

The compositional morphosemantics of pluractionality

Robert Henderson

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The plan for the week

This week, in this course, I would like to introduce you all to the morphosemantics of pluractionality. We will not only focus on compositional issues, but I would like to think about composition as much as we can because it is the area of pluractionality that is least understood.

- ▶ Day 1: A general introduction to pluractionality, its common typological manifestations, as well as some very basic initial compositional issues we could consider.
- ▶ Day 2: We will focus on dependent indefinites and dependent pluractionality, which exhibit what looks like “split scope” (pre-theoretically speaking). We will consider how various authors have tried to deal with the complex scopal phenomena.
- ▶ Day 3: We will take a deep dive into the incredibly complex morphological system of plural agreement / pluractionality we see in the language Seri, spoken in the Mexican state of Sonora. Seri pluractionality presents major hurdles for compositionality. We will consider how we might overcome these hurdles.

How to identify pluractional morphology

Pluractionality

A pluractional verb is a derived verb that denotes a predicate which cannot be satisfied by an atomic event

Some examples

We will return to the definition, but sometimes it is more easy to start with some examples.

(1) X-i-tzuy-e’

CP-A1s-sit-P.ITV

‘I sat.’

(2) a. X-i-tzuy-**ulöj**.

CP-A1s-sit-**ulöj**

‘I sat various times.’

b. X-in- \emptyset -tzuy-**utzu’**

CP-E1s-A3s-sit-**utzu’**

‘I made the motion of sitting there many times.’

c. X-in- \emptyset -tzuy-**ula’**

CP-E1s-A3s-sit-**ula’**

‘I sat in various places.’

The central definition

In each example from the Kaqchikel language we have a verbal derivation that produces a verb, a predicate of events, which cannot be satisfied by an atomic event. For this reason, they satisfy the definition.

- ▶ I will call this morphology “pluractional”
- ▶ Verbs derived by a pluractional are called “pluractional verbs”

Why should we focus on verbal derivation?

- ▶ Doesn't it seem that inflection can also “pluralize” verbs?

(3)

- ¿Que pasó? **Murió**.
- ¿Que pasó? **Murieron**.

If (3a) is true, there is just a single event. But, if (3b) is true there must be a plurality of events—one for each participant (everyone dies alone).

The problem is that plural agreement does not always require a plural event (we will see some special cases of inflection in Seri later this week, which tell a more complex story). With many verbs, plural agreement is consistent with an atomic event.

(4) Jorge levant**ó** una mesa una vez.

(5) Suppose that all the children are working in a group and they lift a table together just once.

a. Levant**aron** una mesa.

For this reason we don't want to say that plural inflection is a pluractional morpheme. (Also, this does not accord with our idea that pluractionality is a verbal category.)

Why should we focus on verbal derivation?

- ▶ It seems that adverbials can also “pluralize” verbs.

(6)

- Levantaron la mesa **uno por uno**.
- Levantaron la mesa **individualmente**.
- Levanté la mesa **muchas veces**.
- Levanto la mesa **cada día**.
- ...y más
- ...y más y más

Sometimes these adverbials are called “pluractional adverbials”

- ▶ I do not challenge that these adverbs produce verbs that cannot be satisfied by atomic events...
- ▶ ...but I don't think that we want to say that these adverbials are pluractional morphemes in the same sense as the affixes that we have seen in languages like Kaqchikel.

There are some reasons:

- ▶ Languages with pluractional affixes also have these kinds of adverbials—that is to say, these adverbials do not compete with pluractional affixes for lexicalization.
- ▶ There are many languages with pluractional affixes, so we should want to talk about pluractional affixes as a distinct phenomenon with respect to the typology.
- ▶ Finally, the contrast between pluractional adverbials and bona fide pluractionality is similar to what we see in other more familiar domains, in particular, with nominals.
 - ▶ Nominals have morphology that derive predicates that cannot be satisfied by atomic individuals—árbol / árboles
 - ▶ Also there are modifiers that require plural individuals—**dos**, **cada**, **muchos**, etc.

My point of view is that we want to explore these analogies between plural nominals and plural verbs, and for this reason it would be best to focus on these intriguing verbal derivations.

Also, for this course, we can think about the composition of nominal plural derivations along with plural nominal modifiers, and then ask whether verbal plurationals and verbal modifiers have the same structure.

