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Typology of Pluractional Constructions in the Languages of the World

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by Simone Mattiola

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.	Boundary between several metalanguage elements referring to a single object-language
-	Morpheme boundary
=	Clitic boundary
~	Boundary between reduplicants
<…>	Infix
o	Sub-morphemic unit
1	1st person
2	2nd person
3	3rd person
I	Active for non-past (Khwe)
II	Active for past
I	Agreement prefix of agreement pattern one (Eton)
A	Subject of transitive verb
ABL	Ablative
ABS	Absolutive
ACC	Accusative
ACT	Active
ACTL	Actual
ACTN	Action
ADJ	Adjective
ADN	Adnominalizer
ADV	Adverb
AEO	Absence of explicit object
AFF	Affirmative
AGT	Agent
AI	Addressee involvement
ALL	Allative
ALLEG	Allegation
AN.INVIS	Animate demonstrative pronoun invisible/distal singular
ANAPH	Anaphoric
AND	Andative
ANT	Anterior (aspect)
ANTIP	Antipassive
AOR	Aorist

ART	Article
AS	Asseverative morpheme
ATBZ	Attributilizer (adverbializer) (Arara)
ATTR	Attributive
AUG	Augmentive
AUX	Auxiliary
AV	Actor voice
B	Gender agreement marker; gender class (marker /b/)
BEN	Benefactive
BKGR	Background (aspect)
CA	Connective adverbial
CAUS	Causative
CL	Classifier
CN1	Connective 1
CN2	Connective 2
CNJ	Coordinating conjunction
COLL	Collective
COLTV	Collective action marker
COM	Comitative
COMP	Completive
COMPL	Complementizer
CON	Construct case
CONT	Continuative
COP	Copula
CSL	Causal
CVB	Converb
CVB.ANT	Anteriority converb
CVB.MNR	Manner converb
CVB.SMLT	Simultaneity converb
DAT	Dative
DEF	Definite
DEICT	Deictic particle
DEM	Demonstrative
DEP	Dependent clause
DET	Determiner
DI	Dependent initial
DIM	Diminutive
DIR	Directional
DISCN	Discontinuous
DISTR	Distributive

DLMT	Delimitative
DS	Dative subject
DTR	Detransitivizer
DUAC	Duactional
DUR	Durative
EM	Emphatic
EP	Epenthetic
ERG	Ergative
EXC	Exclamation
EXCL	Exclusive
F	Feminine
FAC	Factual
FACT	Factitive
FOC	Focus
FREQ	Frequentative
FUT	Future
FV	Final vowel
G	Suffix or infix that occurs in several TAM-forms (Eton)
GEN	Genitive
GL	Goal
GNO	Gnomic time reference
HAB	Habitual
HSY	Reportative/Hearsay
IMM.PST	Immediate past
IMP	Imperative
IMP.MVMT	Imperative movement
IMPS	Impersonal
IN.INVIS	Inanimate demonstrative pronoun distal invisible
INAN	Inanimate
INCL	Inclusive
IND	Indicative
INDF	Indefinite
INF	Infinitive
INFREQ	Infrequentive
INST	Instrument
INT	Intensive (pluractional)
INTR	Intransitive
INTS	Intensifier
INV	Inverse
IPFV	Imperfective (particle)

IRR	Irrealis
ITER	Iterative
JUS	Jussive
L(T)	Low (tone)
L	Linker (Enumeration)
LK	Linking vowel
LOC	Locative
LV	Locative voice
M	Masculine
MID	Middle
MLOC	Locative case used modally, modal locative
N	Neuter
N	Non-eyewitness
N.AC	Action noun
N.AGN	Agent noun
NEG	Negative
NEGPOT	Negative potential
NFUT	Non future tense
NIPL	Instrument nominalization plural
NMLZ	Nominalizer/nominalization
NOM	Nominative
NPF	Non-perfect
NPL	Non-plural
NPPR	Non-final form of the personal pronominal
NSG	Non-singular
NSPEC.I	Non-specific aspect, intransitive stem
OBJ	Object
OBL	Oblique
OPT	Optative
ORD	Ordinal
OUT	Out
P	Plural gender (Cushitic languages)
PASS	Passive
PAT	Patient
PF	Perfect/perfective TAM (distinct from PFV)
PFV	Perfective
PFX	Prefix
PHO	Phoric
PL	Plural
PLAC	Pluractional

PLUS	[+ participant] valence prefix
POSS	Possessive
POSSC	Controlled possession
PP	Perfective particle
PP2	Completive particle
PPERF1	Immediate (default) past-perfective aspect
PPERF2	Intermediate past-perfective
PR	Plurality of relations
PRED	Predicator
PRET	Preterite
PRIV	Privative
PRO	Pronoun
PROG	Progressive
PROP	Proprietive
PRP	Pronominal prefix
PRS	Present
PRSU	Tense present uncertain
PSD	Possessed
PSR	Possessor
PST	Past
PTCP	Participial
PUNC	Punctual
PVN	Plain verbal noun
PX	Proximal/proximity
Q	Interrogative particle
R	Realis
RECP	Reciprocal
REFL	Reflexive
REI	Reiterative
REL	Relator/relative marker
RELNR	Relative nominalizer
RELT	Relational
REM	Remote (aspect)
RM.PST	Remote past
RP/P	Realis past/present
RSLT	Resultative
RXC	Reflexive/reciprocal
S	Intransitive subject function
SBJ	Subject
SBJN	Subjunctive

SFOC	Subject focus
SG	Singular
SGAC	Singulactional
SOF	Softener
SRC	Source
SS	Same subject marker
SSSS	Simultaneous event, different subject, S orientation
STA	Stat(iv)e
STYLE	Stylistic
SUB	Subordinator
T	Target
TEMP	Temporal mode
TOW	Towards subject
TR	Transitive
TRNSF	Transformative
UNCRTN	Uncertain
V	Gender agreement marker; gender class (marker is /v/)
VBZ	Verbalizer
VEN	Ventive
VOC	Vocative
VOL	Volition
WP	Witnessed past tense
YIMPF	Hesternal past form of the imperfective auxiliary (Eton)

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CHAPTER 1

Introduction

1.1 Preliminaries

The main goal of the present work consists in providing a first large scale typological investigation (based on a 246-language sample) of the phenomenon known as "pluractionality" in the languages of the world.

In general, the grammatical category of number has probably attracted less interest than it deserves. Indeed, it has been for a long time one of the less studied category in modern linguistics being subordinated to several other morphological, and more in general morphosyntactic, phenomena, such as case, grammatical gender, verbal categories (tense, aspect, mood), and so on.

Corbett (2000), quoting the words of two eminent linguists of last century, notes that:

> Number is the most underestimated of the grammatical categories. It is deceptively simple, and is much more interesting and varied than most linguists realize. This was recognized by Jespersen: 'Number might appear to be one of the simplest natural categories, as simple as "two and two are four." Yet on closer inspection it presents a great many difficulties, both logical and linguistic' (Jespersen 1924: 188). Lyons too pointed out its interest: 'The analysis of the category of number in particular languages may be a very complex matter' (Lyons 1968: 283).
>
> (Corbett 2000: 1)

However, after the publication of Greville Corbett's monograph, roughly two decades ago, the amount of studies dedicated to number and related issues has consistently increased.

Interestingly, a similar situation of imbalance can be found within the category of number itself. Almost all studies dedicated to number concern nominal number. However, there is at least another sub-phenomenon that deserves investigation, namely, "verbal number".

Corbett (2000: 2) himself states that number does not affect only entities (and, thus, nominals): in several languages of the world, also verbs can show a distinction that in some way concerns number. This phenomenon does not seem to correspond to syntactic agreement between a noun phrase and a verb, that is, a

redundant marking of nominal number on the verb (the target of the agreement). Rather, verbal number markers seem to express a distinction between one or several situations and, consequently, directly connected to the semantics of the verb.

In the literature, this particular phenomenon is called with several different labels, such as: verbal number (or plurality), event plurality, pluractionality, iterativity, frequentativity, multiplicativity, repetitivity, plurality of relations, and so on.

In the present work, I decided to adopt the term pluractionality. This is mainly due to two reasons: (i) the morphology of this term reveals its lexical meaning (plural + action = plurality of actions), and (ii) in addition, in recent years, the use of this term has increased even outside the field in which it was firstly used (i.e., African linguistics).

The present work aims at investigating this phenomenon in cross-linguistic perspective, through the analysis of a sample of 246 languages. In the next sections, I will briefly provide the preliminary notions necessary to understand the discussion on pluractionality and I will also examine some methodological and theoretical issues on which my analysis is based.

1.2 What is pluractionality?

The term pluractionality was originally coined by Newman (1980) in a paper on the classification of Chadic languages within the Afro-Asiatic family. Therein, he states:

> Greenberg (1952) correctly drew attention to the general Afroasiatic nature of such verb forms [i.e. intensive, SM], but incorrectly described them as belonging to the aspect system rather than to the verb derivational system. In my opinion these verb forms represent, not "Present" stems, but rather iterative, habitual, intensive, or, what I prefer to call, "pluractional" stems.(Newman 1980: 13, fn 23)

Newman created this new term to describe a set of constructions that was formerly called intensive in Chadic grammatical tradition. But these stems mark several functions in addition to intensity, and these ones are mainly connected with the notion of plurality. Thus, Newman decided to coin a new term in order to better describe the functions that these constructions express.

However, one of the first scholars that explicitly recognized this phenomenon was the Danish linguist Otto Jespersen, who in his grammar of English (Jespersen 1949) notes:

> If the plural of one walk or one action is (several) walks, actions, the plural idea of the corresponding verb must be 'to undertake several walks, to perform more than one action'. In other words the real plural of a verb is the corresponding frequentative or iterative verb. (Jespersen 1949: 184)

For example, if we look at the sentences of English (Indo-European, Germanic) in (1), we can note that the only element that distinguishes (1a) from (1b) is the adverbial phrase *several times*.

(1) a. *John kicks the ball*
b. *John kicks the ball several times*

The presence of this element encodes a plurality of actions, i.e. an action that is performed more than once. In (1b), we have an agent (*John*) doing the action of kicking a given ball several times, more than once.

The first full-fledged definition of pluractionality was provided again by Paul Newman in a work that explores nominal and verbal number in Chadic languages (cf. Newman 1990). About ten years after the introduction of this term, he suggests the following definition:

> [A] few years ago (Newman 1980: 13), I coined the term "pluractional" in order to set apart the semantically endowed verbal plural from the inflectional agreement stems. Although pluractional verbs sometimes relate to plurality of a nominal argument in the sentence (e.g. subject, direct object, even indirect object), the essential semantic characteristic of such verbs is almost always plurality or multiplicity of the verb's action. (Newman 1990: 53–54)

In other words, pluractionality marks the number of times an action is done, that is, if a verb encodes a single (singular) or a multiple (plural) action.

For example, compare the two sentences of Beng (Mande, Eastern Mande) in (2):

(2) Beng (Mande, Eastern Mande)
a. *ǒ* *bè-ɛ́ĺó.*
3SG.ST.AFF run-PROG
'He is running.' (Paperno 2014: 41)
b. *ǒ* *bè~bé-ɛ́ĺó.*
3SG.ST.AFF run~ITER-PROG
'He is running (repeatedly back and forth).' (Paperno 2014: 41)

Like (1), also in (2) there is only one element that distinguishes the sentence in (2a) from the one in (2b). However, in the case of Beng this element is the reduplication of the verb *bè* 'run'. According to the gloss and the translation, this modification of the verb stem gives a plural meaning to the verb: while the action is done only once in (a), it is done more than once in (b).

Since my goal is to give a comprehensive account of this phenomenon in the languages of the world, I have to adopt a preliminary definition in order to know what I am going to look for. The working definition that I adopt is slightly different from the one proposed by Newman (1990). I operationally define pluractionality as follows:

> Pluractionality is a phenomenon that marks the plurality or multiplicity of the situations (i.e. states and events) encoded by the verb through any morphological mean that modifies the form of the verb itself.

Compared to Newman's (1990) definition, I specify an essential trait that a pluractional constructions must have, i.e. the overt expression of the locus of marking: a pluractional marker must be applied directly to the verb. The reason why this trait was not explicitly addressed by Newman's definition is because, in Chadic languages and in Hausa in particular, pluractionality is always marked on the verb, specifically, through the reduplication of the verb stem. Since Newman's work was limited to Chadic languages, it was unnecessary to make this explicit.

However, in a cross-linguistic study, this clarification is fundamental. This is because it allows to distinguish similar but different phenomena. Cabredo-Hoffher and Laca (2012) point out an important distinction:

> We consider under the term EVENT PLURALITY any linguistic means of expressing a multiplicity of events, be they verbal markers (***re**-read*), adverbials (*twice*, *often*, *always*, *again*), or adnominal markers (*John lived in **different** countries*, ***each** boy built a canoe*, *John repaired **several** bicycles*). We use the term VERBAL PLURALITY more narrowly for event plurality marked on the verb. Following the usage in the literature we refer to markers of verbal plurality as PLURACTIONAL MARKERS.
>
> (Cabredo-Hofherr & Laca 2012: 1, emphasis in the original)

Thus, with the term verbal number ("event plurality" for Cabredo-Hofherr and Laca 2012) we refer to all the strategies that the languages of the world use to express a plurality of actions, while with pluractionality ("verbal plurality" in Cabredo-Hofherr and Laca 2012 terms) we only refer to the strategies that apply to the verb and that modify its form.

The most important consequence of such distinction is that pluractionality is therefore conveyed as a particular case (i.e., a sub-type) of the wider phenomenon of verbal number.

1.3 Previous studies

In the previous section, I noted that pluractionality is one of the less studied phenomena in the literature on number. However, we can recognize at least three important analyses on this topic that can be useful for the present work, namely Dressler (1968), Cusic (1981), and Xrakovskij (1997a).

It is noteworthy that none of these works is directly focused on describing pluractionality, but rather analyze some related phenomena or issues.

Dressler (1968) is the first monograph that investigates verbal plurality. The author examines the semantic domain of verbal plurality focusing on some ancient

languages (such as Latin, Hittite, Ancient Greek, etc.) and on a few other modern languages. On the other hand, Cusic (1981) is probably the most influential work: it deals with the relationship between verbal number and other verbal categories, namely, grammatical aspect and lexical aspect (*Aktionsart*). Finally, Xrakovskij (1997a) is the introductory chapter of a miscellaneous volume that explores iterative constructions in about twenty languages (cf. Xrakovskij 1997b).

In addition to these three, there are also other studies on verbal number/pluractionality, but of a less theoretical relevance. I will briefly present some of them, i.e.: Corbett (2000: 243–264), Wood (2007), and Součková (2011).

1.3.1 Dressler (1968)

Dressler (1968) is the first investigation that directly focuses on verbal plurality. The author gives a comprehensive account of the functional domain of plurality connected to verbs.

In Dressler's (1968) view, verbal plurality should be understood as a case of lexical aspect. This choice is supported by the awareness that verbal plurality cannot be easily described as verbal aspect. Rather, it seems to be more strictly related to the lexical meaning of the verb.

The author recognizes four basic Aktionsarten that can be furtherly subdivided in several types:

- ITERATIVE AKTIONSART: multiple actions that are simply recognizable as plural; it can be divided into: (i) discontinuative, (ii) repetitive, (iii) duplicative, (iv) reversative, (v) frequentative, (vi) conative, and (vii) alternative;
- DISTRIBUTIVE AKTIONSART: actions distributed on different participants and/or locations; it can be divided into: (i) subject distributive, (ii) object distributive, (iii) dispersive, (iv) diversative, and (v) ambulative;
- CONTINUATIVE AKTIONSART: actions that are continuous in time or prolonged; it can be divided into: (i) usitative, (ii) durative, and (iii) continuative;
- INTENSIVE AKTIONSART: actions that are more or less intensive; it can be divided into: (i) intensive proper, (ii) attenuative, (iii) accelerative, (iv) exaggerative, (v) pejorative, (vi) asseverative.

Even though, Dressler's (1968) work is based on a relatively small sample of ancient and modern languages, it contributes some important insights. First and foremost, Dressler is probably the first scholar that recognizes verbal plurality as a phenomenon that shows such a broad multifunctionality. This is certainly the most important result because it strongly challenges the idea of considering verbal number as an instance of grammatical aspect (see in particular the Distributive Aktionsart). However, his description gives too much relevance to all the semantic

shades that verbal plurality shows in the languages of the sample. This represents a weak point, in a way, because leads to a proliferation of functions that makes it hard to elaborate more general considerations.

In any case, Dressler (1968) is a milestone in the field of verbal plurality and, more in general, of verbal number. It had a great influence on several later works. Specifically, some intuitions pointed out by Dressler (1968) were then taken into consideration by Cusic (1981).

1.3.2 Cusic (1981)

Cusic's (1981) doctoral dissertation is undoubtedly the study that has had the deepest influence on works on verbal number and pluractionality. It consists in a theoretical study of the semantic relationship between verbal plurality and other verbal categories, specifically aspect and aktionsart. The author builds on several elements proposed by Dressler (1968) and broadens the analysis redefining some theoretical points.

Among the important innovations that this work achieves, the most important is undoubtedly the introduction of the distinction between event-internal and event-external plurality.

In his work, Cusic introduces four different parameters that are pivotal in the analysis of verbal plurality:

> a. The phase/event/occasion parameter, for distinguishing between internal and external plurality;
> b. a relative measure parameter, for relating event plurality to the generalized plural functions described in the previous chapter [i.e. the exact functions that verbal plurality can encode cross-linguistically, SM];
> c. a connectedness parameter for relating event plurality to the mass/count distinction;
> d. a distributive parameter, for relating plurality to temporal and spatial extension, and to number in associated noun phrases.
>
> (Cusic 1981: 77)

In Cusic's (1981) view, these four parameters represent all we need to explain the multifunctionality of verbal number, since by crossing them we can roughly account for all the functions.

Like Dressler (1968), he lists several functions that pluractional constructions can express.

> What is noteworthy about plural verb […] is that it may serve to indicate not only the repetition of an action […], but a whole range of other plural meanings: repetitiveness, repeated occasions and events, persistent consequences, habitual agency, distributed quality, inchoativity, cumulative result, intensity, plurality

> of sites of action, duration, continuity, conation, distribution, celerativity/retardativity, augmentation, diminution. The plural verb shows, as well, certain relations we would not be likely to associate with event plurality at all: with perfectivity, causativity, and plurality of subject or object noun phrases.
>
> (Cusic 1981: 74)

Even though several of these functions are actually part of the functional domain of pluractional constructions (as defined in Chapter 2), some of them are not completely clear. For example, it is quite opaque what Cusic (1981) means by cumulative result, conation or celerativity/retardativity.

Among the parameters proposed by Cusic, there are two that seem to be more important than the other ones, namely, the event ratio and the distributive parameters.

The event ratio parameter consists in a classification of the plurality that involves events in a three-level system. These levels are represented by: (i) plurality in events, i.e. "INTERNAL PLURALITY or imperfectivity in the sense of internal structure of the event" (Cusic 1981: 61); (ii) plurality of events, i.e. "EXTERNAL PLURALITY or iterativity in the sense of a series of perfective or imperfective actions" (Cusic 1981: 61); (iii) and, finally, plurality in and of events, i.e. "both of these combined" (Cusic 1981: 61). For example:

(3) Ratio Parameter (Cusic 1981: 61)
   a. Plurality in events: "The mouse nibbled and nibbled the cheese"
   b. Plurality of events: "The mouse bit the cheese again and again"
   c. Plurality in and of events: "The mouse was always nibbling at the cheese"

Cusic (1981) groups these three types in two classes: (i) the type in (3a) (plurality in events) can be called EVENT-INTERNAL PLURALITY; (ii) the types in (3b–c) (plurality of and in-and-of events) can be called EVENT-EXTERNAL PLURALITY (Cusic 1981: 61). The distinctive trait of these two classes lies in: a single event that shows some internal complexities (event-internal plurality) *vs*. an event (complex or not) that is externally repeated (event external plurality). Cusic (1981: 78) states that in the first class we find "repetitive action", while in the second class we find "repeated actions". The event ratio parameter and its classifications are extremely important, and I will come back to them several times.

The distributive parameter is simpler than the event ratio one, but it is pivotal for the investigation of verbal number. This parameter affects the distribution that an action can have, both in space and time:

> The general idea of distribution is separation in time, space, or some other way, of actor from actor, action from action, object from object, property from property, and so on. (Cusic 1981: 102)

The remaining two parameters are less central both in Cusic's (1981) and in my own analysis. The relative measure parameter concerns the amount of the action. In other words, it considers the number of times the event is repeated (few times *vs*. several times), the size of the action (augmentative *vs*. diminutive), the effort employed in the situation (intensive *vs*. diminutive), etc.

