *Plurality of mass nouns and the notion of “semantic parameter”*. Springer.
- Chomsky, N. (2000). *Minimalist inquiries: The framework. Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. Cambridge, MA: MIT Press.
- Chomsky, N. (2001). *Derivation by phase. Ken Hale: A life in language*. Cambridge, MA: MIT Press.
- Comrie, B. (1982). Grammatical relations in Huichol in studies in transitivity. *Syntax and Semantics Ann Arbor, Mich* 15(95–115).
- Coon, J. and O. Preminger (2009). Positional roots and case absorption. *New Perspectives in Mayan Linguistics*, 35–58.
- Dixon, R. M. (1994). *Ergativity*. Cambridge University Press.
- Dixon, R. M. W. (1979). Ergativity. *Language*, 59–138.
- Doetjes, J. (2004). Degree quantifiers. *Handbook of French Semantics*, 83–98.
- Doetjes, J. (2007). Adverbs and quantification: Degrees versus frequency. *Lingua* 117(4), 685–720.



- Döhler, C. (in prep). *A grammar of Kómnzó*. Ph. D. thesis, Australian National University.
- Evans, N. (2012). Even more diverse than we had thought: The multiplicity of Trans-Fly languages. In ed. by Nicholas Evans and M. Klamer (Eds.), *Melanesian languages on the edge of Asia: Challenges for the 21st century, Language Documentation and Conservation Special Publication No. 5.*, pp. 109–49. Honolulu: University of Hawaii Press.
- Haji-Abdolhosseini, M., D. Massam, and K. Oda (2002). Number and events: Verbal reduplication in niuean. *Oceanic Linguistics*, 475–492.
- Jackendoff, R. (1991). Parts and boundaries. *Cognition* 41(1), 9–45.
- Krifka, M. (1992). Thematic relations as links between nominal reference and temporal constitution. *Lexical matters* 2953.
- Krifka, M. (1998). The origins of telicity. *Events and grammar*, 197–235.
- Landman, F. (1989). Groups, i. *linguistics and philosophy* 12(5), 559–605.
- Larson, R. K. (1988). On the double object construction. *Linguistic inquiry*, 335–391.
- Lee, J. (to appear a). Pluractionality in Ranmo. *Oceanic Linguistics*.
- Lee, J. (to appear b). Split ergativity and voice marking in Ranmo. In *NELS 45: Proceedings of the 45th North East Linguistic Society*.
- Link, G. (1983). The logical analysis of plurals and mass terms: A lattice-theoretical approach. *Formal semantics: The essential readings*, 127–146.
- Newman, P. (1990). *Nominal and verbal plurality in Chadic*. Number 12. Walter de Gruyter.
- Preminger, O. (2011). *Agreement as a fallible operation*. Ph. D. thesis, Massachusetts Institute of Technology.
- Preminger, O. (2014). *Agreement and its failures*, Volume 68. MIT Press.
- Smith, C. S. (1997). *The parameter of aspect*, Volume 43. Springer.
- Součková, K. and M. Buba (2008). Intensive plurality hausa pluractional verbs and degree semantics. *Linguistics in the Netherlands* 25(1), 133–144.
- Travis, L. (2010). *Inner aspect: The articulation of VP*, Volume 80. Springer.
- Yu, A. (2003). Pluractionality in Chechen. *Natural language semantics* 11(3), 289–321.