Thus, I think my core definition is a good place to start our investigation—again:

Pluractionality

A pluractional verb is a derived verb that denotes a predicate which cannot be satisfied by an atomic event

There are cases about which I am still not decided. These tend to involve suppletion and are especially common in the indigenous languages of North America. Usually they are called “plural agreement verbs” or “participant-numbered verbs”. Here are some examples from South Paiute discussed by Sapir.

(7)

- a. watcī- “place (an objet)”
- b. yuna- “place (various objets)”

(8)

- a. pitcī- “arrive (one entity)”
- b. ĩmwii- “arrive (various entities)”

(9)

- a. qarī- “sit, inhabit (one entity)”
- b. yuγwi- “sit, inhabit (various entities)”

What do we want to say about these examples?

- ▶ Well, suppletion can be a form of derivation, so I am happy to say that these cases involve verbal derivation.
- ▶ But, I think that there is not sufficient data to confirm that these verbs always require plural events
 - ▶ for verbs like *imwii*- “arrive”, I think so
 - ▶ for verbs like *yurwi*- “inhabit”, I don't know

The truth is that we don't know much about “participant-numbered verbs”, but I think they are probably more like semantically contentful verbal agreement, and so bypass pluralizing the event argument.

Typology of Pluractionality

Which languages have pluractionality?

Now that we have a definition of pluractionality, we can explore its typology. Wood 2007 considers a sample of 43 languages that come from a variety of families and regions.

sub-Saharan Africa	†Hoan, Luvale, Ewe
North Africa	Hausa, Syrian Arabic, Lango
Caucasus	Chechen, Georgian
Europe	Russian, Finnish, Basque
(C. &) N. Asia, Siberia	Korean, Turkmen, Evenki
Indic subcontinent	Kannada, Burushaski
S. and SE. Asia	Mandarin, Thai, Vietnamese
Polynesia, Micronesia, Melanesia	Fijian
New Guinea	Yimas, Amele, Kobon, Daga
Australia	Nunggubuyu, Kayardild, Wardaman
Alaska to Oregon	Central Alaskan Yup'ik, Thompson River Salish, Slave
California	S. Sierra Miwok, Yurok
Intermontane North America	Kiowa, Koasati, Wichita, S. Paiute
eastern North America	Tuscarora
Mexico and Central America	Chalcatongo Mixtec, Tzutujil
South America	Imbabura Quechua, Guaraní, Hixkaryana, Yagua

Which languages have pluractionality?

In this sample, 36 of the 43 languages have some form of pluractionality.

- ▶ The sample is small, but the number of languages with pluractionality is notable.
- ▶ Generally, there is agreement that the languages of Africa and the Americas commonly have pluractional morphemes.
- ▶ Also, generally pluractional affixes are less common in the languages of Europe (especially western Europe)
- ▶ I think that crosslinguistically, pluractionality is extremely common.

How many pluractional morphemes does a language usually have?

No pluractionality	Basque, Burushaski, Guaraní, Hixkaryana, Imbabura Quechua, Lango, Mandarin Chinese (7)
Marginal pluractionality	Finnish, Syrian Arabic, Korean, Chalcatongo Mixtec, Turkmen, Russian, Vietnamese (7)
1 or 2 pluractionals	Georgian, Ewe, Kiowa, Hausa, Chechen, Yimas, Kayardild, Fijian, Kannada, Nunggubuyu, Thai, Yagua, Wardaman, Daga, Tzutujil, Yurok, Amele, Southern Sierra Miwok, Wichita, Kobon, Tuscarora, Thompson River Salish, Koasati (27)
>2 pluractionals	Central Alaskan Yup'ik, Evenki, †Hoan, Slave, Southern Paiute, Luvale (6)

Woods does not have a single Mayan language in her sample. My experience with these languages is that they all have three more more. For Kaqchikel, I have found 5 or 6 verbal pluractional affixes.

- ▶ I think we need more more descriptive and theoretical work on these languages, so please...join me!

How are pluractionals marked?

Usually, many people assume that there is a connection between pluractionality and reduplication. Yes, there are a fair few cases marked in this way, but it is not the rule.

How are pluractionals marked?

We find languages with reduplicative pluractional morphemes. Consider Karitiana, which is spoken in Brazil.

(10)

Öwä naka-**kot-kot** sypomp opokakosypi.

kid 3.DECL-**break-break**.NFUT two.OBL egg

'The child broke two eggs.'

How are pluractionals marked?