The connectedness parameter deals with "the relative prominence of bounds at the phase and event levels" (Cusic 1981: 96), that is, the relative connection between the phases or events of a multiple action. This parameter "does not provide clear-cut categories of meaning, but it is more suggestive of a continuum" (i.e. more-connected *vs*. less-connected) (Cusic 1981: 96).

In conclusion, Cusic (1981) is the most influential investigation on verbal plurality. The introduction of the distinction between event-internal and event-external plurality is probably one of the most relevant findings so far and it will play a major part also in my investigation.

1.3.3 Xrakovskij (1997a)

Xrakovskij (1997a) is the first chapter of an edited volume (Xrakovskij 1997b) that aims at giving a cross-linguistic account of iterative constructions. Xrakovskij (1997a) is the theoretical introduction and is followed by several chapters that investigate these constructions in single languages.

In Xrakovskij (1997a), the author aims at giving a semantic classification of what he calls "iterative constructions", that is, constructions that express a plurality of situations. Xrakovskij (1997a) recognizes two different parameters that allow him to classify iterative constructions, and he names them "attributes". Each attribute is composed of two different values.

The first attribute is similar to the event ratio parameter proposed by Cusic (1981),[1] that is, the distribution of plural events on the same occasion or on different occasions:

> Attribute I: value Ia: a plurality of repeated situations P1, P2, …Pn occurs at one period of time T; value Ib: each of the repeated situations belonging to the plurality exists at a separate period of time (i.e. situation P1 occurs at period T1, situation P2, at period T2, …, situation Pn, at period Tn). This classificatory attribute demonstrates the crucial role of the interrelation between a plurality of situations and the periods of time at which these situations occur.
>
> (Xrakovskij 1997a: 26)

1. It is important to note here that Xrakovskij (1997a) does not cite Cusic (1981), probably because it is the translation of an older Russian book (cf. Xrakovskij 1989).

The second parameter associates plurality of actions with participant plurality, that is, if the plural event is performed by the same (group of) participant(s) or by different (group of) participants:

> Attribute II: value IIa – identical sets of actants take part in each of the repeated situations belonging to the plurality; value IIb – the sets of actants taking part in each of the repeated situations are not completely identical (i.e. there is at least one nonidentical actant in every situation; nonidentical actants of the situations P1, P2, …, Pn are individual representatives x1, x2, …, xn/y1, y2, …, yn/z1, z2, …, zn of a compound actant X/Y/Z common to all situations). This feature of classification indicates the primary importance of the interrelation between the plurality of situations and the participants (semantic actants) of each of the situations. (Xrakovskij 1997a: 26)

These two parameters can be crossed to form different values that are exemplified in Table 1.

Table 1. Classification of the types of situational plurality (Xrakovskij 1997a: 27)

N°	Combinations of values of classificatory attributes	Realization of the combinations	Semantic type of plurality	Examples
1	Ia, IIa	+	Multiplicative (terminal)	The boy tapped at the window for several minutes;The patient coughed all night.
2	Ia, Ib	+	Distributive (terminal)	In a week's time the fox carried away all the neighbor's chicks one by one; The student is paying back his debt.
3	Ib, IIa	+	Iterative (terminal)	The boy visits his granny every year;The student pays back his debt every month; The patient coughs at night.
4	Ib, IIb	-	-	-

It is noteworthy that in Xrakovskij's (1997a) view not all four possible types do actually exist. In his opinion, the fourth type (composed of Ib and IIb) cannot be found in the languages of the world. However, Wood (2007) correctly notes that:

> [T]he last of the possible feature combination (Ib, IIb) is not exemplified. However, it does not seem to be excluded by any principle, and in fact examples can be constructed which seem to meet its definition. For example, *The fox carries one of the neighbour's chicks away every week* involves habitual repetition, distributed over distinct participants. The combination seems to be possible as long as the context permits distribution over a potentially unbounded set of participants, in order to be compatible with a habitual interpretation. (Wood 2007: 19–20)

This passage points out another interesting issue: Xrakovskij (1997a) interprets the third type (Ib, IIa) of situational plurality as a habitual event. However, situations in which the plurality of actions is performed in different occasions but that are not habitual do actually exist. For example, the sentence *Sometimes, I go to the supermarket* encodes an action repeated in different occasion that, at the same time, cannot be considered habitual because the repetitions are not regular and typical of a specific time frame. However, this problem concerns the definition one gives of habituality. Probably, Xrakovskij (1997a) adopts a different definition from the one I am going to use in the present work, which is the one proposed by Comrie (1976):

> The feature that is common to all habituals, whether or not they are also iterative, is that they describe a situation which is characteristic of an extended period of time, so extended in fact that the situation referred to is viewed not as an incidental property of the moment but, precisely, as a characteristic feature of a whole period. If the individual situation is one that can be protracted indefinitely in time, then there is no need for iterativity to be involved (as in *the Temple of Diana used to stand at Ephesus*), though equally it is not excluded (as in *the policeman used to stand at the corner for two hours each day*).
>
> (Comrie 1976: 27–28)

The definition of Comrie (1976) (and thus mine) is probably stricter than the definitions of other scholars. I will return to this in Chapter 2, which provides the definitions of pluractional functions.

At the theoretical level, Xrakovskij (1997a) believes iterative constructions to belong to lexical aspect, specifically, he names this category "quantitative aspectuality" (cf. also Maslov 1984):

> It should be noted that some researchers speak not about the semantic field of quantitative aspectuality, but about the category of verbal multiplicity or plurality, although the empirical facts analyzed by them give no ground, in our opinion, to postulate the existence of such a grammatical category in the true sense of the term. (Xrakovskij 1997a: 6)

The most important innovation of Xrakovskij (1997a) consists in the decision of limiting the variety of functions connected with event plurality and basing his research on empirical grounds, rather than on more philosophical (in the sense of less linguistic) speculations. This choice allows the investigation of the semantic and functional domain of iterative consatructions, thus trying to provide also some generalizations. In general, rich classifications (such as the ones proposed by Dressler 1968 and Cusic 1981) have the merit of showing the whole situation in detail, but at the same time they usually tend to be more challenging for general and typological generalizations. On the other hand, a more coarse-grained

classification also presents some problems, since it necessarily leaves aside interesting elements (especially those that are rarer and less widespread) and, consequently, it does not show the real richness of a specific phenomenon. For these reasons, I will propose a different approach to describe the semantic domain of pluractional constructions (cf. Chapter 2).

1.3.4 Other studies

In addition to the works that have been briefly presented in the previous sections, there are some other studies that deserve to be mentioned, namely: Corbett (2000), Wood (2007), and Součková (2011). Each of these works offers some interesting innovations or proposals.

As already noted, Corbett (2000) is the most important typological investigation of the linguistic category of number. The author focuses mainly on nominal number; however, he also provides a sketchy presentation of verbal number. Corbett does not explicitly make a difference between verbal number and pluractionality, but reading his words from Chapter 8 (cf. Corbett 2000: 243–264) it is evident that he is considering verbal number in the sense of verbal plurality marked on the verb.[2]

Corbett stresses the fact that pluractionality does not entail only a plurality of situations, but it also affects a plurality of participants. He draws his attention primarily on the identification of different types of verbal number, and specifically he describes two types: event- and participant-number. The first type corresponds roughly to the definition that previous analyses proposed for verbal plurality, whereas the second type is well-described in Corbett (2000: 247–249), although he does not provide a straightforward definition.

> It might also be said that there is a difference between one singer singing a song (once or several times) and several singers singing it: singing in a choir is different from singing a solo. Such differences resulting from the number of participants in an action may also be encoded in a language as a different type of verbal number. Thus we distinguish two main types of verbal number: **event number** and **participant number**. (Corbett 2000: 246, emphasis in the original)

The clear identification of such a distinction is probably the most important result of Corbett (2000) concerning verbal number.

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2. Corbett (2000) does not explicitly note the locus of marking in his definition. In any case, he states that "in all the examples we have considered, verbal number is expressed on the verb: I have been unable to find examples of verbal number being expressed on the noun phrase" (Corbett 2000: 251).

The other two studies have a different goal compared to Corbett (2000): they investigate how pluractional constructions work in specific languages. In fact, even though they present also a (brief) theoretical introduction, they concentrate more in detail on the analyses of this phenomenon in one or a couple of languages. Specifically, they provide very important descriptions of pluractionality in three different languages: Wood (2007) examines Yurok (Algic) and Chechen (Nakh-Daghestanian, Nakh), while Součková (2011) analyzes the structures of Hausa (Afro-Asiatic). Both studies are important because of they offer very clear-cut and detailed investigation of this phenomenon providing several examples. This is something that usually lacks in the literature. And, even though at the theoretical level they do not add any particular innovations, this kind of descriptive works is very important because often in linguistic typology we do not have enough data on the phenomena we are examining. This is particularly true for pluractional constructions because in grammars and descriptive materials, it is very hard to fine such a fine-grained exploration.

1.4 Some issues on the cross-linguistic comparison of pluractional constructions

One of the most challenging problem in typology is the lack of a common terminology in the descriptive traditions of the languages of the world. Indeed, even though it apparently would seem normal to have a shared term for the same grammatical category or value in different languages (such as, gender, masculine, nominative, number, case, and so on), everyone that has faced at least once a typological investigation knows that this is far from being true, and it is far from being a small issue (cf. for example Comrie 1976; Bybee, Perkins & Pagliuca 1994; Corbett 2000 among others).

Obviously, this problem also affects the typological study of pluractionality, and in our case it is probably even more problematic. Indeed, in addition to the wide vocabulary found in specific language traditions, basically each of the few studies described in the previous sections proposes its own set of terms. This situation has led to some consequences. Corbett (2000) notes:

> Unfortunately the lack of agreed terms has led some to consider it as being geographically restricted, whereas similar systems are found widely distributed, though referred to by different names. (Corbett 2000: 264)

The absence of a common term has led to a lack of works. Even though there have been some important advances in the field of aspect and actionality over the last decades, the study of event plurality did not attract the attention of linguists

sufficiently. This is particularly true for the typological-functionalist approach (cf. Section 1.5), and less for more formal-oreinted approaches (cf. Lasersohn 1995; Cabredo-Hofherr & Laca 2012, among others). This lack of dedicated works on pluractionality has raised two issues, a substantial one and a terminological one. Pluractional markers and their functions are generally more difficult to find in grammatical descriptions. This is because they are less described and less recognized than other phenomena. However, sometimes we do find dedicated sections on pluractionality (or related phenomena) within grammars of languages for which this phenomenon is salient. The most relevant consequence of this issue is that I could not dispose of the same amount data for each language of the sample and this creates an unbalance in the examples that I will consider in next chapters in favor of languages with extensive data. This is quite common in large-scale typological investigations, but it is probably more evident for pluractionality. The second issue concerns terminology. The terms that I will propose and use in this work will refer to specific meanings and phenomena, and I will try to adopt definitions that are as clear as possible. In addition, I will try to use terms that already exist in the literature (though sometimes with a different connotation) in order to avoid a proliferation of a new and potentially ambiguous terminology. Specifically, I will try to follow the terms and definitions proposed in Bybee, Perkins and Pagliuca (1994). This choice is motivated by two facts: (i) this work is one of the most important and most cited reference for verbal categories and, therefore, the definitions given therein are generally already known and used in the literature; (ii) the authors usually provide very precise and clear definitions. For this reason, in Chapter 2 I will make reference to Bybee, Perkins and Pagliuca (1994) several times.

An additional terminological problem is related to the difference between my terms and the ones adopted by the grammars or descriptive works I will use as a source for my analysis. For this reason, I adopt a convention that was firstly proposed by Comrie (1976) and that permits to distinguish the language-specific terms from the cross-linguistic ones:

> To avoid confusion between language-particular categories and semantic distinctions defined independently of any particular language, in this book the policy has been adopted of using an initial capital for the names of language-particular categories, whether referring to the category as such or to forms that belong to that category, while not using initial capitals for language-independent semantic distinctions. (Comrie 1976: 10)

This solution allows to maintain the terms of the original bibliographic references and to refer to general notions minimizing the possible misunderstandings. In addition, I decided to adopt a similar approach also for interlinear glosses: I will try

to maintain as often as possible the glosses used in the original work from which the examples are taken. However, to avoid an uncontrolled increase of abbreviations, I will uniform similar glosses following the Leipzig Glossing Rules (cf. <https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf>), some other abbreviations that are not pivotal for the analysis of pluractional markers will be simplified. For example, the dative of a distransitive sentence will be glossed as DAT instead of D as suggested by Foley (1991) for Yimas (Lower Sepik-Ramu, Lower Sepik). What should be kept in mind is that the glosses, though they are the same in examples from different languages, refer to categories that are language-specific.

1.5 The functional-typological approach

Croft (2003) identifies three different connotations that the term typology can have within the field of linguistics:

i. in the sense of "typological classification":

> a classification of structural types across languages. In this definition, a language is taken to belong to a single type, and a typology of languages is a definition of the types and an enumeration or classification of languages into those types.
> (Croft 2003: 1)

ii. in the sense of "typological generalizations":

> the study of patterns that occur systematically across languages. […] The patterns found in typological generalization are language **universals**.
> (Croft 2003: 1, emphasis in the original)

iii. in the sense of "functional-typological approach":

> an approach to linguistic theorizing, or more precisely a methodology of linguistic analysis that gives rise to different kinds of linguistic theories […]. This view of typology is closely allied to **functionalism**, the view that linguistic structure should be explained primarily in terms of linguistic function […]. For this reason, typology in this sense is often called the **(functional-)typological approach** (Croft 2003: 2, emphasis in the original)

The present work consists in a large scale typological investigation of pluractional constructions. When I use the word typological I mean all the three definitions given by Croft (2003). This is because I have conducted a cross-linguistic comparison of a specific phenomenon (first connotation) in order to provide some typological generalizations (second connotation) that will be explained adopting the functional-typological approach, i.e., I will interpret and explain them taking into consideration the communicative function that languages have and, at the same time, trying to catch why they are as they are from a cognitive point of view.

1.6 The language sample

Each typological study has to deal with the problem of representativeness. It is practically impossible to investigate all the languages of the world, mainly due to two reasons. First of all, nowadays, about 7000 languages are recorded (cf. Hammarström et al. 2018 and Simons & Fennig 2018) and, consequently, they definitely are too many to be investigated in a single work. Second, the great majority of these languages is not well described, or not described at all. For these reasons, typological investigations have the necessity of creating a representative sample that allows to capture the greatest possible diversity.

There exist different types of language samples. Probably, the most relevant in typological linguistics are: (i) probability sample, and (ii) variety sample.[3]

These two types differ basically in the goal they are constructed for: while probability samples try to catch the real representativeness of the languages of the world, variety samples try to maximize the linguistic diversity giving less importance to perfect balancing. In other words, the former type aims at representing exactly the situation that the languages of the world actually show (as far as possible), while the latter type aims at capturing the broadest possible number of linguistic types.

> [Probability sample] is the preferred type of sample if one wants to apply conclusions drawn from the sample directly to the population in terms of the distribution of the phenomena observed […]. In this type of sample [i.e., variety sample, SM] the likelihood is optimized that different values for the research variable will be attested. (Bakker 2011: 104)

During the last decades, several proposals of language sampling techniques were suggested (such as: Dryer 1989; Rijkhoff et al. 1993; Rijkhoff & Bakker 1998; Miestamo, Bakker & Arppe 2016; among others). However, now the majority of typologists is aware that the perfect balancing of a sample does not exist and, in addition, that basically no sample can be totally free of any possible kind of bias.

These problems and the low number of languages that can count on a well-described grammar have led linguists to adopt another type of sample, that is, the so-called convenience sample. Even though this type of sample aims at maintaining both the highest degree of language diversity and the best balancing, as far as possible, more importance is given to the actual possibility of reaching the available descriptions.

3. The discussion presented in Section 1.6 is based on Croft (2003: 19–28) and Bakker (2011).

This approach to language sampling is driven by two principles: (i) the existence (or not) of a descriptive work on a specific language; and (ii) the practical availability of that description for the researcher.

Convenience sampling is often used to refine the other more rigorous samples. In other words, both in probability and variety samples the convenience of the researcher can play a major role in the final shape of the sample itself. Obviously, variety/convenience mixed samples are usually more frequent than probability/convenience samples because the opportunistic drive does not modify strongly the final goal of variety samples (i.e., maximization of diversity), but it does modify deeply the final goal of probability samples (i.e., representativeness).

In this work, I adopt a language sample composed of 246 languages. It is a variety and a convenience sample at the same time. I based this sample on two pre-existing samples, that is: (i) the 200-language sample of the World Atlas of Linguistic Structures (henceforth WALS,[4] cf. Haspelmath et al. 2005 and Dryer & Haspelmath 2013); and (ii) the 194-language sample created by Ljuba Veselinova for her chapter on "Verbal number and suppletion" within the WALS project (cf. Veselinova 2005).

The editors of WALS describe the criteria and methodology used to create the samples used for the chapters of the project (therefore Veselinova sample too) as follows:

> Maximizing genealogical and areal diversity were major considerations in constructing the 100- and 200-language samples. […] A further consideration in choosing languages for the 100- and 200-language samples was the ready availability of detailed grammatical descriptions. In most cases, the choice of a language over genealogically related languages was based on the availability of detailed descriptions. (Haspelmath et al. 2005: 4)

To this basis, obtained from mixing the two pre-existing samples, I added some further languages, while still others were substituted following the principle of convenience. The criterion adopted for the substitution of the languages was the following: if it was difficult to find the description of a particular language contained in the original samples, I opted for the available description of the most strictly related language. This criterion was applicable in the great majority of cases and allowed us to maintain the best balance possible.

The choice of a variety (and convenience) sample was driven by the nature of the phenomenon that is under investigation in this work. Indeed, my aim is to offer a first large scale cross-linguistic account of pluractional constructions. Thus,

4. The 200-language sample of WALS is available online at the following website: <http://wals.info/languoid/samples/200>.

in order to provide a description that is as detailed as possible, I tried to maximize the variety of languages to gain the greatest diversity.

The full list of the languages included in my sample with the relative genealogic classification is given in the Appendix I.

1.7 Distribution of pluractionality in the languages of the world

Before presenting the semantic and formal properties of pluractional markers, it is interesting to give a look at the distribution of pluractionality in the languages of the world. In Map 1, the languages of my sample in which pluractionality is attested are marked by light blue triangles and the languages in which pluractionality is not attested by red circles.

Map 1. Distribution of pluractionality in the languages of the world

It is important to note here that in Map 1 if a language is marked by a light blue triangle it certainly has at least one pluractional marker, but if a language is marked by a red circle this does not necessarily mean that that specific language has not pluractional markers, but only that I could not find any pluractional marker in its grammatical description. This distinction is important to point out and it is mainly due to the issues of identification already discussed in Section 1.4. For this reason,

the distributional consideration that I am going to make below must be conceived just as impressionistic considerations rather than as statistical accurate facts.

In my language sample, I found 183 languages (74,4%) in which at least one pluractional marker is attested and 63 languages (25,6%) in which pluractional markers are not attested. From Map 1, we can see that pluractionality is more common in North and South America, Africa and Oceania; while it is almost absent in European languages, more specifically in modern Indo-European languages of Europe. In conclusion, we can say that pluractionality is a phenomenon quite widespread in the languages of the world, more frequent than one might think at first glance.

1.8 Outline of the book

This book is organized in three major parts. The first part gives a comprehensive description of pluractional constructions from a cross-linguistic perspective. Specifically, Chapter 2 tackles the functional domain of pluractional constructions. I describe the most recurrent functions that pluractional marker can encode in the languages of the world. Then, I propose a new classification of such functions by representing them geometrically through the adoption of semantic maps. This approach allows to investigate the semantic relationships that exist between the functions. In addition, the resulting conceptual space helps explaining quite neatly why pluractional constructions express certain functions. Then, Chapter 3 describes the more widespread marking strategies languages use to express the pluractional functions. In addition to this description, I analyze and discuss some morpho-syntactic issues involving pluractionality. These problems concern essentially a theoretical difficulty in identifying what can be actually called a pluractional construction and, conversely, what cannot.

The second part provides some language-specific investigations. In Chapter 4, I present how pluractional constructions work in three typologically different languages: Akawaio (Cariban, Venezuelan Cariban); Beja (Afro-Asiatic, Cushitic); and Maa (Nilotic, Eastern Nilotic). These case studies are based on analyses conducted directly on corpora of these languages. These analyses are crucial in that they test the validity of the cross-linguistic generalizations proposed in the first part, by at the same time giving a detailed account of three pluractional systems. This last change of focus from worldwide typological investigation to language-specific analysis also allowed to detect some interesting details that could not emerge in the (large) typological survey.