Also we find languages that mark pluractionality with partial reduplication. Consider the Yurok language.

syaahlk-	to kick	sya'syaahlk-	to kick (more than once)
kwryrch-	to (give a) whistle	kwrykwryrch	to whistle 2/3 times, be whistling (EW 2:22)

How are pluractionals marked?

Finally, there are languages, like Finnish, which use non-reduplicative affixes.

Finnish frequentative verbs (Sulkala & Karjalainen 1992:312):

aja 'drive'

ajella 'drive around'

kysy/ä 'ask'

kysellä 'ask repeatedly'

How are pluractionals marked?

When we take a typological point of view, we see that, usually, pluractional verbs are not marked via reduplication.

<u>Form of pluractional</u>	<u>Number of pluractionals</u>
Full reduplication	6
Partial reduplication	10
Full or partial reduplication ⁶	2
Non-reduplicative affixes	55
Other ⁷	10
Total	83

TABLE 2.3: Forms of pluractional categories

Is there a correlation between pluractionality and plurality?

We have seen that a plural argument can (but not always), indicate a plurality of events.

- ▶ For the same reason, a pluractional verb can indicate that an argument is plural.
- ▶ Thus, perhaps there is a connection between nominal plurality and pluractionality.

That is to say, perhaps languages that have pluractionality don't mark plurality on nominals because it is redundant. Is this the case?

Is there a correlation between pluractionality and plurality?

The answer is no!

Nominal number	No pluractionality	Marginal pluractionality	1-2 pluractionals	>2 pluractionals
1 (Most)	2	4	6	3
2 (Some)	3	1	7	2
3 (Few)	1	0	6	1
4 (None)	1	2	4	0

Is there a correlation between pluractionality and plurality?

The facts indicate that pluractionality, while able to indicate that an argument is plural, has other function, and for this reason, they are not in competition.

- ▶ Later we will see that pluractional morphemes do not just pluralize an argument, but also act over this plural argument:
 - ▶ usually these argument receive a distributive interpretation, but also there are other interpretations.

Argument plural only: Yup'ik distributive postbase (Jacobson 1984:542)

tekite- 'to arrive' tekitequut 'they are leaving one after another'

nerre- 'to eat' ner'qui 'he is eating them one after another'

While we want to discuss the semantics of these pluractional morphemes, also I want to raise another typological question.

Which arguments can be “pluralized” by a pluractional morpheme?

<u>Pluralised argument</u>	<u>Number of languages</u>
O only	10
S only	4
	(2 of which pluralise only S of stative)
A only	0
S/O	12
S/A	4
S/A/O	5

Variation in the meaning of pluractionality

Up to this point, we have focused on the morphosyntactic typology of pluractionality.

- ▶ How to define a pluractional
- ▶ Which languages have pluractional morphemes
- ▶ How many do they have
- ▶ etc.

Now we should consider their semantics. The question is “what semantic notions are lexified by pluractional morphemes”

Variation in the meaning of pluractionality

In this section I would like to identify the semantic parameters along which pluractional morphemes vary.

- ▶ We will see that this question reduces to another question—in particular, When can we say that we have a single event and when can we say we have more?

Variation in the meaning of pluractionality

Sometimes it can be difficult. Kratzer presents a case like the following

My friend and I plant a rosebush. I dig a hole. My friend puts it inside. I cover it with soil. He waters it a bit from the hose, but then he hands the hose to me in order to finish watering.

How many events are there?

- ▶ One? The planting of a rosebush?
- ▶ Four? Each step in the proessing of planting a rosebush?
- ▶ Five? Each thing that we did between us?

Variation in the meaning of pluractionality

In this question we have the seeds of a theory of the semantics of pluractionality

- ▶ A pluractional morpheme does two things:
 - 1 It says how to count events—that is, it says when we have events that are distinct.
 - 2 It says that we have a plurality of events that we can distinguish by the method of counting.

What we will see is that pluractional morphemes distinguish pluralities of events (most centrally) through the route of time, space, and thematic participants.

We can distinguish events via their location in time. There are three features that interest us (but there are also some sub-features).

- ▶ multiple occasions / just one occasion
- ▶ continuous repetition / intermittent repetition
- ▶ number of repetitions

The number of occasions

When the plurality of events occurs in a manner that suggests that they are part of the same macroevent, we say that they occur on the same occasion.

- (11) Luvale extensive suffix
 - a. -jingumuka “*turn energetically*”
 - b. -jínwomwoka “*oscillate*”

- (12) Luvale extensive suffix
 - a. -telemuka “*turn to the side*”
 - b. -telwomwoka “*wobble*”

That is to say, the character of the macroevent is a plural event.

The number of occasions

In contrast, when the events occur independently and with more time between them, we say that occur on multiple occasions.

- (13) yurok “repetitive”
kipun kwegeskwes-ek
winter have.a.cold.ITR-1SG
‘I get colds in the winter.’

In many cases these pluractional morphemes have a habitual meaning.

The character of the repetitions

Continuous repetition is very simple. It is when there is no time (or minimal time) between the events that satisfy the non-pluractional verb.

(14) Yup'ik reversativo

- a. ane- “*leave*”
- b. anqetaartuq “*enter and leave*”

(15) Ruso po + -va

- a. blestat “*glow*”
- b. pobleskivat “*flicker*”

- c. smotret' “*look at*”
- d. posmtrivat' “*shoot glances*”

The character of the repetitions

Intermittent repetition is more complex because there are many ways in which a repetition can be intermittent. There are two ways that I would like to focus on.

- ▶ Aperiodic repetitions—the time between the events is unpredictable or varies.

(16) Northern Paiute “heggwi”

a. Paumawünü “*rain*”

b. Paumawünü**heggwi** “*rain every once and awhile*”

This type is very common.

The character of the repetitions

We also find pluractional morphemes that prefer periodic repetitions—the time between the events is uniform.

(17) X-Ø-chin-**ilöj** ri kanpana.

COM-A3s-ring-**löj** the bell

'The bell repeatedly sounded.' (Speaker Comment: *like on the hour*)

In her study, Woods found that pluractionals that prefer continuous repetitions are more common

+ **continuous** 50

- **continuous** 11

+/- **continuous** 16

The number of repetitions

Usually, pluractionality does not signify that there is a simple plurality (more than 2).

- ▶ Instead, pluractional verbs require a plurality that is “sufficiently large”.
- ▶ The context says what is “sufficiently large”

(18) Yup'ik +a-postbase

- igar- “write”
- igarauq “write various people”

- atur- “sing”
- aturauq “sing various songs”

What is “various”? Well, it is more than 2, but the context decides.

The number of repetitions

Sometimes the pluractional morpheme requires that the plurality of events is large.

- ▶ it is like the contrast between “various” and “a lot”
- ▶ The two are sensitive to the context, but also there is a semantic difference in their cardinality.

(19) Hausa intensive

- maaree “*hit*”
- mammaaree** “*hit a lot*”

The number of repetitions

What does not often exist are languages with pluractional morphemes that require a simple plurality. I know of only one case—Karitiana, which requires the pluractional form for all verbs that are satisfied by more than one event.

- (20) Öwä naka-**kot-kot** sypomp opokakosypi.
kid 3.DECL-**break-break**.NFUT two.OBL egg
'The kid broke two eggs.'

I do not know why this type of pluractionality is so uncommon, but it is a critical difference between verbal and nominal plurality and should have important consequences for how we think of verbal plurality (based on what we know from the nominal domain).

We can also distinguish events by their location in space.

- ▶ There are fewer types of this kind of spatial variation—I think there are more or less three.
- ▶ There are pluractionals that only have spatial readings are uncommon, and usually we only see these readings with verbs of motion.

The “here and there” kind

These use a type of plural existential quantification over a contextually apportioned bit of space.

Spatial plural only: †Hoan “Verb-ing around” suffix (Collins 2001:466)

Titi ‘a-kí ‘am-q||o

Titi PROG kí[PL] eat-around

‘Titi is eating around (e.g. in several places in one day)’

The “all over” kind

These use a type of universal quantification over a contextually apportioned bit of space.

Amele distributive (Roberts 1987:313)

Uqa sab eu cawal-**ade**-i-a

3s food that grab-dist.-3s-tod.p

‘He grabbed all of that food’

Uqa maha cunug wal-**ade**-i-a

3s land all search-dist.-3s-tod.p

‘He searched the whole land’

The “disperse” kind

The events must occur, more or less, at the same time, but in various locations.

- ▶ Koasati has this morpheme *-ci*.

- (21) a. πάλλιν ‘split’
b. πάλλί:cin ‘splinter’

- (22) a. ταλανάρκαν ‘jump’
b. ταλανάρλί:cin ‘overflow’

Thematic variation

Thematic variation is how I want to describe pluractionality that involves an argument of the verb.