Finally, the third part proposes a completely new approach to the theoretical conceptualization of pluractional constructions in cross-linguistic perspective. As we will see, this new model is grounded in the Radical Construction Grammar approach (cf. Croft 2001).

CHAPTER 2

The semantic domain of pluractional constructions

In this chapter, I investigate the most recurrent functions that pluractional constructions can express in the languages of the world.

One of the main characteristics that pluractional constructions do show cross-linguistically is undoubtedly their broad multifunctionality.[5] As already noted in Chapter 1, though this peculiarity is not typical only of pluractionality, but it is quite widespread also in other typological investigation, it has probably increased the problem of the recognition of actual pluractional constructions. And, therefore, this multifunctionality has also led different authors to create the extremely rich classifications of pluractional functions that we find in the literature.

For these reasons, I think that a radical re-conceptualization of the functional domain of pluractionality is needed. In what follows, I propose an innovative approach in the description and explanation of pluractional functions.

Analyzing the languages of the world, we can recognize two different functional groups. The first group is composed of functions that are very frequent and that actually make a specific construction a real instance of pluractionality, I will call these functions "core functions". However, cross-linguistically pluractional constructions can also express some additional functions that do not make a construction a pluractional one, but that at the same are quite frequently found, though less, and I will call these functions "additional functions".

In order to better understand such a complex and rich functional domain, I believe that the adoption of semantic maps (cf. Croft 2001, 2003 and Haspelmath 2003) is fundamental. The semantic map approach is the perfect tool to unfold complex situation of multifunctionality. Indeed, this approach allows to visualize simultaneously several (ideally all) functions on a geometrical space and to also

5. In this case, I would rather prefer to adopt the terminology suggested by Haspelmath (2003: 212–213). He suggests to use the terms functions and multifunctionality instead of senses/uses and polysemy mainly because the latter couple of terms can be interpreted differently and can lead to some sort of misunderstandings, while the former terms seem to be clearer (cf. Haspelmath 2003 for a deeper discussion).

reveal the connections and relationships that do exist among them. In the next sections, it will become evident how this model perfectly fits in giving account for the intricate situation of pluractional functional domain.

Before presenting the functions and their geometrical disposals, I will give some theoretical preliminaries that are fundamental to better understand what follows.

2.1 A brief theory of events

The theory of events that I adopt in this work mainly follows the one proposed by Cusic (1981) and Lyons (1977). In particular, I consider the phase/event/occasion distinction as pivotal for any work on verbal plurality (Cusic 1981: 77). This parameter accounts for the internal structure of events and their correlation with event plurality. However, the event represents only one of the components that compose a situation.

Unfortunately, a long list of terms has been used in the theory of events (such as "situation", "state of affairs", "event", "occasion", "state", "action", "process", and so on) and almost each contributor has given his own definition.

In this work, every term adopted has a specific meaning that tries to take into consideration the tradition, but at the same time tries to properly account the complexity of the situation. This means that I will aim at referring to definitions that we can already find in the literature, but it will also happen to use a term with a new connotation if it does help in improving the comprehension of the context.

I use the term occasion to indicate a specific time frame in which a situation (i.e., a state or an event) occurs in a (specific) place and eventually involving also one/some participant(s).

Following the definition given by Lyons (1977), the term situation is intended as a hypernym of both states and events:

> There is, unfortunately, no satisfactory term that will cover states, on the one hand, and events, processes and actions, on the other. We will use the term situation for this purpose. (Lyons 1977: 483)

There is a small, but fundamental, difference between occasion and situation: while the former considers all the elements that are present in a particular happening (i.e., participants, locations, and the events or states encoded by the predicate), the latter is the cover term only for the predicative part of the occasion, that is, the action in its widest sense (states and events).

With the term state, I intend the following traditional definition:

> A static situation (or state-of-affairs, or state) is one that is conceived of as existing, rather than happening, and as being homogeneous, continuous and unchanging throughout its duration. (Lyons 1977: 483)

On the other hand, an event is what Lyons (1977) calls a dynamic situation, that is:

> A dynamic situation […] is something that happens (or occurs, or takes place): it may be momentary or enduring; it is not necessarily either homogeneous or continuous, but may have any of several temporal contours; and, most important of all, it may or may not be under the control of an agent. (Lyons 1977: 483)

In this context, the phase/event/occasion parameter of Cusic (1981) identifies three different levels in which a situation can be pluralized:

a. the phase level points out a plurality that is within the situation, e.g. *the man is whistling* (several whistiling forming a single event);
b. the event level points out a plurality of the situation that occurs in a single occasion, e.g. *the man is whistling several times/continuously* (several whistling events performed repeatedly);
c. the occasion level points out a plurality that is displayed on several occasions, e.g. *the man whistles (several times)* (several whistling events performed frequently, but not repeatedly in a strict sense).

Finally, when I refer to space/location of a specific situation, I mean the geographical (specific or unspecific) space in which the situation takes place. When I use the term participant I intend every kind of entity (animate or inanimate) that is involved in the situation regardless of its role within the situation, that is, its the semantic role (it can be the agent, the patient, the experiencer, etc.).

2.2 The functional domain of pluractional constructions

As I have stated previously, the first useful distinction in the functional domain of pluractional constructions is between core and additional functions.

By core functions, I intend those semantic functions that are mandatory to call a specific construction a pluractional one, i.e. those meanings whose presence or absence makes a form pluractional or not.

By additional functions, I intend those recurrent semantic functions that pluractional constructions can express in addition to the core ones, i.e. those meanings that cannot be described as distinctive of pluractional markers in respect to other verbal markers, but that at the same time are frequently found in the languages of the world to be expressed additionally by pluractional markers. Usually,

these additional functions show a connection with the notion of plurality, sometimes more directly connected and some others less.

2.2.1 Core functions

Generally, a prototypical occasion is essentially composed of four elements: a participant (that can be singular or plural) that semantically represents mainly the agent/patient/experiencer of a certain situation that is temporally posited in a particular time frame, and these elements are usually located in a specific or unspecific location. In other words, a prototypical occasion involves an event or a state performed by an agent or a patient or an experiencer in a specific place and time frame.

The mandatory semantic trait that the core functions must have to be recognized as pluractional is the plurality of the situations marked directly on the verb. Nonetheless, this does not mean that this plurality does not also affect the other elements that compose an occasion. Specifically, it is quite common that a plurality of situations involves a plurality of participants or places.

Thus, we can recognize at least three different types of pluractional core functions depending on which element of the occasion is pluralized.

i. pluractionality *stricto sensu*: plurality of situations through time. This function can be sub-divided into iterativity and frequentativity;
ii. spatial distributivity: plurality of situations and places;
iii. participant plurality: plurality of situations and participants.

In the following sections, all these types will be described and exemplified.

2.2.1.1 *Pluractionality* stricto sensu

I call pluractionality stricto sensu those occasions in which the plurality of the situations involves a distribution of the single occurrences through time. This means that the event or state involved is done more than once and, therefore, in these cases only the situation is pluralized.

For example:

(1) Konso (Afro-Asiatic, Cushitic)

a. *ʔiʃa-ʔ* *ʔinanta-siʔ* *ʔi=tuɠɠuur-ay*
3SG.M.PRO-NOM girl-DEF.F/M 3=push.SGAC-PFV.3M
'He pushed the girl.' (Orkaydo 2013: 263)

b. *ʔiʃa-ʔ* *ʔinanta-siʔ* *ʔi=tu~tuɠɠuur-ay*
3SG.M.PRO-NOM girl-DEF.F/M 3=PLAC~push.SGAC-PFV.3M
'He pushed the girl more than once.' (Orkaydo 2013: 263)

In the example of Konso, we can see that the initial reduplication of the first syllable of the verb (C_1V_1-, *tu~tuʗʗuur-* PLAC~push.SGAC-) pluralizes the number of times the action is performed: while in (1a) the agent pushes the girl just once, in (1b) he pushes the girl several times.

Pluractionality stricto sensu is the most common function that pluractional constructions encode cross-linguistically and it probably represents the most prototypical one.

If we take into consideration the Cusic's (1981) phase/event/occasion parameter, this type of plurality can be divided in two sub-types depending on the temporal distribution of the repetitions of the situation. These functions are: iterativity and frequentativity. In this work, the two terms iterative and frequentative do not have a direct connection with the aspectual values, i.e., they encode only the value that I am going to define in the present section without any kind of reference to any actual linguistic category. In cross-linguistic perspective, they can be conveyed by aspectual values, but in other cases they are not part of the aspect system of a specific language. This issue will be discussed at length in Chapter 5. The value that these terms have in this work essentially follows the ones in Bybee, Perkins and Pagliuca (1994: 127), I only merged those definitions with Cusic's (1981) distinction between event-internal and event-external plurality.

Bybee, Perkins and Pagliuca (1994: 127) define iterativity as follows:

> **Iterative** describes an event that is repeated on a particular occasion. The notion of iteration is particularly relevant to telic predicates – those that have a well-defined end point. Thus, iteratives will have lexical restrictions. In reference grammars iteratives are sometimes called Repetitives.
>
> (Bybee, Perkins & Pagliuca 1994: 127, emphasis in the original)

I define iterativity as the case in which the situation occurs multiple times, but the repetitions are limited to a single and the same occasion, that is, the situation is repeated more than once within a time frame that is relatively short to be understood as a single occasion. Therefore, the repetitions occur sequentially, one after the other.

For example:

(2) Skwxwú7mesh (Salishan, Central Salish)

a. *chen kwelesh-t ta sxwi7shn*
1SBJ.SG shoot-TR DET deer
'I shot a deer.' (Bar-el 2008: 34)

b. *chen kwel~kwelesh-t ta sxwi7shn*
1SBJ.SG PLAC~shoot-TR DET deer
'I shot a deer several times/continuously.' (Bar-el 2008: 34)

The sentences in (2a) and (2b) differentiate each other only for a single modification: as for the case of Konso (Afro-Asiatic, Cuchitic), in (2b) the verb is derived through the reduplication of the first syllable, while in (2a) we can see the underived form of the same verb. This derivation encodes a specific case in which several actions occur in a relatively small period of time (a single occasion) and, indeed, they are performed continuously.

The second type of pluractionality stricto sensu is frequentativity. Bybee, Perkins and Pagliuca (1994) define frequentativity as follows:

> **Frequentative** includes habitual meaning – that a situation is characteristics of a period of time – but additionally specifies that it be frequent during that period of time. (Bybee, Perkins & Pagliuca 1994: 127, emphasis in the original)

In this case, my definition is slightly different: I do not consider habituality as a function included in the notion of frequentativity. In this work, the only difference between these two functions is the custom and typicity of the relative situation in a period of time. While habituality implies that a specific situation occurs customarily and is typical of a time frame, frequentativity does not.

Thus, I define frequentativity as the case in which the repetitions of a specific situation are performed over multiple and different occasions, that is, the situation is repeated, but the time that occur between one repetition and the other is sufficiently long to be understood as different occasions.

For example:

(3) Khwe (Khoe-Kwadi, Khoe)
tí *à* *bè-è-xú-t-a-tè!*
1SG OBJ be_too_heavy-II-COMP-FREQ-I-PRS
'It is often too heavy for me!' (Kilian-Hatz 2008: 146)

In Khwe (Khoe-Kwadi, Khoe) the affix *-t-* gives a frequentative reading to the verb, i.e., an action that is repeated on different occasions. In fact, the sentence in (3) means that something (an object or a situation) is, in most of the cases (but not always), too heavy for the speaker. The situation of being too heavy for the speaker is definitely extended on a longer period of time than the one of the sentence in (2).

Iterativity and frequentativity reflect, in a certain way, the distinction between "plurality of events" and "plurality in and of events" proposed by Cusic (1981).

However, as previously noted, Cusic (1981) recognizes three different levels of plurality of a situation: one type of event-internal plurality (plurality in events), and two types of event-external plurality (plurality of events and plurality of and in events). From my data and analysis, it becomes evident that in the languages of the world iteratives and frequentatives are much more common

than event-internal plurality (plurality in events in Cusic's (1981) terms). For this reason, I decided to include the latter function, that I did actually find in the languages of my sample, in the additional and not in the core pluractional functions. However, at the same time, this does not mean that in a specific language event-internal plurality cannot be a very frequent function, also more than the cross-linguistic core functions.

2.2.1.2 *Spatial distributivity*

The second element of the prototypical occasion pointed out in Section 2.2.1 that can be pluralized together with the situation is the location in which the situation itself can occur.

A repeated situation can occur involving a single place (like in the case of pluractionality stricto sensu) or can be distributed over different places. I propose to call this function spatial distributivity. In linguistics, this term has often a wider meaning, that is, the distribution on different participants or places. However, I use (spatial) distributivity with a more specific value, i.e., I consider this function only in its spatial reading and for this reason I decided to add the adjective spatial.

An example of spatial distributivity is given by Barasano (Tucanoan, Eastern Tucanoan):

(4) Barasano (Tucanoan, Eastern Tucanoan)
gahe-rʉ̃bʉ̃ bota-ri kea-kudi-ka-bã idã
other-day post-PL chop-ITER-RM.PST-3PL 3PL
'The next day they went from place to place chopping down posts (for the new house).' (Jones & Jones 1991: 101)

In (4), we can see that the morpheme *-kudi* (glossed as Iterative) encodes the fact that the action is performed more than once and in different places ("[…] went from place to place chopping […]").

Cross-linguistically, spatial distributivity is the less widespread core function. In addition, it appears almost always marked in co-presence with another core function, that is, participant plurality (see Section 2.2.1.3). Probably, this happens because often if the situation occurs over different places, it will also involve plural participants. For example, this is the case seen in (4), in which the occasion involves a plurality of situations acted in different places on different objects.

There is an analogous situation in ǂHoan (Kxa):

(5) ǂHoan (Kxa)
a. *ya ǁˈai ˈa*
3SG hang.SG PFV
"It is hanging [a thing hanging on a wall, SM]' (Collins 1998: 56)

b. *tsi* *!ga* *ˈa*
3PL hang.PL PFV
'They are hanging [several things hanging on different walls, SM]'
(Collins 1998: 56)

In this example, the distribution of the situation over different locations is marked through a particular strategy, that is, lexical alternation (also stem alternation or suppletion in certain references, cf. Chapter 3).

2.2.1.3 *Participant plurality*

The last element that can be pluralized in a prototypical occasion and that can be involved in the plurality of situations is represented by the participant(s). By the term participant, I mean any entity or element (be it animate or not) that is involved in the situation encoded by the verb. Participant plurality is the type of pluractionality that encodes an occasion in which there is a co-presence of a plurality of situations and a plurality of entities. In this case, the plurality of situations will be distributed over different participants.

For example:

(6) Huichol (Uto-Aztecan, Southern Uto-Aztecan)
a. *nee* *waakana* *ne-mec-umɨʔii-ri* *eekɨ*
1SG chicken.SG 1SG.SBJ-2SG.OBJ-kill.SGAC-BEN 2.SG
'I killed you the chicken' (Comrie 1982: 113 cited in Durie 1986: 357)
b. *nee* *waakana-ari* *ne-mec-uqɨʔii-ri* *eekɨ*
1SG chicken-PL 1SG.SBJ-2SG.OBJ-kill.PLAC-BEN 2.SG
'I killed you the chickens.' (Comrie 1982: 113 cited in Durie 1986: 357)

In (6), we can see that when the verb stem is singular, also the participants involved are singular and when the verb stem is plural the number of the direct object is marked with a plural marker. This co-variation follows from an encyclopedic truth: if there is more than one occurrence of a killing event, consequently, there will be more than one entity killed. This is because a particular entity cannot be killed more than once (except for fantasy worlds and novels).

Even though every kind of participants can apparently be pluralized, it is important to note that cross-linguistically there exists a general tendency: often, the entity whose number is pluralized is the so-called "most affected argument", i.e. the participant whose state is mostly modified by the occurrence of the situation.

In syntactic terms, more often the most affected participant tends to be the direct object of transitive sentences (cf. (7)) and the only argument of intransitive ones (cf. (8)).

(7) Central Pomo (Pomoan, Russian River and Eastern)
a. *háyu* *š-čé-w*
dog hooking-catch-PFV
'He tied up the dog.' (Corbett 2000: 244)

b. *háyu š-čé-ṯ-ʔ*
dog hooking-catch-PL-PFV
'He tied up the dogs.' (adapted from Corbett 2000: 244)[6]

(8) Huichol (Uto-Aztecan, Southern Uto-Aztecan)
a. *(nee) ne-nua*
1SG 1SG-arrive.SG
'I arrived.' (Comrie 1982: 99)
b. *tri yhuuta-t me-niuʔazani*
children two-SBJ 3PL-arrive.PL
'Two children arrived.' (Comrie 1982: 99)

At the semantic level, the most affected argument tends to be the patient (cf. (6) and (7)). Also in this case, this just represents a general tendency and sometimes also the agent can be pluralized (cf. (8b)).

To summarize, participant plurality is a modification of the number value of the most affected argument. The pluralization of the action forces this change. In certain situations, the fact that the action is multiple needs, semantically, the presence of plural participants. This happens because the effect of a plural action can involve plural entities. As Mithun put it, the main function of this kind of pluractionality "is not to enumerate entities, but to quantify the effect of [plural] actions, states, and events" (Mithun 1988: 214).

In this sense, participant plurality is not a case of nominal number or syntactic agreement between the absolutive argument and the verb, but it is a sort of semantic (i.e., non-syntactical) agreement that makes evident the effect that a plurality of situations has on entities (cf. Section 3.5).

Durie (1986) and Mithun (1988) have discussed at length on this issue. Their analyses are similar, but they have adopted different terms. Durie (1986) coins the term "semantic selection" and Mithun (1988) describes it as a case of "classificatory verbs".

Semantic selection is a sort of concordance that exists between the value of number of the verb and one of its arguments. The plurality (or singularity) of the verb makes necessary a plural (or singular) value of the most affected argument (e.g. the case of killing in (6) and of tying in (7)).

On the other hand, Mithun (1988) shows that, in some languages, there are different verb stems that share the same lexical meaning, but that differ from each other depending on the type of argument they ask.

---

6. I would like to thank Marianne Mithun for having corrected the segmentation of this example.

For example, in Klamath (Isolate, North America) there are four different verbs that encode the basic lexical meaning of 'give':

(9) Klamath (Isolate, North America)
l^{v}oy to give a round object'
n^{e}oy 'to give a flat object'
ks^{v}oy 'to give a live object'
s^{ʔ}ewan^{ʔ} 'to give plural objects'

(Barker 1964: 176)

The element that makes these verbs different is the type (mainly the shape) of object that they involve (round, flat, live, etc.).

It is interesting to note that, in this list, there also exists one verb that encodes the action of giving plural objects. This means that, in this language, plurality is conceptualized as a property of the object and that directly modifies the whole context.

The case of Klamath makes evident that, in such languages, if the action is done more than once and its effect affects a participant, the latter will be necessarily plural.

The terms used by Durie (1986) and Mithun (1988) refer to similar circumstances. They are both valid depending on the language (and the constructions) we consider. The most important consequence is that we must be aware that participant plurality works on semantic and not on syntactic grounds. A more detailed discussion on this issue will be addressed in Chapter 3.

2.2.1.4 *The case of single actions: Singulactionality*

It is important to mention another type of constructions that deals with pluractionality, but that does not represent a direct topic of the present work.

In the literature on nominal number, it is widely recognized that the singular form is often the unmarked or less marked (it is also called the default value) and the plural is the marked or the more marked value (Corbett 2000: 17). Nonetheless, at the same time, there are languages in which the singular form of a noun is overtly marked or is the only one marked (cf. for example the case of singulative).[7]

In parallel, we can find a similar situation also in the domain of pluractionality: more often, there does not exist an explicit morpheme to mark a single action,

7. Corbett (2000: 17) defines singulative as follows: "'Singulative' is a term relating to form; in meaning such forms are singular; 'singulative' is normally used when the singular form is derived from some other form, typically a collective or general form, and carries a number marker."

but some languages display this kind of marker. For example, some Cushitic languages show a verbal derivation (gemination of final consonant in monosyllabic verbs: $C_1VC_2{\sim}C_2$) that is recognized by several authors (e.g. Amborn, Minke & Sasse 1980; Sasse 1986; Savà 2005; Orkaydo 2007, 2009) as a marker that encodes the meaning of doing an action once. This is particularly widespread in the Dullay and Oromoid sub-branches. Nevertheless, its absence is noteworthy in Oromo (cf. Orkaydo 2009).

There exist different terms that refer to this type of derivation, such as "singulative" as for the nominal phenomenon (Black 1974; Amborn, Minker & Sasse 1980; Sasse 1986), "punctual" (Savà 2005; Orkaydo 2007, 2009; Orkaydo & Mous 2017), and "semelfactive" (Tosco 2010: 394).

An example from Konso (Afro-Asiatic, Cushitic) is reported in (10):

(10) Konso (Afro-Asiatic, Cushitic)

a. *nama-si?* *inanta-si?* *i=ɠof~f-ay*
person-DEF.F/M girl-DEF.F/M 3=pinch.PLAC~SGAC-PFV.3M
'The person pinched the child once.' (adapted from Orkaydo 2007: 154)

b. *ɠimayta-si?* *hellaa-sini?* *i=ɠoɠ~ɠof-ay*
old_man-DEF.M/F children-DEF.P 3=PLAC~pinch.PLAC-PFV.3M
'The old man pinched the children many times.' (Orkaydo 2007: 155)

In Konso, the underived verb *ɠof* (pinch.PLAC) has an inherently plural meaning. There are three other forms of the same verb: (i) the form *ɠof~f* (pinch.PLAC~SGAC) has a singular meaning; (ii) the form *ɠo-ɠof~f* (PLAC~pinch.PLAC~SGAC) encodes that the action is repeated a few times ('to pinch few times'), and (iii) the form *ɠoɠ~ɠof* (PLAC~pinch.PLAC) that encodes that the action is repeated several times. The situation of Konso, and of Cushitic languages in general, is particularly complex and interesting and will be reconsidered in Chapter 4. At this point, the relevant aspect is that these languages have a strategy to mark the singularity of situations.

We can find a singulative derivation in a few other languages of the world. Comanche (Uto-Aztecan, Northern Uto-Aztecan) is another example. In this language we can find a suffix *-i*/*-ʔi* that expresses: "X is an isolated action that is over and done with" (Charney 1993: 142).

(11) Comanche (Uto-Aztecan, Northern Uto-Aztecan)

a. *awo-e* *nɨɨ* *wɨH-tɨpa-i*
dish-OBJ I INST-break.SG.OBJ-SGAC
'I broke the dish.' (Charney 1993: 142)

b. *u-ma* *nɨɨ* *tɨmɨ-ʔi*
it-with I buy/sell-SGAC
'I sold it.' (Charney 1993: 143)

Another example of this phenomenon is provided by Warao (Isolate, South America). Also this language displays such a kind of marker. In this case, the derivational morpheme *-a* is described by Romero-Figeroa (1997: 99) as a punctual-semelfactive marker; i.e., a marker that expresses an instantaneous or a single action.

(12) Warao (Isolate, South America)

a. *naba-ya ine naru-n-a-e*
river-all I go-SG-PUNC-PST
'I went to the river for an instant' (Romero-Figeroa 1997: 99)

b. *ma-rima rau kaba-n-a-e*
1SG.POSS-father tree cut-SG-PUNC-PST
'My mother cut the bush with a single blow' (Romero-Figeroa 1997: 99)

The South American language Yagua (Peba-Yagua) shows a similar system in which the affix *jadapu̧u̧ryi̧i̧* encodes a single action (Payne & Payne 1990: 395).

(13) Yagua (Peba-Yagua)

a. *ray-rąącha-jadapu̧u̧ryi̧i̧-rà*
1SG-cut-SGAC-INAN
'I cut it with a single blow.' (Payne & Payne 1990: 395)

What comes out from what we have just seen in the present section is that, as it happens in the domain of plural situations, several terms are used for single action forms as well. For this reason and in parallel with the Chapter 1, I propose to adopt the term singulactionality. This term is the morphological counterpart of the term pluractionality. Both terms have the merit to be transparent in meaning and also in their morphological formation. They are formed with the stem of the number value (plur- and singul-) and the term that refers to the lexical value that usually verbs express, namely, actions and situations (-actionality). Thus, plurality of actions will be plur-actionality and singularity of actions will be singul-actionality. This parallelism also reflects on the glosses, that are respectively PLAC and SGAC.

Though this phenomenon does not pertain to my investigation, since I am describing the cross-linguistic characteristics of pluractional constructions, these constructions emerged in my data and I believe it was important to give at least a quick glance to this phenomenon.

2.2.2 Additional functions

Cross-linguistically, pluractional constructions show a high degree of multifunctionality. In other words, the forms that are pluractionalized tend to encode not only the core functions described in the previous sections, but also several other additional functions.

In the languages of the world, a set of these recurrent additional functions is quite easily detectable. And, they cannot be considered core functions for several reasons.

The majority of these additional functions is related to the notion of plurality or, in a wider sense, to the notion of number. Nevertheless, it is hardly identifiable the way in which all these functions are semantically and functionally connected each other.

To better understand this multifunctionality, I tried to classify these additional functions in different semantic clusters depending on the type of relationship they show with the notion of plurality/number.

I propose the following three clusters:

1. NON-PROTOTYPICAL PLURALITY: this group gathers functions that encode a sort of plural notion, but that at the same time cannot be described as a typical plural meaning. In other words, these values do not indicate a bare distinction between a singular *vs*. a plural situation. In the languages of the world, the most frequent functions of non-prototypical plurality are: habituality, event-internal plurality, continuativity, generic (or gnomic) imperfectivity;
2. DEGREE: in this group, we find functions that encode a modification in the way an action is performed, the degree or grade of its development. The most widespread functions are: intensity, completeness, emphasis;
3. RECIPROCITY: often reciprocal meanings can be encoded by pluractional constructions. They encode an action performed reciprocally by at least two different participants.

In the next sections, these semantic clusters are briefly described and exemplified.

2.2.2.1 *Non-prototypical plurality*

By the phrase non-prototypical plurality, I mean those functions that show a semantic relationship with the notion of number and plurality, but at the same time this connection does not seem to be a direct one. We can call this non-direct relationship non-prototypical.

These non-prototypical functions do not encode only a simple distinction between single/singular and multiple/plural events, but they encode some other aspects that in some way go beyond this distinction.

The most recurrent non-prototypical functions in the languages of the world are: habituality, event-internal plurality, continuativity, and generic (or gnomic) imperfectivity.

Habituality. This term is very widespread in linguistic studies and grammars and it indicates a situation that is repeated customarily, i.e. that is typical

of a period of time. The definition that Bybee, Perkins and Pagliuca (1994: 127) adopted from Comrie (1976: 27–28) is extremely clear:

> **Habitual** situations are customarily repeated on different occasions. Comrie's (1976: 27–28) definition of habitual is well put:
>
> > [Habituals] describe a situation which is characteristic of an extended period of time, so extended in fact that the situation referred to is viewed not as an incidental property of the moment but, precisely, as a characteristic feature of whole period.
>
> Habitual grams may also be restricted to either present or past, or applicable to both. Alternate terms for habitual found in reference grammars are Customary and Usitative and sometimes Iterative.
>
> (Bybee, Perkins & Pagliuca 1994: 127, emphasis in the original)

In other words, this value means that a situation is repeated; however, its fundamental trait is not the mere repetition over several occasions (like frequentativity), but the typicality of that situation in a more or less precise time frame.

Often, we can find this kind of function encoded by a pluractional marker and this semantic similarity can quite clearly explain why pluractional core functions and habituality (repeated actions and repeated action typical of a period of time) are often marked through the same grammatical marker.

For example:

(14) Sandawe (Isolate, Africa)

a. Frequentative reading of the morpheme *-wǎ* PLAC.
nì-ŋ *híkʼ-wǎ-ŋ* *phàkhé-ŋ* *ǀʾèé-ì*
CNJ-CL go.SGAC-PLAC-L inspect-L look_at-3.IRR
'And he will often go, inspect and have a look at it' (Steeman 2012: 242)

b. Habitual reading of the morpheme *-wǎ* PLAC.
mindà-tà-nà=sḭ̀ *híkʼḭ̀-wà*
field-in-to=1SG go.SGAC-PLAC
'I go to the field.' (Steeman 2012: 188)

In (14), we can see that the morpheme *-wà* (glossed as PLAC) can have both a frequentative reading in (14a) and a habitual one in (14b). The action in (14a) is performed several times on different occasion, while in (14b) is repeated customarily and habitually, but it is also typical of an extended period.

Another example is provided by Macushi (Cariban, Venezuelan Cariban) in which the Iterative suffix *-pîtî* encodes iterative/frequentative situations in the present (an action merely repeated, cf. (15a)) and habitual situations in the past (cf. (15b)).

(15) Macushi (Cariban, Venezuelan Cariban)

a. Iterative or frequentative reading (depending on the context) of the Macushi Iterative morpheme *-pîtî* ITER.
paapa-ya yei ya'tî-pîtî
father-ERG tree cut-ITER
'Father cuts the tree (repeatedly)' (Abbott 1991: 118)

b. Habitual reading of the Macushi Iterative morpheme *-pîtî* ITER.
mîîkîrî i-n-koneka-'pî yapurî-pîtî-'pî to'-ya
3.PRO 3-OBJ.NMLZ-make-PST praise-ITER-PST 3PL.PRO-ERG
'They used to worship that which he made.' (Abbott 1991: 118)

Event-internal plurality. I use the phrase event-internal plurality exactly with the same meaning that was proposed by Cusic (1981), that is, a situation which is internally plural because it is composed of several repetitive sub-situations that are reciprocally intertwined (not discrete) and, thus, difficult to distinguish each other. In some language traditions, this function is recognized as a case of core pluractional function (cf. for example Orkaydo & Mous 2017), but in cross-linguistic perspective we cannot consider this kind of function as a core pluractional value, mainly for two reasons. Firstly, in the languages of my sample, this function is not as widespread as the actual core functions presented in Section 2.2.1, though it is probably the most frequent additional function. Secondly, in my opinion this kind of meaning does not encode a real multiplicity of situations and thus event-internal plurality cannot be comprised within the definition of pluractionality that I adopted in Chapter 1. Indeed, the situation that this function encodes is certainly complex, but single. The plurality is internal to the event and not external. Often, in these situations, the event is composed of different phases that are hardly separable from one another; this makes event-internal plurality situations more complex than others and this complexity can be connected with some sort of plurality, but, despite this, the situation remains singular. Following Cusic (1981) terminology, we can say that event-internal plurality encodes a repetitive action rather than a repeated action.

For example, if we look at the English sentence *he whistled* we have in our mind a situation in which the subject whistled continuously, rather than a situation in which the agent whistles only once. In other words, the agent who is whistling does not make a single and punctual whistle, but the whistling would be continuous and composed of different sub-whistlings. So, even though I would not probably describe this situation as plural, it is undeniable that the situation is complex and internally plural (composed of different phases).

A piece of evidence of this is given by the fact that if someone whistles only once we usually have to say it explicitly: *he makes a whistle/he whistles once*.

In some languages of the world, pluractional markers can mark event-internal plurality. A possible explanation lies in the strict relationship between the complexity of event-internal plurality and the notion of plurality (cf. Section 1.3.1).

An example of a pluractional marker that also encodes event-internal plurality is provided by Sandawe (Isolate, Africa).

(16) Sandawe (Isolate, Africa)

a. Iterative or frequentative reading (depending on the context) of the Iterative morpheme *-ìmé* ITER.
gélé-áá |*-ìmé*
Gele-SFOC come.SGAC-ITER
'Gele came repeatedly' (Steeman 2012: 143)

b. Event-internal plural reading of the Iterative morpheme *-ìmé* ITER.
tsháá=sà *xàd-ímé-é*
pot=3F.SG scrape_out-ITER-3OBJ
'She scraped out a pot.' (Steeman 2012: 141)

In these examples, we clearly see a difference between (16a) and (16b): while in the former sentence the Iterative morpheme *-ìmé* has a frequentative reading, in the latter it encodes an event that is complex and composed of different repetitive phases that make the actual situation complex, but externally singular. For this reason, I cannot say that in (16b) there is a case of verbal plurality in the strictest sense.

In the languages of the world, this particular function can also be expressed as a characteristic of the lexical item rather than as a morphological device. In fact, in several cases, event-internal plurality can be seen as a specific lexical trait of certain verbs and consequently better understood as a type of Aktionsart, which we can call repetitive following the terminology of Cusic (1981).

Continuativity. The continuative function is broadly widespread in the languages of the world, often with a dedicated marker. However, also pluractional markers can additionally encode this kind of function. Continuativity expresses a single situation that is prolonged during a period of time. I define this term similarly to Bybee, Perkins and Pagliuca (1994), the definition that they propose is the following one:

> **Continuative** includes progressive meaning – that a dynamic situation is ongoing – and additionally specifies that the agent of the action is deliberately keeping the action going. Continuative is the meaning of 'keep on doing' or 'continue doing'.
> (Bybee, Perkins & Pagliuca 1994: 127, emphasis in the original)

For example, in Rapanui (Austronesian, Malayo-Polynesian) pluractional constructions can express continuativity:

(17) Rapanui (Austronesian, Malayo-Polynesian)

a. Spatial distributivity reading of verbal reduplication in Rapanui.
e *ha'aki~'aki* *koe* *e* *oho* *apó*
STA announce~PLAC 2SG STA go tomorrow
'You go and show them all around tomorrow.' (Du Feu 1996: 162)

b. Continuative reading of verbal reduplication in Rapanui.
i teki~teki i oho ai
PST tiptoe~PLAC PST go PHO
'He went tiptoeing along.' (Du Feu 1996: 162)

In (17a) the reduplication of the verb stem gives a pluractional reading to the situation (in this case a spatial distributive), and in (17b) it encodes a continuative situation, i.e., the action is performed for an extended period of time.

Another interesting example is given by Chechen (Nakh-Daghestanian, Nakh):

(18) Chechen (Nakh-Daghestanian, Nakh)
a. Unmarked form of the verb stem.
so tykana vedira
1SG.ABS store.DAT run.WP
'I ran to the store.' (Wood 2007: 224)

b. Frequentative reading of the pluractional verb stem.
hoora wyyrana so tykana ydu
every morning 1SG.ABS store.DAT run.PLAC.PRS
'Every morning I run to the store repeatedly (more than once per day)'
(Wood 2007: 225)

c. Continuative reading of the pluractional verb stem.
so cwana sahwtiahw idira
1SG.ABS one.OBL hour.LOC run.PLAC.WP
'I ran (went running) for one hour.' (Wood 2007: 224)

In these examples, we can see that different forms of the verb *run* can display different functions. In particular, the pluractional forms in (18b) and (18c) have respectively a frequentative and a continuative reading.

Generic (or gnomic) imperfectivity. In the languages of the world, this function is not as widespread as the other non-prototypical plural functions, but it is particularly relevant for the explanation of a possible conceptual space (cf. Section 2.3).

Generic and gnomic imperfectivity expresses a situation that occurs always, and it can be a property or a quality of an entity or a gnomic truth, that is, it is part of the encyclopedic shared knowledge. In this sense, this function can also be viewed as a radical extension of habituality.

For example, in Meithei (Sino-Tibetan, Kuki-Chin-Naga) the suffix *-kən* marks pluractional, habitual and generic meanings:

(19) Meithei (Sino-Tibetan, Kuki-Chin-Naga)
a. Frequentative/habitual reading of the morpheme *-kən* PLAC.
nók-kən-pə
laugh-PLAC-NOM
'someone who laughs all the time whether or not there is a joke, as a habit.' (Chelliah 1997: 216)

b. Generic imperfective reading of the morpheme *-kən* PLAC.

əy-ti *yám-nə* *pí-kən-pə* *mí-ni*
I-DLMT lot-ADV give-PLAC-NOM man-COP
I a lot always giving man am
'I am a very generous man.' (lit. I am a man who always gives a lot)
(Chelliah 1997: 216)

Unfortunately, the translations of these examples are not completely satisfactory and do not show straightforwardly the functions that this suffix can cover. However, the author of the grammar recognizes herself that the morpheme *-kən* can actually have different readings:

> The suffix *-kən* indicates that an action is performed repeatedly where such repetition is not called for (see (6b) [(19a) in this section, SM]). As seen in (6c) [(19b) in this section, SM], the suffix may also indicate habitual action.
> (Chelliah 1997: 216)

In this case, I cannot describe this function as a pluractional core one because the sentence encodes a property or a peculiarity of the subject that probably s/he will have for her/his entire life, i.e. a distinctive characteristic that occurs always, and that is always true.

2.2.2.2 *Degree*

By degree, I intend those functions that encode a modification of the degree of the situation. In other words, a single situation whose grade is modified with respect to the usual or prototypical development of the same situation.

Cross-linguistically, the most widespread functions of this semantic cluster are: (i) intensity, (ii) completeness, and (iii) emphasis.

Intensity. This is one of the most common additional functions that pluractional markers can encode. Intensity indicates a situation done with more effort or whose result is augmented with respect to the normal happening of the same situation.

For example, in Yimas (Lower Sepik-Ramu, Lower Sepik) the reduplication of the verb root marks pluractional functions (cf. (20a)) but can also mark intensity of the situation. In (20b), the reduplication of the verb *tay-* 'see' produces the stem *tacay-* with the intensive meaning 'stare'.

(20) Yimas (Lower Sepik-Ramu, Lower Sepik)
a. Iterative or frequentative (depending on the context) reading of Yimas verbal reduplication.
ya-n-ark~ark-wampaki-pra-k
PL.OBJ-3SG.A-break~PLAC-throw-VEN-IRR
'He repeatedly broke them and threw them as he came.'
(Foley 1991: 319)

b. Intensive reading of Yimas verbal reduplication.
ya-mpu-nanaŋ-ta~cay-ckam-tuk-mpun
PL.OBJ-3PL.A-DUR-see~PLAC-show-RM.PST-3PL.DAT
'They were showing those to them very well (and they stared at those).'
(Foley 1991: 319)

Also in Kokama-Kokamilla (Tupian, Maweti-Guaranì), the full reduplication of the verb stem, that usually marks pluractionality (cf. (21a), plus the Reiterative suffix *-ka* in this case), can give an intensive meaning (cf. (21b)):

(21) Kokama-Kokamilla (Tupian, Maweti-Guaranì)

a. Iterative reading of Kokama-Kokamilla verbal reduplication.
ra yupuni yauki urkuru umi~umi-ka ikian yapu uka
3SG.M start make basket see~PLAC-REI[8] this paucar house
chikuara
base
'She starts to make the basket looking and looking at the base of the paucar's house' (Vallejos Yopán 2010: 371)

b. Intensive reading of Kokama-Kokamilla verbal reduplication.
tapɨa=tua alcanza-shka=ay ɨwɨra=ka ya=pariatsu~pariatsu
savage=AUG reach-VBZ=3F.OBJ tree=LOC 3SG.F=suffer~PLAC
arɨwa ɨwɨra ya=warika arɨwa
on_top tree 3SG.F=go_up on_top
'The savage reaches him on the tree while he is in intense suffering while climbing the tree' (Vallejos Yopán 2010: 371)

Vallejos Yopán (2010: 371) notes that "the verb *umi* 'see' is repeated to indicate that in the process of basket-making the manufacturer observes the model over and over."

Completeness. This function encodes a situation that is performed completely, in its entirety.

For example, in Turkana (Nilotic, Eastern Nilotic) the reduplication of the verb stem can encode pluractional (cf. (22a)) and complete (cf. (22b)) situations:

8. The morpheme *-ka* of Kokama-Kokamilla expresses both iterativity and reiterativity (some situations already done once and re-done for the second time, thus not a real plural situation). It follows that in this example is hard to say which device (reduplication or *-ka*) expresses the pluractional reading. However, the author of the grammar says that reduplication can express "reiterative, iterative, intensification, and emphasis." (Vallejos Yopán 2010: 153). It is noteworthy that basically all examples of reduplicated verbs with a pluractional reading in this grammar appear with the suffix *-ka*.