- ▶ The canonical way that we can distinguish events by way of their arguments is to distribute the participants over a plural event.
- ▶ For this reason, there is a connection between pluractionality and distributivity (which we will explore more tomorrow)

Each individual in a plural argument has its own event (but there are no other conditions over those events)—e.g., The students **each** left.

(23) Slave distributive

a. ?ónéyágodéla ‘I gave them individually.’

This kind of pluractionality is not very common, but it exists. More common is distributivity over a plural argument, but also the events are ordered in time (or space).

“Mixed” distributivity

Each individual in a plural argument has its own event, and the events are distinguished in time (or space).

(24) Slave seriative

- a. yáíhtsin ‘do it one by one.’

(25) Yup’ik distributive postbase

- a. tekite- ‘arrive’
- b. tekite**quut** ‘arrive one by one’
- c. nere- ‘to eat’
- d. ner’**qui** ‘eat one by one’

It is infrequent, but pluractional morphemes exist which involve mixed distributivity where the events must occur in different locations.

(26) Evenki

- a. lo:van- ‘hang (meat or fish to dry)’
- b. lo:vat- ‘hang (pieces of meat or fish to dry) here and there’

Grouping Properties

We have discussed a large number of semantic properties of pluractional morphemes.

- ▶ But we have discussed them as if they were independent
 - ▶ That is to say, can we find pluractional morphemes that mix these properties in any manner?
 - ▶ Or, do these properties clump, forming distinct types of pluractional morphemes?

We shall see that the latter can be answered affirmatively.

Grouping Properties

In particular, there are two types of pluractional morphemes that appear time and time again combining the properties we have seen in this section in a particular way. Yurok presents an example of these two.

- ▶ An event-internal pluractional

(27) Ko'moy-o' 'o **prkwprkwr**
hear-SG LOC **REP**.knock
'I hear knocking.' (someone's at the door)

- ▶ An event-external pluractional

(28) kipun **kwegeskwes-ek**
winter have.a.cold.**ITR**-1SG
'I get colds in the winter.'

The central idea is that with “event-internal” pluractionals, the repetitions occur inside of a macroevent with its own identity or character. The “event-external” pluractionals involve a plurality of events that are more independent.

The characteristics of “event-internal” pluractionality

- (29)
- a. preference for “semelfactive” and “achievement” verbs
 - b. contiguous repetition (en space or time)
 - c. single occasion
 - d. large cardinality
 - e. same theme or telos
 - f. does not entail the base-predicate

The characteristics of “event-external” pluractionality

- (30)
- a. applies to all verbs ignoring aktionsart (except maybe statives)
 - b. allows intermittent repetition
 - c. multiple occasions or habitual readings
 - d. tolerates smaller cardinalities
 - e. does license entailments to the base-predicate

How do we analyze all of this?

How do we analyze all of this?

At the end, what most interests us is an analysis of the patterns that we have seen. We can't analyze everything but I want to focus on a few questions.

- ▶ How do we explain the “event internal” / “event external” contrast? That is to say, can we provide an analysis that can explain the grouping of properties that we see.
- ▶ How does distributivity function in the pluractional domain and is it similar to quantifiers and other markers of distributivity?
- ▶ How similar is pluractionality and plurality (in the nominal domain).

How do we analyze all of this?

Each of these questions has a compositional partner:

- ▶ Do event-internal and event-external pluractionals have different compositional properties. (I think yes! Involving how close to the root they apply)
- ▶ Is pluractional distributivity compositionally like other kinds of distributive markers in other domains (Yes! Though, I think there are different kinds of distributive pluractionality. Tomorrow we will see a particular beautiful case of symmetry)
- ▶ Does pluractionality compose differently than plurality in the nominal domain? (Here I don't know, but I think it does. We will dig more into this on day three).

How do we analyze all of this?

In answering these questions I constantly want to look for parallels between plurality and pluractionality. I think this is the null hypothesis.

- ▶ I want to say, as much as possible, things like: “Ahhh, event-internal pluractionals are no more than [mass nouns / group nouns / bare plurals / etc.] in the domain of events.”

Where there are differences between pluractionality and plurality, I hope we can attribute them to ontological differences between events and individuals, and syntactic differences between nouns and verbs.

- ▶ For instance, events are defined by their temporal properties but individuals are usually not defined this way.
- ▶ Or, for example, verbs have argument structure (mirrored by their events having thematic roles), but individuals normally do not.