(22) Turkana (Nilotic, Eastern Nilotic)

a. Pluractional reading of Turkana verbal reduplication.
-poc 'pinch' → *a-poc~o-poc*' 'pinch repeatedly'
-ìlug 'twist' → *a-k-ìlug~u-lug* 'twist repeatedly'
(Dimmendaal 1983: 106)

b. Complete reading of Turkana verbal reduplication.
-ɲrl 'crumble' → *a-ɲrl~r-ɲrl*' 'crumble completely'
-ìkic 'bone out' → *a-k-ìkic~i-kic* 'bone out completely'
(Dimmendaal 1983: 106)

Another example is provided by Indonesian (Austronesian, Malayo-Polynesian) in which the pluractional suffix *-i* that can express several pluractional functions (cf. (23), see Appendix II) can also encode completeness and intensity (cf. (24)):

(23) Indonesian (Austronesian, Malayo-Polynesian): Iterative/frequentative reading of the Indonesian suffix *-i*.
memukul 'hit' → *memukuli* 'hit repeatedly'
menjual 'sell' → *menjuali* 'sell off, sell (many things)'
(Sneddon et al. 2010: 99)

(24) Indonesian (Austronesian, Malayo-Polynesian): Complete and intensive reading (respectively) of the Indonesian suffix *-i*.
membakar 'burn' → *membakari* 'burn up completely'
memandang 'look at' → *memandangi* 'gaze at'
(Sneddon et al. 2010: 99)

Emphasis. Finally, another function connected with the notion of degree that pluractional markers can additionally express is the so-called emphasis. With this term, I intend a situation performed with particular emphasis or affectedness. For example, in Karo Batak (Austronesian, Malayo-Polynesian), this kind of function can be encoded by the reduplication of a causative verb (cf. (25b)):

(25) Karo Batak (Austronesian, Malayo-Polynesian)

a. Iterative or frequentative (depending on the context) reading of Karo Batak verbal reduplication.
sapu~sapuna *kucing* *é*.
PLAC~stroke.3SG.F cat that
'She stroked the cat again and again.' (Woollams 1996: 96)

b. Emphatic reading of Karo Batak verbal reduplication.
peturah~turah *sitik* *ukurndu*
CAUS.grow~PLAC SOF mind.your
'Grow up a bit! (i.e. Act like an adult!)' (Woollams 1996: 98)

This function is probably the less widespread function of the degree semantic cluster.

2.2.2.3 *Reciprocity*

The last semantic cluster that composes the additional functions of pluractionality is reciprocity. This cluster is composed of only one function, namely, reciprocity.

In the languages of the world, the morphemes that mark reciprocal meanings are often connected semantically with pluractional constructions. These two functions are strictly related, and the motivation of this relationship is quite evident: reciprocity encodes a situation that is performed by at least two different participants reciprocally, i.e. one of the participants performs the situation on the second and, vice versa, the second one simultaneously performs the same situation on the first participant. Consequently, in a reciprocal situation there are at least two different participants and two different instances of the same situation. This is clearly similar to a prototypical pluractional situation, and specifically reciprocity is strictly related to participant plurality, but also to iterativity and spatial distributivity.

For example, in Jóola Karon (Atlantic-Congo, North Atlantic) the same marker *-ool* can encode reciprocal and pluractional functions:

(26) Jóola Karon (Atlantic-Congo, North Atlantic)

a. Iterative reading of Jóola Karon Pluractional/Reciprocal marker *-ool* PLAC/RECP.
Lopeel a-muus-ool-a
Robert 3SG-pass-PLAC-ACC
'Robert went and came back.' (adapted from Sambou 2014: 150)

b. Reciprocal reading of Jóola Karon Pluractional/Reciprocal marker *-ool* PLAC/ RECP.
Sana ni Faatu ka-cuk-ool-a
Sana and Fatou 3PL-see-RECP-ACC
'Sana and Fatou saw each other.' (Sambou 2014: 149)

Another example is provided by Cambodian/Khmer (Austro-Asiatic, Khmeric) in which the prefix *pra-* encodes iterative (cf. (27a)) and reciprocal (cf. (27b)), and also collective meanings:

(27) Cambodian/Khmer (Austro-Asiatic, Khmeric)

a. Iterative or frequentative (depending on the context) reading of Cambodian/Khmer prefix *pra-*.
dual → (*p-dual* →) *pra-dual*
'fall down' ('knock down') 'knock down repeatedly'
(Haiman 2011: 71)

b. Reciprocal reading of Cambodian/Khmer prefix *pra-* (*sra:j* 'connect' → *pra-sra:j* 'be united, connected; stay on or with')
praeu ka:-ni'jiaj pra-sra:j tev venj tev mau:k raviang
use NMLZ-talk PLAC-connect go back go come among
caun teang la:j
person all all
'(We) all use conversation to make reciprocal connections with each other.' (Haiman 2011: 71)

2.2.3 Rare functions

In the languages of the world, core and additional functions are not the only functions that pluractional markers can encode: they are the most frequent cross-linguistically, but at the same time there are some other minor functions that are rare and not so widespread. Even though these rare functions do not help a lot in making typological generalization, some of them definitely deserve to be mentioned.

Indefiniteness. We have already seen how in Karo Batak (Austronesian, Malayo-Polynesian) verbal reduplication encodes pluractional functions, both core and additional (cf. (25)). In addition to these functions, in this language verbal reduplication can be applied to certain intransitive verbs giving

> a sense of indefiniteness, "diffuseness" (Rosen 1977: 4), or lack of specific orientation or goal; this meaning tends to overlap with notions of repetition and plurality […]. (Woollams 1996: 101)

For example:

(28) Karo Batak (Austronesian, Nuclear Austronesian)
sëh i Lau Kawar, déba ia ridi~ridi, déba ngerakit …é
reach at Lau Kawar some they bathe~PLAC some ACT.raft and
maka kundul~kundul ia kerina i tepi dano é.
then sit~PLAC they all at side lake that
'Arriving at Lau Kawar, some went swimming, others played on rafts and then they all sat around the edge of the lake.' (Woollams 1996: 101)

Successive events. The Beja language (Afro-Asiatic, Cushitic) displays three different marking strategies for pluractional functions: partial or full reduplication of the verb stem and internal modification. The latter strategy can encode the so-called successive events (cf. Vanhove 2017: 65), i.e. the presence of a plurality of situations, but in the sense of the sequentiality of different kind of situation rather than the repetition of the same situation (pluractionality stricto sensu). In other words, it can mark the fact that a situation is performed after another one.

For example:

(29) Beja (Afro-Asiatic, Cushitic)
j=hank^{w}il-a=ja: *dha:j* *jhak-i=t*
DEF.M=youth-PL=POSS.3PL.NOM DIR get_up-AOR.3SG.M=CNJ
i=ḍe:fa *dha:j* *i-na:gil-na*
DEF.M=door DIR 3-open\INT.IPFV-PL
'Ses jeunes messagers se sont levés vers lui et lui ont ouvert les portes successivement.' (literal translation: 'His young messenger people got up towards him and opened the door for him.' [SM]) (BEJ_MV_NARR_14_si-jadok_292–293) (Vanhove 2017: 65)

Antipassive. Though quite rare in the languages of the world, pluractional markers can also mark antipassivity. In the literature, different scholars have quite differently defined this term. Since this issue, though very interesting and challenging, is not central in my discussion I simply give the most general and widespread definition of this phenomenon. An antipassive construction is generally defined as a formally intransitive clause that displays a transitive verb whose object (or patient-like argument) is demoted to a non-core argument or non-argument (i.e., to an oblique case or it is incorporated or not expressed at all) (cf. Janic 2013: 15 and Polinsky 2017: 310).

Dom, Segerer and Bostoen (2015) note that in Cilubà (Atlantic-Congo, Volta-Congo) the morpheme *-angan* is multifunctional (they call this marker plurality of relations, glossed as PR). The functions that this suffix expresses are antipassivity and reciprocity (cf. (30) and (31) respectively).

(30) Cilubà (Atlantic-Congo, Volta-Congo)
mu-ntu *ù-vwa* *mu-ship-angan-a*,[9] *bà-vwa* *bà-mu-ship-a* *pà-èndè*,
CL-person SBJ-PST CL-kill-PR-FV SBJ-PST SBJ-OBJ-kill-FV PRP-POSS
nànasha *yêye* *mu-àna-ènù*.
even_if PRO CL-brother-POSS.PL
'The person that has killed (someone), we should kill him as well, even if he is your brother.' (Dom, Segerer & Bostoen 2015: 355)

(31) Cilubà (Atlantic-Congo, Volta-Congo)
ba-ntu *ba-ònso* *bà-di* *ànu* *bà-amb-angan-a.*
CL-human PRP-every SCBJ-PRS just SBJ-say-PR-FV
'Everybody just teases each other.' (Dom, Segerer & Bostoen 2015: 355)

9. "This is a nominalized form of the verb with the verbal stem taking a nominal prefix. In combination with an auxiliary it expresses perfect aspect." (Dom, Segerer & Bostoen 2015: 355, fn 2).

The additional functions that this marker can express are sociativity/collectiveness (cf. (32)) and iterativity (cf. (33)) (Dom, Segerer & Bostoen 2015: 355).

(32) Cilubà (Atlantic-Congo, Volta-Congo)
m-bowà nè N-gandù bà-vwa ba-eeò-èsh-àngàn-e
CL.n-buffalo and CL.n-crocodile CL-PST CL-throw-CAUS-PR-FV
'The buffalo and the crocodile were having a discussion.' (Dom, Segerer & Bostoen 2015: 370)

(33) Cilubà (Atlantic-Congo, Volta-Congo)
mu-lùme ù-di ù-pòòl-angan-a àmu ku-pòòl-angan-a.
CL-man SBJ-PRS SBJ-pluck-PR-FV just CL-pluck-PR-FV
'The man is just constantly plucking.' (Dom, Segerer & Bostoen 2015: 374)

This multifunctionality can be explained through the functional similarity among all these functions. Reciprocity expresses a situation in which two participants act reciprocally (e.g. *Bob and Peter are hitting each other*) and the situation is symmetrical (both participants are at the same time the agent and the patient) (cf. Bostoen, Dom & Segerer 2015). At the linguistic level, this means that the object of the transitive verb can be promoted to the subject position (*Bob hits Peter* vs. *Bob and Peter hit each other*) resulting in a typical antipassive situation.

The functional connection between reciprocity and participant plurality (and then plurality of situations, i.e. pluractionals stricto sensu) was partly noted in Section 2.2.2.3 and it will be discussed in the next sections.

This situation applies to several other Bantu languages (morpheme *-an*, cf. Bostoen, Dom & Segerer 2015).

Causativity. Though quite rare in the languages of my sample, sometimes pluractional marking strategies can also encode causativity, that is, a valency decreasing construction in which we have two different component events: the causing event and the caused event (cf. Song 2013).

For example:

(34) Khwe (Khoe-Kwadi, Khoe)

a. Pluractional reading of Khwe verbal reduplication.

cii	'proceed'	→	*cii~ci*	'go continually'
xòá	'split'	→	*xòá~xoa*	'reduce to small pieces'
gyaó	'look/keep the eyes open'	→	*gyaó~gyao*	'look in all directions'

(Kilian-Hatz 2008: 147)

b. Causative reading of Khwe verbal reduplication.

|x̌ó̌è	'be full'	→	*|x̌ó̌ɛ ~|x̌oɛ*	'fill' (make sth. full)
‖xó	'be dry, dry out'	→	*‖xó~‖xo*	'dry sth.'
kyérí	'be hard/difficult'	→	*kyérí~kyeri*	'make it harder/more difficult'

(Kilian-Hatz 2008: 161)

2.3 The conceptual space of pluractional constructions

From the previous sections, it comes out quite straightforwardly that cross-linguistically pluractional constructions can express a very broad range of different functions.

Describing such a large multifunctional domain can appear a tough task and, indeed, in a certain way it is complex to offer a satisfactory explanation that aims at covering (almost) all the functions that pluractional constructions can encode in the languages of the world.

For this reason, I believe that displaying all these functions in a geometrical space can help in revealing their relationships and, thus, it might improve our understanding of the functional domain of pluractionality. This tool is the semantic map model, as it was proposed and discussed by Croft (2001, 2003) and Haspelmath (2003).

2.3.1 The semantic map model

In the last three decades, a new way of representing "both language universals and language specific grammatical knowledge (see Anderson 1974, 1982, 1986, 1987, Croft, Shyldkrot & Kemmer 1987; Croft 1991a, 2001; Kemmer 1993; Haspelmath 1997a, 1997b; to appear [i.e. 2003, SM]; Stassen 1997; Kortmann 1997; van der Auwera & Plungian 1998)" (Croft 2003: 133) has been proposed. This method is known as the semantic map model or method.

The semantic map model consists in representing the multifunctionality of a specific grammatical phenomenon on a geometrical space in order to capture the existing relationships between the different functions.

An extremely clear and widely recognized definition of this approach is the following one:

> A semantic map is a geometrical representation of functions in "conceptual/semantic space" that are linked by connecting lines and thus constitute a network. The configuration of functions shown by the map is claimed to be universal.
> (Haspelmath 2003: 213)

The creation of semantic maps is strictly connected with the cross-linguistic comparison. The universality of the network of the functions can be dealt with only through a large-scale typological analysis, i.e. comparing a sufficient (and balanced) number of languages.

An important distinction originally proposed in Croft (2001) is between the notions of conceptual space and semantic map. Following Croft's (2001: 93) definition: "Conceptual space is a structured representation of functional structures

and their relationships to each other". In other words, a conceptual space is the network of functions of a specific domain and, in addition, it is claimed to be universal.

On the other hand, a semantic map is the language-specific expression of a conceptual space: it shows how a specific language encodes the functions disposed on the space.

A conceptual space is constructed following a quite simple, but very strict method. Two distinct functions are connected only if there exists at least one language that expresses them through the same marker (cf. connectivity hypothesis, Croft 2001: 96), and at least one that distinguishes them making use of two different marking strategies (cf. analytical primitive principle, Cysouw 2007, 2010). The closeness of two functions on the space means that they are semantically/functionally similar, and thus, they will be connected with a line.

This model was criticized by some scholars (cf. Cristofaro 2010 among others). Some linguists theorized that a conceptual space also shows the mental and cognitive organization of the functions, that is, how concepts are organized in our mind (e.g. Anderson 1982). Although this theory is certainly attractive, so far, we have not enough data to scientifically demonstrate this statement (cf. Cristofaro 2010).

Even though this debate is extremely interesting, it is not the aim of the present chapter, and in a wider sense neither of this work, to solve (or discuss) this issue.[10]

However, I believe that the conceptual space/semantic map model has an undoubted quality: it allows us to better understand and help in solving the intricacy of very multifunctional situations, such as the case of pluractional functional domain.

In the sections that follow, I will present the conceptual space of pluractional constructions and I will propose a tentative explanation. In Chapter 4, I will present some case studies and the relative semantic maps.

2.3.2 Pluractional conceptual space

The conceptual space of pluractional constructions that emerges from the cross-linguistic comparison of the data that I have collected from the languages of my sample (cf. Appendix II) is represented in Figure 1.

Some of the notations that I have adopted in the space must be explained.

I use three distinct types of line: full line, dotted line, and dashed line. The full lines connect functions that show a direct relationship in my data, that is, there exists at least one language that marks them through the same marker, and at least another one through different markers. Conversely, the dotted lines show a relationship between functions that I did not directly find in my data, but that I

10. For a detailed discussion on the problems (and the possible solutions) of the conceptual space/semantic map model cf. the monographic issue of Linguistic Discovery 8:1 (2010).

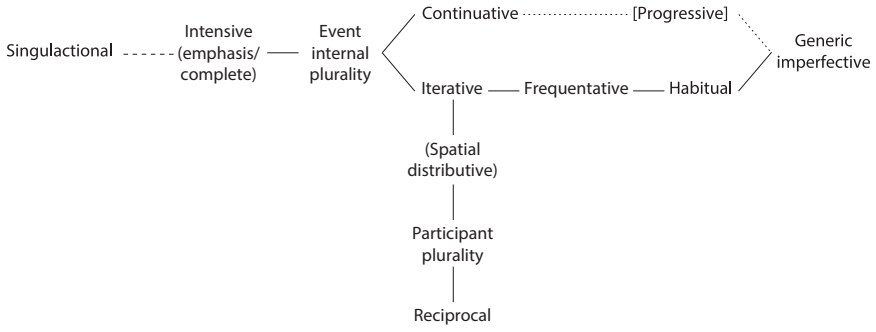

Figure 1. The conceptual space of pluractional constructions

found in the literature. Specifically, the only part of the space in which this kind of lines appears is the progressive zone. As I will explain below, the existence of this relationship is suggested by Bybee, Perkins and Pagliuca (1994: 169–172). Thus, this zone is not a direct result of my investigation. Finally, there is only one dashed line. This type of line connects functions that show a correlation that is plausible, but that I did not find in my data and that is not direct. In other words, it is highly probable that a connection between singulactionality and the other functions (intensity, completeness, emphasis) actually exists, but since the main topic of this work is the investigation of the domain of plurality of situations (pluractionality) and not of singularity of situations, I did not have the opportunity to analyze this topic in a sufficient way, but only tangentially and peripherally. In addition, I cannot say without any doubt that these functions have a connection, direct or mediated.

Another notation that must be explained concerns the brackets. While the lines show a different type of relationship between the functions, the brackets have two different meanings: in the case of progressive, square brackets indicate that this is not a function that I have found in the data; in the case of spatial distributivity and completeness/emphasis, round brackets indicate that even though they showed up during the cross-linguistic analysis and exhibit the connection expressed in the space, these functions are marginal and less widespread in the languages of the world.

2.3.3 The linguistic bases of the pluractional conceptual space

In Section 2.3.1, I presented what is a conceptual space and how it can be constructed. I noted that two functions to be connected must have at least one language that adopts two different marking strategies to express them, and at least one language that adopts the same marking strategy. In the present section, I will show which are the languages that drove me in arranging the pluractional functions in such a way (cf. Figure 1).

I have already explained the particular status that singulactionality and progressivity have on the space (and partially also of emphasis and completeness), and consequently I will not dwell on the connections between these functions and the functions that play an effective role on the space.

Going from the left to the right of the space, the first line connects intensity to event-internal plurality. An example of a language that adopts the same strategy to give an intensive and an event-internal plural reading is Hausa (Afro-Asiatic, Chadic):

(35) Hausa (Afro-Asiatic, Chadic)

a. Intensive reading of Hausa verbal reduplication.
yâraa sun rur~rùuɗee
children 3PL.PF PLAC~be_confused
'The children were very confused' (Součková 2011: 114)

b. Event-internal plural reading of Hausa verbal reduplication.
naa tat~tàafaa
1SG.PF PLAC~clap
'I clapped' (as a complex situation) (Součková 2011: 132)

On the contrary, a language in which intensity and event-internal plurality are expressed through two different marking strategies is Kayardild (Tangkic, Southern Tangkic). In this language, the full reduplication of the verb stem can give several functions, among them there is also event-internal plurality ("the action may be inherently multiple" Evans 1995: 290):

(36) Kayardild (Tangkic, Southern Tangkic)
ngawi 'breathe' → *ngawi~nyawi-ja* 'pant'
kurdala 'stab' → *kurdala~kurdala-tha* 'dig in the sand to find eggs'
(Evans 1995: 290)

On the other hand, the Kayardild language to express intensity exhibits a strategy that Evans (1995) calls "verb+verb construction" (a sort of compound) in which one of the two verbs provides an adverbial reading (cf. Evans 1995: 305–308). Specifically, there are three verbs that convey the meaning of 'do hard, intensely'. In (37), I show an example for each of them:

(37) Kayardild (Tangkic, Southern Tangkic)

a. The verb *kurulu-tha* 'kill' with verbs of impact.
ngada kuru-lu-tha bala-tha
1SG.NOM dead-FAC-ACTL hit-ACTL
niwan-ji wangalk-ur
him-MLOC boomerang-PROP
'I hit him hard with the boomerang.' (Evans 1995: 307)

b. The verb *bulba-ja* 'be full (of food)' with verbs of sound production.
nyingka kamburi-j, bulba-ja wama-th!
2SG.NOM speak-IMP be_full-IMP shout-IMP
'You speak, yell it out loud!' (Evans 1995: 307)

c. The verb *jilkaba-tha* 'seize, hold tight' with verbs of perception and communication.
ngada jilkaba-tha kurri-j
1SG.NOM seize-ACTL see-ACTL
'I'm looking hard.' (Evans 1995: 307)

Going on from the left to the right, we encounter the nodes that link event-internal plurality with continuativity (on the top) and iterativity (in the middle of the space).

In Latvian (Indo-European, Balto-Slavic), there exist several markers to encode pluractional functions, one of them is the suffix *-ā*. This suffix can express both event-internal plurality (cf. (38a)) and continuativity (cf. (38b)).

(38) Latvian (Indo-European, Balto-Slavic)

a. Event-internal plural reading of the Latvian Iterative suffix *-ā*.
vilkt 'put on' → *valkāt* 'wear' (Kalnača 2014: 106)

b. Continuative reading of the Latvian Iterative suffix *-ā*.
bràukt 'drive' → *braūkāt* 'keep driving' (Kalnača 2014: 106)

Conversely, Mapuche/Mapudungun (Araucanian) displays several strategies to express event-internal plurality and continuativity. Two markers for such functions are respectively the full reduplication of the verb stem plus the stem formative *-ye* (that also has a lexical meaning that is 'carry', cf. Zúñiga & Díaz-Fernández 2014) and the suffix *-ka* (often in combination with the adverb *petú* 'still'):

(39) Mapuche/Mapudungun (Araucanian)

a. Event-internal plural reading of Mapuche/Mapudungun verbal reduplication + *-ye* ('carry').
üna~üna-ye-e-n-ew
tickle~PLAC-carry-OBJ-IND.1SG-DS
'It tickles me.' (Smeets 2008: 306)

b. Continuative reading of the Mapuche/Mapudungun Continuative suffix *-ka*.
petú meke-ka-y-m-i i-n?
still be_busy-CONT-IND-2-SG eat-PVN
'Are you still eating?' (Smeets 2008: 256)

The other node that involves event-internal plurality is the one that links this function with iterativity. In my sample, there are several languages that have the same marker to encode both the functions. An example is provided by Meyah (East Bird's, Meax):

(40) Meyah (East Bird's, Meax)

a. Event-internal plural reading of Meyah verbal reduplication.
ofa ejek~jeka didif rot mar ke-uma
he/she PLAC~ask me concerning thing NOM-that
'He/she kept questioning me about that.' (Gravelle 2011: 97)

b. Iterative reading of Meyah verbal reduplication.
Rua ri-agob~gob ofa
they 3PL-PLAC~strike him/her
'They kept striking him/her.' (Gravelle 2011: 97)

Since event-internal plurality and iterativity are very similar functions, it is not always simple to find clear situations in which the two functions are marked through different strategies. Probably, the most common situation consists in an explicit marker for iterativity and the lexical inherent expression of event-internal plurality. For example, in Jalonke (Mande, Western Mande) the Distributive prefix *ma-* encodes basically two pluractional functions, namely, iterativity (cf. (41a)) and participant plurality (cf. (41b)):

(41) Jalonke (Mande, Western Mande)

a. *n mugar-ɛɛ ma-bcmbc*
1SG thief-DEF DISTR-beat
'I repeatedly beat the thief.' (Lüpke 2005: 127)

b. *n ninge-nee ma-bana*
1SG cow-DEF.PL DISTR-castrate
'I castrated many bulls.' (Lüpke 2005: 126)

However, Lüpke (2005) notes that:

> Among the verbs that do not occur with the distributive are verbs that already lexicalize a plurality of action and/or participant, such as *gɛrɛnsɛn* 'disperse, scatter', which is a *plurale tantum* in English as well.
> (Lüpke 2005: 306, emphasis in the original)

What Lüpke (2005) calls "plurale tantum" corresponds to an inherently plural situation that, in my terms, is event-internal plurality.

The next node of the conceptual space that I am going to explain is the iterativity-frequentativity connection. These two functions represent the core of pluractionality stricto sensu. The only difference that discerns one from the other is the time frame that the repetitions involve: respectively, a single occasion *vs*. several occasions. Since their functional similarity, it is not difficult to find a language that adopts the same strategy to express them. For example, in (Southern) Gumuz

(Gumuz, Daats'iin-Southern Gumuz) the Pluractional prefix *n-* can have iterative and frequentative readings:

(42) (Southern) Gumuz (Gumuz, Daats'iin-Southern Gumuz)

a. Iterative reading of the (Southern) Gumuz Pluractional prefix *n-*.
dua b-a-n-t'ó-gá ŋ̣éa ká=ílsa-má
child AFF-3SG.TR-PLAC-put-NFUT dirt DAT=mouth-3SG.POSS
'The child put dirt in his mouth (again and again).' (Ahland 2012: 197)

b. Frequentative reading of the (Southern) Gumuz Pluractional prefix *n-*.
b-a-zee-gá éégwéa ká=ɓaga
AFF-3SG.TR-watch-NFUT pig DAT=person
b-á-g-íi-gá
AFF-3SG.INTR-CAUS-be-NFUT
b-a-ga-n-sá-gá iidá-ŋga
AFF-3SG.TR-COM-PLAC-eat-NFUT DIM-food
'Because he watched the pigs for the man he was able to eat (on several occasions) a little food with them (the pigs).' (Ahland 2012: 198)

Among the languages that express iterativity and frequentativity differently, we can find Ute (Uto-Aztecan, Northern Uto-Aztecan) in which the Past Habitual suffix *-na* expresses frequentativity and habituality, while the reduplication of the first syllable of the verb stem encodes iterativity and spatial distributivity:

(43) Ute (Uto-Aztecan, Northern Uto-Aztecan)

a. Iterative reading of Ute first syllable reduplication.
sarichi 'uway ta~ta'a-qha
dog.OBJ 3SG.OBJ PLAC~kick-ANT
'(s/he) kicked the dog repeatedly' (Givón 2011: 133)

b. Frequentative reading of the Ute Past Habitual suffix *-na*.
…kh-'ura 'sinawavi' may-kya-na-puga-vachi-'ura , …
…then-be Sinawav say-PL-HAB-REM-BKGR-be , …
'…they used to call him Sinawav then, …' (Givón 2011: 131)

Another node that links functions that are semantically very similar is the frequentative-habitual one. Like many other languages, frequentativity and habituality are expressed by the same marker in Hindi (Indo-European, Indo-Iranian) where the auxiliary verb *kər* can express both the functions:

(44) Hindi (Indo-European, Indo-Iranian)

a. Frequentative reading of the Hindi Frequentative auxiliary *kər*.
bəcpən mẽ həm kəbəɖɖī kʰela
childhood in we kabaddi play.PFV.M.SG
kərte tʰe.
FREQ.IPFV.M.PL PST.M.PL
'We used to play kabaddi in (my) childhood.' (Kachru 2006: 154)

b. Habitual reading of the Hindi Frequentative auxiliary *kər*.
un dinõ mɛ̃ hər həfte məndir jaya
those day.PL.OBL I every week.M.OBL temple go.PFV
kərtī t^{h}ī.
FREQ.IPFV.F.SG PST.F.SG
'Those days I used to go to the temple every week.' (Kachru 2006: 154)

However, there are also several languages that exhibit different marking strategies for frequentativity and habituality. In Eton (Atlantic-Congo, Volta-Congo), we find two distinct quasi-auxiliaries for such functions: the first one is *dìŋ* that expresses iterativity and frequentativity (cf. (45a)); the second one is *zèzà* that encodes the presence of several situations that are performed regularly (habituality, cf. (45b)):

(45) Eton (Atlantic-Congo, Volta-Congo)
a. Frequentative reading of the Eton quasi-auxiliary *dìŋ*.
à-mɛ́ L-dìŋ-gì L-kɔ́zì
I-YIMPF INF-HAB-G INF-cough
'He coughed often.' (answer to the question: 'Why did you think yesterday that your brother had caught a cold?') (van de Velde 2008: 332)
b. Habitual reading of the Eton quasi-auxiliary *zèzà*.
à-Ltɛ́ L-zəzà àjă H à jám H kpɛ́m
I-PRS INF-HAB already LT ? cook LT [9]cassava
'She has the habit of regularly preparing cassava leaves.' (van de Velde 2008: 333)

The last node that we see on the pluractional conceptual space moving from the left to the right is the habitual-generic imperfective link. West Greenlandic (Eskimo-Aleut, Eskimo) presents several affixes to express pluractional functions. The suffix *-tar* can be used to encode both habituality (cf. (46a)) and generic imperfectivity (cf. (46b)).

(46) West Greenlandic (Eskimo-Aleut, Eskimo)
a. Habitual reading of the West Greenlandic Habitual suffix *-tar*.
quli-nut innar-tar-put
ten-ALL go_to_bed-HAB-3PL.IND
'They (habitually) go to bed at ten o'clock.' (Fortescue 1984: 279)
b. Generic imperfective reading of the West Greenlandic Habitual suffix *-tar*.
qimmi-t qilut-tar-put
dog-PL bark-HAB-3PL.IND
'Dogs bark.' (Fortescue 1984: 280)

At the same time, there are languages that have two different marking strategies for habitual and generic imperfective situations. However, it is far from being simple

to identify this kind of languages. This is mainly due to the fact that in several grammatical descriptions, and also in the literature, the term imperfective is generally used as a cover term for habituality and related functions.

However, an example of this type of languages is provided by Kolyma Yukaghir (Yukaghir, Kolymic). In this language, the Imperfective marker *-nu* is used for generic imperfectivity, while the Habitual marker *-nunnu* is used to express habituality (cf. Shluinsky 2009: 190).

(47) Kolyma Yukaghir (Yukaghir, Kolymic)

a. Habitual reading of the Kolyma Yukaghir Habitual suffix *-nun(nu)*.
tudā tāt ed'-u-t modā-nun-d'īl'i
long_ago CA live-0-SS.IPFV live-HAB-INTR.1PL
'We used to live that way long ago.' (Maslova 2003: 199)

b. Generic imperfective reading of Kolyma Yukaghir Imperfective suffix *-nu*.
puge-d-in el-al'a:-t'uön qodo:-nu-j
summer-POSS-DAT NEG-melt-PRIV lie-IPFV-INTR.3SG
'It lies without melting till summer.' (Maslova 1999: 245)

The last area of the space that we have to look at is the vertical zone. The first node that we encounter is the one between iterativity and spatial distributivity. Though the latter function is not very widespread in the languages of the world, we can recognize some languages that express these two functions through the same device. For example, in Euchee (Isolate, North America) the reduplication of the verb stem can give both the readings, either the iterative (cf. (48a)) or the spatial distributive (cf. (48b)) ones:

(48) Euchee (Isolate, North America)

a. Iterative reading of Euchee verbal reduplication.
nō-k'a-thede~de
1PL.EXCL.AGT-RECP-hit~PLAC
'We beat each other up/We hit each other repeatedly' (Linn 2001: 252)

b. Spatial distributive reading of Euchee verbal reduplication.
we-she~she
3SG.ACT-hide~PLAC
'He's hiding/He keeps moving around.' (in the sense of from place to place) (Linn 2001: 233)

However, there are also languages that differ according to the marking strategies for iterativity and spatial distributivity. Wichí (Matacoan, Mataguayo II) displays several pluractional markers, among them the suffix *-li* is used for iterative and event-internal plural situations, while the suffix *-kʸe* is used for spatial distributivity and participant plurality.

(49) Wichí (Matacoan, Mataguayo II)

a. Iterative reading of Wichí Iterative (with singular participant) suffix *-li*.
am *lat'-iskʸey-li*
PRO.2SG 2-laugh-ITER.SG
'Tú te ríes' (repetidamente) (literal translation: 'You are laughing' (repeatedly) [SM]) (Terraza 2009: 158)

b. Spatial distributive reading of the Wichí Distributive suffix *-kʸe*.
inot *n-i-tsoy-kʸe*
agua MID-3-pour-DISTR
'El agua salpica' (vierte gotas aqui y allá) (literal translation: 'The water sprinkles' (pouring drops here and there) [SM]) (Terraza 2009: 153)

The node that links together spatial distributivity and participant plurality is probably the most problematic one, in the sense that it is very hard to find a language that clearly discerns between these two functions. This is the main reason why I put spatial distributivity in the rounded brackets.

The only language of my sample that seems to distinguish them straightforwardly is Apurinã (Arawakan, Southern Maipuran) that has only two pluractional markers: the first one is the suffix *-poko* that expresses spatial distributive situations, the second one is the suffix *-pirīka* that expresses participant plurality.

(50) Apurinã (Arawakan, Southern Maipuran)

a. Spatial distributive reading of the Apurinã Distributive suffix *-poko*.
u-muteka-poko-ta-pe
3M-run-DISTR-VBZ-PFV
'He ran away, stopping here and there' (Facundes 2000: 310)

b. Participant plural reading of Apurinã Collective Action suffix *-pirīka*.
u-nhipoko-ã$_2$-pirīka-ta-na
3-eat-FACT-COLTV-VBZ-3PL
'They really ate all together' (Facundes 2000: 323)

In the case of spatial distributivity/participant plurality node, it is quite simple to find a situation in which these two functions are expressed by the same marker. Indeed, almost always a situation that is distributed over different participants also implies a plurality of locations in which the single occurrences take place.

For example, in Seneca (Iroquoian, Northern Iroquoian) the suffix *-hnö* can express spatial distributive and participant plural situations.

(51) Seneca (Iroquoian, Northern Iroquoian)

a. Spatial distributive reading of the Seneca Distributive suffix *-hnö*.
wa'-hën-ate'ko-' *koh* *a:yë:'*
FAC-M.PL.AGT-run_away-PUNC and it_seems
wa'-hën-ödónya:-hnö-'
FAC-M.PL.AGT-drive_away-DISTR-PUNC
'They ran away and it seems they were scattered.' (Chafe 2015: 213)

b. Participant plural reading of the Seneca Distributive suffix *-hnö*.
da:h o:nëh ë-k-athrory-a-hnö-:'
so now FUT-1SG.AGT-tell_about-LK-DISTR-PUNC
'So now I will tell about things' (Chafe 2015: 185)

Finally, the last node on the conceptual space that I am going to show up is the participant plurality/reciprocity node.

Martuthunira (Pama-Nyungan, South-West Pama-Nyungan) is a language that exhibits the same marking strategies for these two functions. In this language, the Collective suffix has three different allomorphs *-marri*, *-yarri*, and *-lwarri* that can encode both participant plurality and reciprocity.

(52) Martuthunira (Pama-Nyungan, South-West Pama-Nyungan)
a. Participant plural reading of the Martuthunira Collective marker *-yarri*.
ngaliwa mungka-yarri-nguru.
1PL.INCL eat-COLL-PRS
'We're eating together.' (Dench 1994: 155)
b. Reciprocal reading of the Martuthunira Collective marker *-yarri*.
ngaliwa thani-yarri-nguru.
1PL.INCL hit-COLL-PRS
'We're hitting one another.' (Dench 1994: 155)

On the other side, there are several languages that have two different marking strategies for participant plurality and reciprocity. In Panare (Cariban, Venezuelan Cariban), there exist several detransitivizing markers. Among them we can list the suffix *-s* (and its allomorphs) that serves to give a reflexive or reciprocal reading to the situation.

(53) Panare (Cariban, Venezuelan Cariban)
a. Reflexive reading of the Panare Detransivitizer marker *-s*.
w-ës-ëkëta-yaj chu.
INTR-DTR-cut-PPERF1 1SG
'I cut myself.' (Payne & Payne 2013: 338)
b. Reciprocal reading of the Panare Detransitivitizer marker *-s*.
pake pëkë-pëtu t-o-s-ama.
before before-AUG GNO-INTR-DTR-hit/kill
'Long ago they killed each other off.' (Payne & Payne 2013: 339)

Panare (Cariban, Venezuelan Cariban) has also a pluractional marker, namely, the suffix *-pëtï*. This suffix can express iterativity, frequentativity, but also participant plurality. In (54), we can see an example of this suffix used to indicate the plurality of participants (cf. also Chapter 4 for some additional details).

(54) Panare (Cariban, Venezuelan Cariban)
y-u-të-pëtï-n *tikon*
3-INTR-go-ITER-NSPEC.I child
y-u-wëpë-n *koeñan*.
3-INTR-come-NSPEC.I day_after_tomorrow
'The children are gonna leave and come back the day after tomorrow'
(Payne & Payne 2013: 185)

2.3.4 A tentative explanation of the pluractional conceptual space

After having justified why the pluractional conceptual space is how it is, in this section I will describe and (try to) explain it.

First, we can recognize a basic distinction between two main parts: one represents singular functions and the other represents plural functions (prototypical or not). These two macro-groups are showed in Figure 2.

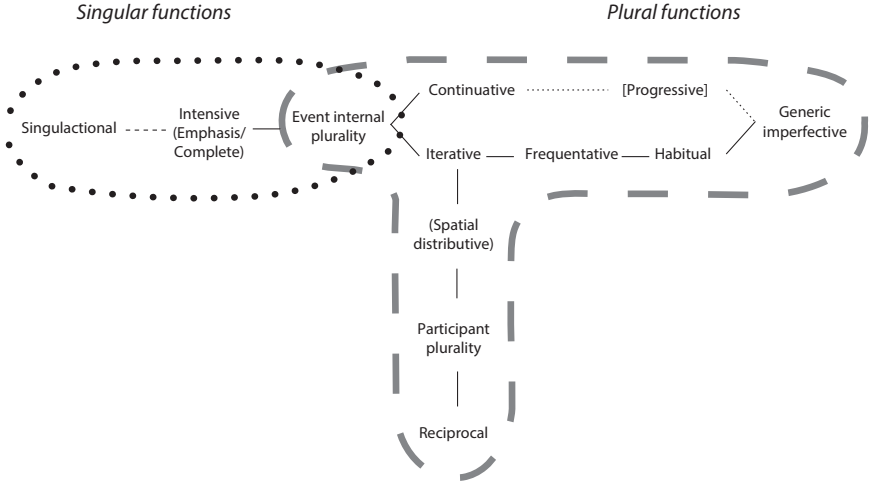

Figure 2. Singular and plural functions

2.3.4.1 *Singular functions*

The functions that are related to the notion of singularity are all situated in the left part of the space. They are: singulactionality, intensity (emphasis and completeness), and event-internal plurality. Each of them shows its own kind of relationship with singularity.

While singulactionality is, at least theoretically, the most prototypical singular function, the other ones tend also to show a (slight) connection with the notion of plurality.

The degree zone is composed of functions that are externally singular and thus it can be conceived as part of the singular part. However, the functions of this

part (mainly intensity, but also completeness and emphasis) indicate the presence of a modification in the development of the situation. In the majority of cases, this modification involves its intensity or grade (cf. completeness) and can be seen as an augmentation (eventually also a diminution) of the degree of the situation itself. This is the first (though small) correlation with plurality that we find in the space going from the left to the right.

The position of event-internal plurality is pivotal. This is the function that marks the borderline between singularity and plurality. Here, the relationship with plurality is stronger, and this increase of plurality is revealed by the nature of this function: indeed, event-internal plurality involves situations that are externally singular, but inherently plural. As I have already noted, this function indicates a situation which is composed of different phases that create a single event or state. This peculiarity makes event-internal plurality the perfect link between single and multiple situations.

The singular area is composed of three different parts. From the left to the right, the connection with plurality increases progressively (cf. Figure 3): from singular (singulactionality) to inherently plural situations, through augmented functions (intensity, completeness, and emphasis).

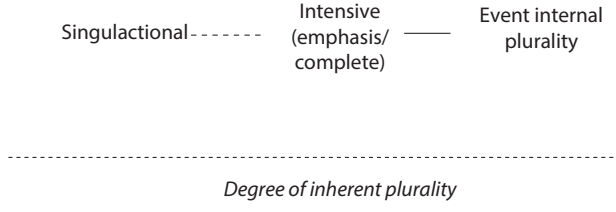

Figure 3. Singular area

2.3.4.2 *Plural functions*

The part of the conceptual space in which are placed the functions that can be considered plural is represented in Figure 4.

This part of the space is obviously the most prominent one. All the functions of this area have a connection with the notion of plurality. This correlation can be more or less direct.

Following the distinction in semantic clusters proposed in the previous sections, we can recognize different types of relationships between these functions and plurality.

These clusters include functions that show a direct relationship with plural meanings (e.g. pluractional core functions) and functions that have an indirect relationship with plurality (two clusters: non-prototypical plurality and reciprocity), in the sense of a vaguer or a less strict semantic connection.

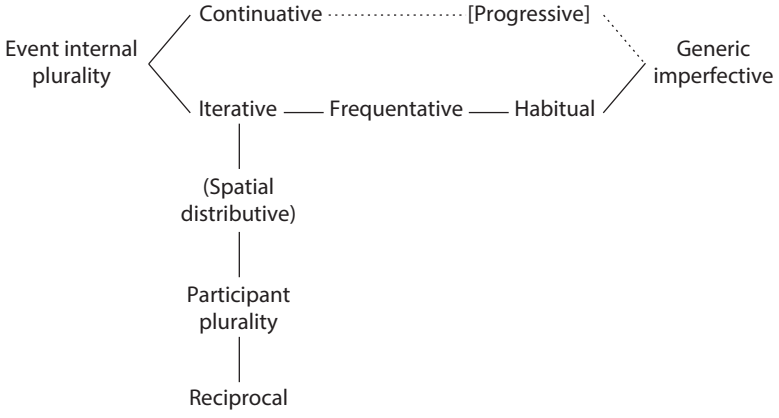

Figure 4. Plural functions of the pluractional conceptual space

As shown in Figure 5, the cluster of the core functions is composed of iterativity, frequentativity, spatial distributivity, and participant plurality. The second and third clusters are respectively formed of event-internal plurality, continuativity (and progressivity), habituality and generic (or gnomic) imperfectivity, and reciprocity.

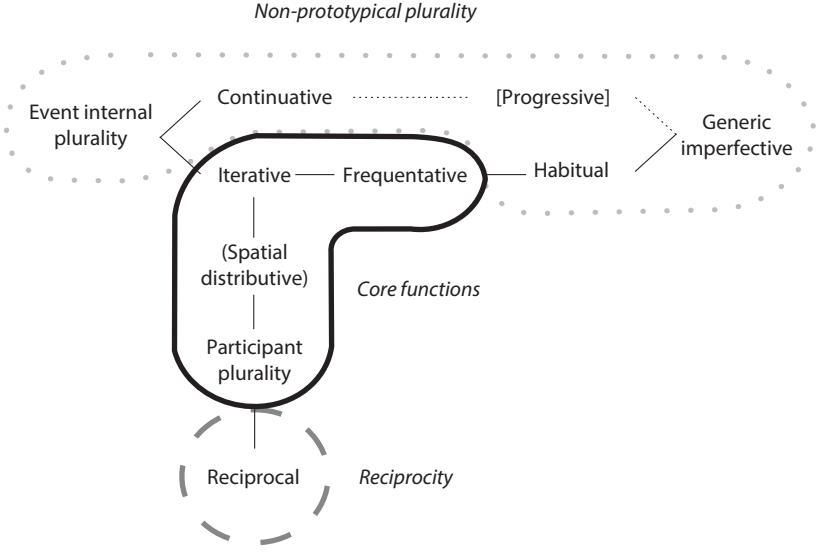

Figure 5. Plural area and relative semantic clusters

In the following paragraphs, all the clusters and the relative functions will be analyzed investigating why the functions are connected on the space and trying to give a possible explanation of their functional and semantic relationships.

Pluractional core functions. The most important part of the conceptual space is represented by pluractional core functions. These functions exemplify the plurality of situations in the most prototypical way, this is exactly the definition that I gave of pluractional constructions in Chapter 1.

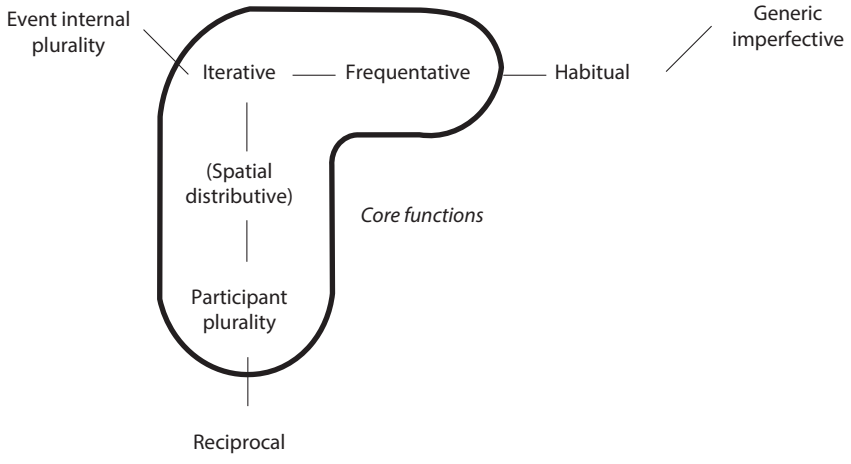

Figure 6. Pluractional core area and its most strictly related functions

Iterativity is connected to the left with event-internal plurality because it brings the plurality from the inside to the outside of the situation. This function encodes a plurality in which we can easily recognize each instance of the repeated situation. In other words, the single repetitions are separated from each other, i.e., they are discrete. This creates an actual multiplicity that involves the situation and it is not barely inside it, that is, a plurality that is external to the situation.

On the other side of iterativity, there is frequentativity. This function extends the multiplicity of the situations outside a single occasion. In other words, the repetitions of the situation that frequentativity expresses are spread over different occasions, i.e., from a single occasion (iterative situations) to several occasions (frequentative situations). In this case, the repetitions occur with a longer pause than iterativity between each instance. This interruption is sufficiently prolonged to make the single repetitions conceived as belonging to different occasions.

Finally, the last part of the pluractional core area is characterized by the notion of distributiveness. I have decided to locate this part not following the horizontal orientation used for the other functions, but rather with a vertical orientation in order to make evident the presence of an additional parameter. This parameter does not affect only the singularity or multiplicity of the situations like for the rest of the space, I call this parameter distributiveness. This term must be kept distinct from (spatial) distributivity. While, the latter term denotes only a distribution over

different places (spatial distributivity), the former one indicates the distribution of plural situations over different places and also over different entities (participant plurality). In other words, the term distributiveness covers the functions that designate the spreading of the situations. On the conceptual space, this spreading is basically conveyed by spatial distributivity and participant plurality. Thus, the choice of changing the orientation emphasizes the presence of this additional parameter.

The difference that exists between iterativity and spatial distributivity is only the presence of a plurality of locations in which the plural situation takes place. The spatial distributive function is particularly important. In fact, as mentioned in Section 2.2.1.2, it is not very widespread in the languages of the world. Nevertheless, from the semantic point of view, this function is the perfect connecting point between iterativity and participant plurality.

Indeed, as previously noted, this function is often conveyed by markers that express cumulatively both spatial distributivity and participant plurality, that is, different entities affected by a plural situation in different places. This connection has a semantic reason. The perfect example is given by the verb *plant*: if someone performs the action of planting something several times, probably s/he will plant several entities involving several different locations. In other words, profiling an occasion in which an agent plants repeatedly the same tree in different locations or even the same location, it is highly unlikely (though theoretically possible). For this reason, we actually expect that the spreading of the repetitions of the situation implies first a distribution over space, and then the extension to several participants that are already widespread in different places. However, we must be careful in this case because the semantic or functional explanation of the connection between two different functions does not directly imply a diachronic evolution (cf. Chapter 5 for some diachronic sources). This example illustrates quite straightforwardly the strict relationship that occurs between iterativity, spatial distributivity, and participant plurality.

Non-prototypical plurality and reciprocity. Non-prototypical plurality and reciprocity are clusters that include those functions that encode a sort of plural semantics, but that do also have an additional value that goes beyond the bare distinction between singular and plural situations.

The functions that belong to this area are highlighted in Figure 7.

Also in this case, we can recognize at least three different sub-areas: (i) the first one is identified by single and extended situations, i.e., situations that are inherently plural or that are extended during time (event-internal plurality, continuativity, and - at least partially - progressivity, that however has a different status within the space); (ii) the second sub-area is composed of habituality and generic

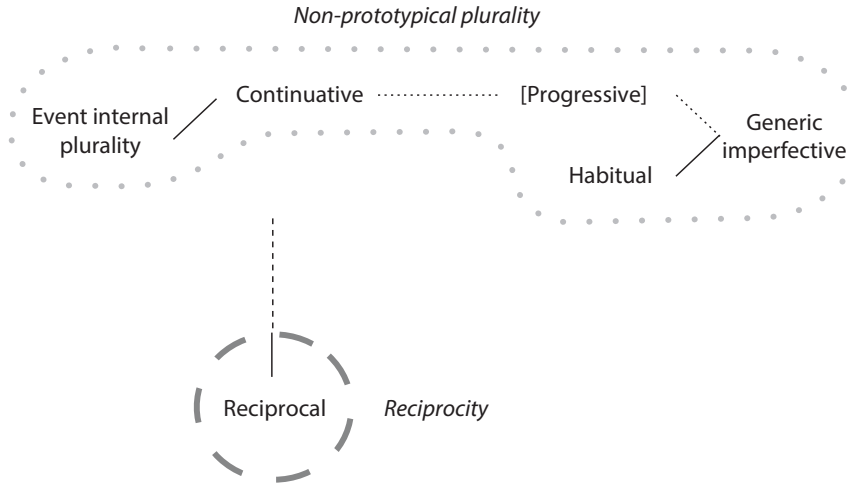

Figure 7. Non-prototypical plurality and reciprocity

imperfectivity, functions that have a rather general meaning; and, finally, (iii) the third one is represented by reciprocity.

The functions that compose the first sub-area are: event-internal plurality and continuativity (and progressivity). These functions do actually encode a single situation, but at the same time they also have a connection with plurality: the situations can be either inherently plural or extended over time.

As previously noted, event-internal plurality encodes a situation which is externally singular, but which is internally plural, in the sense that it is formed of different phases. Often, the situations encoded by this function tend not to be punctual/instantaneous situations, but rather repetitive actions (cf. Cusic 1981: 78). The typical example is represented by the sentence *the mouse nibbled and nibbled the cheese* (cf. Cusic 1981: 61). In this case, the mouse eats a single piece of cheese with several different bites. There is a single occurrence of the situation, but that is composed of several phases (bites). These phases make the action complex (internally plural), but the whole situation remains singular.

Another possible reading for this kind of situations is continuativity. In this case, the action of nibbling is perceived as a single action as well, but it implicates the prolongation of the situation in a long period of time. These two readings are in some way possible at the same time and only other pieces of evidence will reveal the exact reading within a specific context. However, the hypothetical circumstance of a co-manifestation of these two readings makes evident that continuativity and event-internal plurality share a quite strong semantic connection.

The choice of including progressivity in the conceptual space must be furtherly discussed. As I have noted in the previous sections, I basically followed some considerations proposed by Bybee, Perkins and Pagliuca (1994). In fact, progressive meanings seem to be rarely expressed by pluractional markers (at least in my data). I found only one language which displays the same marking strategy to express pluractional core functions (iterativity, frequentativity, and so on) and progressivity. This language is Paiwan (Austronesian) in which verbal reduplication can have both readings:

(55) Paiwan (Austronesian)

a. Iterative reading of Paiwan verbal reduplication.
v<en>alid~lidi ti kulele ta zua ʔutubay nimadu.
turn<AV>~PLAC NOM.SG Kulele OBL that motorbike 3SG.GEN
'Kulele kept turning his motorbike.' (Chang 2006: 55)

b. Progressive reading of Paiwan verbal reduplication.
ka kesa~kesa=aken katiaw, mangetjez timadju
R.TEMP cook<AV>~PLAC=1SG.NOM yesterday come.AV 3SG.NOM
'While I was cooking, he came.' (Chang 2006: 54)

However, Bybee, Perkins and Pagliuca (1994) define progressivity as follows:

> **Progressive** views an action as ongoing at reference time […], it applies typically to dynamic predicates and not to stative ones. Thus, the progressive is typically used for actions that require a constant input of energy to be sustained, […].
> (Bybee, Perkins & Pagliuca 1994: 126, emphasis in the original)

At the same time, they define continuativity as follows:

> **Continuative** includes progressive meanings – that a dynamic situation is ongoing – and additionally specifies that the agent of the action is deliberatively keeping the action going.
> (Bybee, Perkins & Pagliuca 1994: 127, emphasis in the original)

Therefore, it becomes evident that continuativity and progressivity are strictly related functions. In addition, Bybee, Perkins and Pagliuca (1994: 169–172) also state that there is a (diachronic) correlation between these two functions and iterativity on the one side (on my map this relation is not direct, but it is semantically mediated by event-internal plurality) and imperfectivity on the other side. This connection follows a specific path of grammaticalization, namely, ITERATIVE (> EVENT-INTERNAL PLURALITY) > CONTINUATIVE > PROGRESSIVE > IMPERFECTIVITY (adapted from Bybee, Perkins & Pagliuca 1994: 170, 172).

I decided to include this important correlation in my conceptual space. This is because it allows to broaden our understanding of the whole semantic domain of pluractionality giving a more comprehensive account of the functions and semantic areas that are related to pluractionality (even though not directly).

The second sub-area that I am going to analyze is represented by the general functions. These non-prototypical functions are habituality and generic imperfectivity. Habituality is strictly related to frequentativity: both encode a repetition of a situation over a period of time that affects different occasions. The only difference between them consists in the fact that habitual situations are better defined as typical of that (extended) period of time, while the repetitions encoded by frequentativity are not viewed as a characteristic of the time frame, but they seem to be more random. In other words, habituality refers to a situation that is both repeated and generalized in a specific time frame.

Ideally, this time frame can be furtherly extended and, consequently, the repetitions of a specific situation can become typical of all the possible occasions. This can eventually lead to the extreme case in which the situation occurs always. In this case, I will talk about generic (or gnomic) imperfectivity (cf. Shluinsky 2009 and Bertinetto & Lenci 2010).

Therefore, generic imperfectivity can also be conceived as a kind of permanent repetition of a specific situation. For example (Bertinetto & Lenci 2010: 14):

(56) *Dogs have four legs*

The sentence in (56) is always true, it encodes a general truth that happens every time (excepted in some unusual and marginal situations, such as a malformation or an amputation). In other words, we can consider generic (or gnomic) imperfectivity as an extreme case of habituality.

Bybee, Perkins and Pagliuca (1994) note that:

> **Imperfective** is treated in these works [i.e. Comrie 1976, 1985; Dahl 1985, SM] as the contrast partner of perfective, and thus views the situation not as a bounded whole, but rather from within, with explicit reference to its internal structure (see Comrie 1976: 24). In more concrete terms, an imperfective situation may be one viewed as in progress at a particular reference point, either in the past or present, or one viewed as characteristic of a period of time that includes the reference time, that is, a habitual situation.
>
> (Bybee, Perkins & Pagliuca 1994: 125-126, emphasis in the original)

This quotation clearly explains the connection between imperfectivity and habituality.

Also in this case, there exists a diachronic correlation between the functions that are placed in this part of the space (Bybee, Perkins & Pagliuca 1994: 170, 172).

(57) ITERATIVE > FREQUENTATIVE > HABITUAL > IMPERFECTIVE

Bybee, Perkins and Pagliuca (1994) also propose a possible connection between the two paths of grammaticalization that I mentioned in this section (though they note that they established their analysis "on the basis of the scanty information we have available" Bybee, Perkins & Pagliuca 1994: 172):

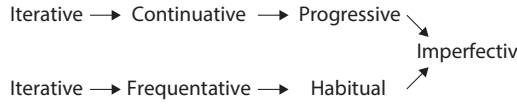

Figure 8. Paths of development of reduplication (adapted from Bybee, Perkins & Pagliuca 1994: 172)

Interestingly, the connections that Figure 8 shows are almost exactly superimposable on the part of the pluractional conceptual space that I described in the present section (except for the presence of event-internal plurality in mine).

Finally, the last sub-area that I identified is represented by reciprocity. This function is slightly different from the others. In fact, reciprocity is strictly connected with participant plurality. Usually, a reciprocal situation involves at least two different participants that perform the same event reciprocally. Therefore, in this kind of situation we can identify at least two occurrences of the same event performed by at least two participants. This denotes a typical pluractional situation and, more specifically, a particular occurrence of participant plurality. The connection between the latter function and reciprocity lies in the distributiveness parameter, that is, the distribution of the repetitions over space and over entities.

2.4 Linguistic correlations of the pluractional conceptual space

The explanation provided in the previous sections seems to be satisfactory to account the multifunctionality of pluractional constructions. In addition, it is noteworthy that the linguistic outcome (the conceptual space) and the semantic explanation seem to match without particular problems. Nevertheless, if we observe this conceptual space more in detail and compare it with the analysis of the relationships between functions, it will become evident that we can point out some other interesting considerations. In particular, I have already noted that going from the left to the right on the map we assist to a progressive generalization of the semantics of the functions: from very specific functions (such as intensity, event-internal plurality, iterativity) to functions with a more general connotation (such as frequentativity, habituality, and more specifically generic imperfectivity). This semantic generalization seems also to reveal some consequent correlations.

First, moving from the left to the right on the space, we can identify the increase of the degree of grammaticalization. The functions located on the left part tend to be more often encoded by less grammaticalized markers than the functions

on the right of the space. Functions such as intensity (completeness, emphasis) or event-internal plurality are more often expressed by the languages of the world through lexical or derivational devices. Conversely, the functions on the right part tend to be more grammaticalized, i.e., they tend to be more often marked trough derivational or inflectional affixes (cf. generic imperfectivity). However, this must be taken just as a general tendency and not an absolute statement. This means that it is as well possible to find languages that encode the functions on the left of the map through strategies that are highly grammaticalized, and, vice versa, languages that mark functions on the right through devices that are not grammaticalized, such as lexical items. This seems to be particularly true for the extreme left periphery of the space. More specifically, I am talking about singulactionality that seems to behave more like the functions that are displayed in the middle of the space (e.g. iterativity and frequentativity). Indeed, it is as well possible to find this function marked through highly grammaticalized strategies that are functionally oriented towards perfectivity (such as, punctual and bounded action).

The second linguistic correlation that the conceptual space seems to show deals with another interesting property that can be viewed as a consequence of the first one: in the majority of cases, the functions located on the left part tend to be expressed by the lexical aspect/Aktionsart of a language (e.g. semelfactive, repetitive, etc.), while the functions on the right tend to belong more often to the grammatical aspectual system (more grammaticalized).

Finally, the pluractional conceptual space seems also to show a connection with telicity. Indeed, the more one goes to the right, the more the unboundedness of the event increases. There is a continuum between telic and atelic situations. In other words, singulactional functions are more often marked on verbs that encode punctual actions or achievements, while the functions that are on the right part can also be applied to stative verbs. This seems to be connected to the second correlation.

All these linguistic correlations seem to be related one to each other. They can be conveyed as a continuum that goes from the left to the right of the map and this can be directly represented on the conceptual space (cf. Figure 9).

The fact that this conceptual space can reveal something more on linguistic structures and not only on the semantic relationships between pluractional functions does not necessarily make the map more predictable. Nevertheless, I cannot consider these correlations only as incidental facts. Unfortunately, at this stage of the research I can only recognize and describe these properties without giving any kind of solid interpretation mainly because in order to do that I need much more data and more detailed studies on the nature of pluractional constructions in specific languages.

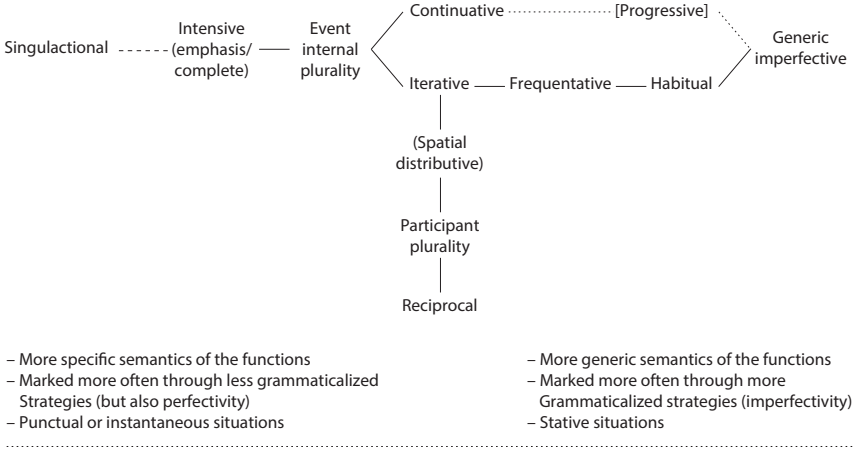

Figure 9. Linguistic correlations of the pluractional conceptual space

However, there is an important methodological consideration that deserves to be stressed here: these linguistic correlations make us conscious that in general conceptual spaces can be considered once again a strong tool useful for the purposes of linguistic description and, in particular, of cross-linguistic generalizations and explanations.

CHAPTER 3

The morpho-syntax of pluractional constructions

This chapter analyzes some morpho-syntactic issues that concern pluractional constructions in the languages of the world.

First, the strategies that the languages of the world adopt to express the pluractional functions described in Chapter 2 will be presented. They are: affixation, reduplication, and lexical alternation. A section will be dedicated to each of them in order to describe and offer some examples of the most common marking strategies. Then, some morpho-syntactic problems related to these strategies (such as their formal identification) will be firstly addressed and then briefly discussed.

Cross-linguistically, the strategies cited above are definitely the most common. However, they are not the only ones. The languages of the world present some other linguistic devices for marking a plurality of situations. For this reason, a section will be dedicated to the rarest strategies.

The last two sections will investigate a crucial issue that involves participant plurality (cf. Chapter 2). Indeed, even though from a functional point of view participant plurality and number agreement between the verb and one of its argument (i.e., the redundant marking of nominal number) is quite clear, it is not always easy to distinguish these two phenomena from a practical and formal point of view.

Finally, it is important to note here that this chapter is substantially different from Chapter 2. In the previous chapter, a new method of conceptualizing the description and the explanation of the functional domain of pluractionality was proposed (the semantic map model); conversely, the present chapter has more descriptive purposes. There are two reasons for this choice. First, from a morpho-syntactic point of view, pluractional constructions differ greatly among the languages of the world, but at the same time they also show some remarkably recurrent patterns. In other words, while the marking strategies seem to be very limited in number (only three), the languages of the world present several other devices that, though are not frequent cross-linguistically, tend to be very pertinent from a language-specific point of view. This makes hard to propose generalizations that can be considered truly universal. Often, in a single language several ways to encode pluractionality can co-exist at the same time. In any case, it seems that there does not exist a real correlation between functions and the corresponding

formal devices, that is, the same morphological strategy can convey several pluractional functions and consequently none of them has a single, specific function. In order to better comprehend and to give an exhaustive account on this matter, more precise and deep analyses are needed. So far, it has not been possible to conduct this type of work (at least cross-linguistically), mainly because of the widespread lack of data and investigations on specific languages.

3.1 Affixation

Probably, we can say that the derivational strategy of affixation is the most common device in the languages of the world for encoding a plurality of situations. It is possible to find all types of affixes (prefixes, infixes, and suffixes) in all the macro-areas of the world (North America, South America, Africa, Europe, Asia, Australia and Papunesia[11]).

(1) Prefixation

a. Caddo (Caddoan)
ná· *wás-t'a-yibahw*
that_one INFREQ[12]-1AGT.IRR-perceive
'I seldom see him.' (Melnar 1998: 105)

b. Tukang Besi (Austronesian, Malayo-Polynesian)
no-para-langke di Maluku
3R-ITER-sail OBL Maluku
'They frequently sail in Maluku.' (Donohue 1999: 284)

c. Cambodian/Khmer (Austro-Asiatic, Khmeric)[13]
praeu ka:-ni'jiaj pra-sra:j tev venj tev mau:k raviang
use NOM-talk PLAC-connect go back go come among
caun teang la:j
person all all
'(We) all use conversation to make reciprocal connections with each other.' (Haiman 2011: 71)

---

11. I adopt the geographical macro-areas proposed by Hammarström et al. (2018), that are: Africa, Australia, Eurasia, North America, Papunesia and South America. I decided to split the Eurasia macro-area in two areas, Europe and Asia. The term *Papunesia* comprises all the islands that are between Madagascar and Rapanui.

12. In Caddo, this marker is called *infrequentive* because it expresses a repeated situation that occurs less frequently than the situations expressed by the Habitual marker (cf. Melnar 2004: 103, 105).

13. This example was already discussed in Section 2.2.2.3 as (28b).

(2) Infixation

a. Mupun (Afro-Asiatic, Chadic)

i. *wu gap pak lua lusim*
3M cut.SG some meat leopard
'he cut a piece of leopard meat' (Frajzyngier 1993: 60)

ii. *wu grəp pak lua lusim*
3M cut.PL some meat leopard
'he cut leopard meat into pieces' (Frajzyngier 1993: 60–61)

b. Koasati (Muskogean, Alabaman-Koasati)

SINGULAR	PLURAL	GLOSS
aká:non	*akásnon*	'to be hungry'
akopí:lin	*akopíslin*	'to knock something over'
apí:lin	*apíslin*	'to throw something away'
anó:lin	*anóslin*	'to devour something'
maká:lin	*makáslin*	'to open the eyes'

(Kimball 1991: 327)

c. Hunzib (Nakh-Daghestanian, Daghestanian)
oλu-l b-u<wα>č̌e-r baba
that.OBL-ERG 4-cut<PL>-PRET bread(4)
'(S)he cut the bread all the time.' or '(S)he cut several loaves of bread.' or '(S)he cut a loaf of bread' (van den Berg 1995: 82)

(3) Suffixation

a. West Greenlandic (Eskimo-Aleut, Eskimo)
saniqquti-qataar-puq
go.PST-ITER-3SG.IND
'He went past several times/again and again' (Fortescue 1984: 283)

b. Khwe (Khoe-Kwadi, Khoe)
n|ĩĩ́ áva-djì ǂx'áà-ì-ti-tè.
DEM clothes-3PL.F wash-IMPS-FREQ-PRS
'These clothes have been washed often.' (Kilian-Hatz 2008: 147)

c. Wardaman (Yangmanic)
bardab-marla ya-0-yuju ngamanda-wu
look_around-ITER 3-3SG-AUX.PRS what-DAT
'What does he keep looking around for?' (Merlan 1994: 192)

d. Huallaga Huánuco Quechua (Quechuan, Central Quechuan I)
chay-pita paka-ykacha-yllapa qeshpi-ku-rqa-:.
that-ABL hide-ITER-ADV escape-REFL-PST-1
'After that I escaped, hiding here and there' (Weber 1989: 150)

e. Kolyma Yukaghir (Kolymic, Yukaghir)

i. *tamun-ge pierī-ŋōt gude-j*
that-LOC wing-TRNSF become-INTR.3SG
'Then it turned into wings.' (Maslova 2003: 194)

ii. *bučin-ben-ŋōt* *gud-uj-de* *tude* *čuge*
various-RELNR-TRNSF become-ITER-SS.ITER his trace
ahite-s'-u-m
hide-DISTR-0-TR.3SG
'He turned into various things (constantly) and was hiding his traces (everywhere).' (Maslova 2003: 194)

f. Latvian (Indo-European, Balto-Slavic)

SEMELFACTIVE		ITERATIVE	
gult	'to lie'	*gulšņavāt*	'to lie around'
knābt	'to peck'	*knābāt*	'to keep pecking'
vērt	'to open'	*virināt*	'to keep opening'
braukt	'to drive'	*braukalēt*	'to keep driving without a purpose'

(Kalnača 2014: 105–106)

The examples confirm that these devices can be found in different geographical areas. However, while suffixes can be found almost everywhere, prefixes and infixes are less widespread. They occur in the languages of Australia and Papunesia (in particular in the Malayo-Polynesian branch of Austronesian family), and in some African and North American languages.

3.2 Reduplication

Reduplication has been defined in several ways in the literature; however, the most important and clear definitions were proposed by Rubino (2005: 11) ("The systematic repetition of phonological material within a word for semantic or grammatical purposes is known as reduplication") and Inkelas (2014: 169) ("the repetition of part or all of one linguistic constituent to form a new constituent with a different function"). While affixation is the most common strategy, reduplication is probably the most widespread, that is, it can be found basically in every area of the world, though less frequently than affixation (in the sense of languages that adopt this strategy).

This distribution can be easily explained. Cross-linguistically, reduplication is very commonly used to express functions that are connected to the concept of plurality, independently by the lexical category. This is mainly due to the fact that reduplication is a highly iconic morphological strategy and this makes it prone to be connected to some sort of repetition ("Reduplication is often semantically iconic, expressing meanings that are impressionistically related to its duplicative nature, like pluralization, emphasis, and frequency/repetition" Inkelas & Downing 2015: 503).

For example, Mithun (1988: 218) notes that in North American languages:

> The most common form of number marking over multiple lexical categories is reduplication. In some North American languages, such as those in the Algonquian and Pomoan families, only verbs are reduplicated. In many languages, however, the same reduplicative processes that mark number on verbs also appear on nouns and even adjectives. […] Reduplication of verbs usually serves a prototypical verbal function of distribution. […] Reduplication can also be extended to adjectives, still with the same basic function, distributing the quality expressed over time, space, or individuals, rather than over a static group as a whole. (Mithun 1988: 218)

In the languages of the world, several types of reduplication can encode pluractional functions. In the following examples, some cases of partial reduplication are presented.

(4) North America: Yurok (Algic)
kich peg~pegoh ku 'yohlkoych'
PF PLAC~split ART log
'I made the log into kindling (split it multiple times)' (ew 2:6) [cf. *pegoh(s-)*, 'split', SM] (adapted from Wood 2007: 148)

(5) South America: Jarawara (Arawan, Madi-Madiha)
noho~ho na-wahe-ba-no-ho
be_hurt_by~PLAC AUX-next_thing-FUT-IMM.PST.N.M-DEP
'He had then been injured in several places (by the jaguar clawing his arm)'
(adapted from Dixon 2004: 277)

(6) Africa: Hausa (Afro-Asiatic, Chadic)
taa tat~tàɓà hancìntà
3SG.F.PF PLAC~touch nose.her
'She tapped her nose/touched her nose repeatedly' (Součková 2011: 106)

(7) Australia/Papunesia:
a. Daga (Dagan)
i. *baraen* → *bararaen*
'he put' 'he put and put until full'
ii. *wadiamopen* → *wadidiamopen*
'to teach them' 'to teach several groups'
(Murane 1974: 73)

b. Asmat (Nuclear Trans New Guinea, Asmat-Awyu-Ok)
i. *erém* → *ér~erém*
'to tear something' 'to tear something to pieces'
ii. *sim* → *sí~sim*
'to shift something' 'to shift something repeatedly'
(Voorhoeve 1965: 51)

(8) Asia: Paiwan (Austronesian)
ka~keLem-an ti kalalu ni zepul.
PLAC~beat-LV NOM.SG Kalalu GEN.SG Zepul
'Zepul beats Kalalu very often.' (Chang 2006: 147)

The most frequent type of reduplication is undeniably the partial one, while total reduplication is less frequent. Nonetheless, it is noteworthy that the occurrences of total reduplication are found almost only on monosyllabic verbs, in which this strategy is basically the only way to apply reduplication (cf. (9)). This situation raises the question on whether total reduplication is truthfully an actual pluractional marking strategy or it is only a particular instance of partial reduplication. The answer is probably positive, that is, total reduplication can be considered a pluractional marking strategy. This is mainly because though total reduplication can be found extensively on monosyllabic verbs, it sometimes affects also some pluri-syllabic verbs (cf. examples from (10) to (13)).

(9) North America: Euchee (Isolate, North America)
a. *we-do-she*
3SG.PAT-1SG.A/PLUS-hide
'I'm hiding from him.' (in one place) (Linn 2001: 233)
b. *we-she~she*
3SG.A-hide~PLAC
'He's hiding/He keeps moving around.' (Linn 2001: 233)

(10) South America: Shipibo-Konibo (Pano-Tacanan, Panoan)
jaino-a-x-ki bewa~bewa-kain-i ka-a iki,
there.LOC-ABL-S-HSY PLAC~sing-AND-SSSS go-PP2 AUX
onis~onis-kain-i ja joni-n bi-[y]ama
PLAC~be_sad-AND-SSSS that man-ERG get-NEG.PP2
'Then she left singing and singing, feeling sad, very sad, the one the man didn't take as wife' (adapted from Valenzuela 2003: 151)

(11) Africa: Jamsay (Dogon, Plains Dogon)
[dójú lé] ñù:-sěy^{n} yɔ́=kùn-Ø [kò ñú: kù^{n}]
[under in] millet.L-grain exist=be_in.L-3SG.SBJ [DEM millet DEF]
gǒ:n-sà-bà dèy, pélgé~pélgé-sà-bà dèy
take_out-RSLT-3PL.SBJ if, PLAC~sift_in_hand-RSLT-3PL.SBJ if
'There is millet grain in it underneath (=in the ant nest). When they have taken that millet out, and when they have sifted it and sifted it (in their hands, to remove the sand), …' (adapted from Heath 2008: 440)

(12) Australia/Papunesia: Kayardild (Tangkic, Southern Tangkic)
waldarra jabi~jabi-j, kurumbu bula-a-nangku
moon.NOM shudder~PLAC-ACTL barbed_spear.NOM pull-M-NEGPOT
'Moon shuddered and shuddered, but the spear could not be pulled out'
(adapted from Evans 1995: 290)

(13) Asia: Burushaski (Isolate, Asia)
e:gic'u-mane~e:gic'umane
sow.PFV-while~PLAC
'(while) sowing continuously' (adapted from Munshi 2006: 226)

The only geographic area in which it is almost impossible to find reduplication is Europe. There are mainly two reasons for this absence: (i) in the languages of Europe, it is hard to find real pluractional markers (except for some languages of the Caucasus) and the languages that actually display an overt marking for such phenomenon rather adopt some different strategies for marking the plurality of the situations; and, (ii) reduplication (in its strictest definition) is not a common device in Europe, and in the modern Indo-European languages spoken in this continent (though it does occur in the Indo-Iranian branch). The only European language that uses a sort of reduplication in order to mark frequentativity is Hungarian (Uralic). Nevertheless, in this case the segment that is reduplicated is not the verb stem, but any preverbal prefix that is present. For example: *meg-áll* PFX-stop 'come to a halt', *meg~meg-áll* 'stop repeatedly'; *ki-megy* OUT-go 'go out/leave', *ki~ki-megy* 'go out repeatedly', and so on (Kenesei et al. 1998: 360).

3.2.1 Total reduplication and repetition: Grammatical *vs.* textual/pragmatic functions

As previously noted, the repetition of a semantic or grammatical element is one of the most common strategies for expressing plurality. However, not all the repetitions have the same grammatical status. One of the main issues concerning total reduplication is whether it can be distinguished from a simple repetition of a word, i.e., a syntactic or textual repetition. Even though it can appear easy to distinguish the two phenomena (that are actually different), it is not always the case, at least from a theoretical point of view.

Gil (2005) defines this distinction as follows:

> *Repetition* and *reduplication* are superficially similar phenomena characterized by the iteration of linguistic material. By definition, repetition and reduplication differ in the following way: whereas repetition applies across words, and is therefore subsumed under syntax or discourse, reduplication applies within words, and is consequently taken to be part of morphology.
>
> (Gil 2005: 31, emphasis in the original)

In other words, while the product of total reduplication will be a single word, the final product of repetition is two (or more) words repeated. At least two facts emerge from this quotation: (i) the pivotal role in this distinction is played by the concept of word; and (ii) while total reduplication can be considered an actual strategy for marking pluractionality because it directly modifies the form of the verb (cf. Chapter 1), repetition cannot, mainly because it does not involve a

grammatical modification of the verb but it works at a clausal or discourse level. While the former fact is probably more central in general terms, it will not be addressed here, in order to avoid opening the Pandora's box of the formal identification of word.[14] On the other hand, the latter fact plays a pivotal role for the purposes of this work.

As often happens in linguistics, the distinction between these two phenomena is not as clear-cut as it seems. In the majority of cases, in real textual situations, this distinction does not emerge straightforwardly. Gil (2005) proposes six operational criteria that might also work on a cross-linguistic level (cf. Table 2).

Table 2. Criteria to distinguish repetition and reduplication (Gil 2005: 33)

	Criterion	Repetition	Reduplication
1	*Unit of input*	Greater than word	Equal to or smaller than word
2	*Communicative reinforcement*	Present or absent	Absent
3	*Interpretation*	Iconic or absent	Arbitrary or iconic
4	*Intonational domain of output*	Within one or more intonation groups	Within one intonation group
5	*Contiguity of copies*	Contiguous or disjoint	Contiguous
6	*Number of copies*	Two or more	Usually two

Sometimes, the textual repetition of some verbs can encode a pluractional function. For example, in the English sentence *He went, went, went, and then arrived* the repetition of the verb is a textual/poetic alternative for *He went for a long time and then arrived*, in which the prepositional phrase encodes more directly the iterative/continuative action.

In this work, pluractionality is defined as the expression of a plurality of situations encoded by the verb through any linguistic mean that modifies the form of the verb itself (cf. Chapter 1). Consequently, it is not enough that a construction expresses a plurality of situations to make it an actual instance of pluractionality. A significant example is provided by Wari' (Chapacuran, Wari') in which pluractional constructions are marked through lexical alternation and a particular case of reduplication, that follows the schema C_1VrV-.

14. For a more detailed discussion of this highly debated topic, cf. some basic manuals of morphology, in particular Bybee (1985) and Haspelmath (2002) and the references cited therein. For some considerations on this issue, but related to reduplication/repetition distinction, cf. Gil (2005).

(14) Wari' (Chapacuran, Moreic-Waric): Lexical alternation
a. *xin* *na-in*
throw.SGAC 3SG.RP/P-3N
'He threw it away' (Everett & Kern 1997: 328)
b. *wixicao'* *na-in*
throw.PLAC 3SG.RP/P-3N
'He threw them away' (Everett & Kern 1997: 328)

(15) Wari' (Chapacuran, Moreic-Waric): Partial reduplication
a. *wixicao'* *na-in*
throw.PLAC 3SG.RP/P-3N
'He threw them away' (Everett & Kern 1997: 328)
b. *wixi<ca~ra>cao'* *pi'* *pin* *na-in*
throw.PLAC<PLAC~EP> finish completely 3SG.RP/P-3N
'He threw them all away' (adapted from Everett & Kern 1997: 329)

This example is interesting also because it shows how a strategy can be applied to a former plural stem in order to express a totality of participants. However, in Wari' (Chapacuran, Moreic-Waric) it is as well possible to repeat a verb to express a plurality of situations (like in many other languages of the world).

(16) Wari' (Chapacuran, Moreic-Waric): Repetition
to' 'ac xucucun na, to' to' to' to', nana
hit travel REFL.3PL.M 3SG.RP/P hit hit hit hit stop
'Then they hit each other, they hit (each other) repeatedly (or kept on hitting each other), and stopped' (Everett & Kern 1997: 316)

We can assert that, even though the function expressed by the repetition can be considered as an instance of iterativity (or also frequentativity), this is not an actual case of pluractionality. The strongest evidence for this statement is provided by the fact that the verb is repeated more than twice, i.e., four times, and in addition the words are not conceptualized as a single lexeme, but as different repeated words (cf. criteria 1, 5, and 6 proposed by Gil 2005). In addition, in (16) there is also a functional trait that offers us a further piece of evidence. The example does not convey a real repetition of a situation, but rather a succession of different events: specifically, several instances of hitting and an instance of stopping. This is not a truly iterative/frequentative reading, and so more in general a core function, though it is semantically extremely similar. This situation can be observed in several other languages, including some that do not present pluractional constructions at all.

For example, the repetition of the third singular imperative form in Italian (Indo-European, Romance) gives an iterative reading, even though this language does not present any productive pluractional marker.

(17) Italian (Indo-European, Romance)

a. *verso Milano non vo di certo; dunque vo verso l'Adda. Cammina, cammina, o presto o tardi ci arriverò.* (Alessandro Manzoni, I promessi sposi 1840, 17.1)
[I'm certainly not going towards Milan, so I must be going towards the Adda. Walk away, then [lit. walk, walk]; sooner or later, I shall get there.] (Thornton 2009: 236)

b. *il governatore designato vescovo cercò di fuggire verso Pavia ma per superlativo miracolo gli si voltò la strada davanti ai piedi e, cammina cammina, il domani all'alba si ritrovò di bel nuovo alle porte di Milano* (La Repubblica corpus)
[the governor that had been made bishop tried to run away towards Pavia, but by a superlative miracle the street turned around in front of his feet and, walk walk, the next day at dawn he found himself again at the gates of Milan]. (Thornton 2009: 236–237)

In the case of pluractionality, some other criteria can be added to the ones proposed by Gil (2005). Specifically, at least two additional facts help to distinguish pluractional total reduplication from repetition. The functions of repetition seem to be driven more by textual or pragmatic goals, rather than grammatical ones (or at least syntactic rather than morphological). This aspect can also be verified by observing the genres of the texts in which we more often find repetitions, i.e., mainly narrative texts (for example, in the Italian novel of ninetieth century, *I promessi sposi* by Alessandro Manzoni). In addition, it is extremely interesting that repetition does not seem to be the more grammatical device for marking a plurality of situations (i.e. a stylistic choice). The latter circumstance is certainly true both for Wari' (Chapacuran, Moreic-Waric), in which there are actual pluractional markers (both lexical alternation and partial reduplication), and Italian (Indo-European, Italic) in which the repetition of *cammina cammina* (lit. '(he) walks, (he) walks') can be substituted with another more grammatical form, such as the gerund *camminando* ('walking') (Thornton 2009: 236), that, however, cannot be considered a pluractional form. These two characteristics are very important for my purposes because, even though they are not always applicable, can be helpful in several circumstances.

Finally, at least another fact deserves mention. From a diachronic point of view, it is highly plausible that the source of pluractional reduplication is exactly this kind of repetition. In other words, it is probable that such textual/pragmatic/syntactic situations in which a verb form is repeated to encode a sort of extension of the action gave rise to a process of grammaticalization that has firstly led to total, and then to partial reduplication. Unfortunately, I do not have any diachronic data to scientifically demonstrate this path, and, in addition, it is not the

purpose of this section to discuss in detail this topic. Thus, it remains a simple consideration that, however, deserves to be noted.

The criteria theorized by Gil (2005) and the specific ones for pluractionality proposed in this section cannot be considered universal and definitive. This is mainly because each language has its own specific constructions and, consequently, its own formal ways for distinguishing these two phenomena. The fundamental difference between repetition and reduplication remains functional, that is, the functions that they cover: while the latter works on a morphological basis and tend to have more often a grammatical function, the former works on a discourse or syntactic level and tends to have a more textual/pragmatic value.[15]

In conclusion, the criteria analyzed in this section are extremely useful from an operational point of view. At the theoretical level, they probably are not as strong as they should be and, thus, they cannot be equally applied to all the languages of the world without a critique language-specific discussion.

3.3 Lexical alternation

Cross-linguistically, the third marking strategy that is particularly widespread is lexical alternation. By lexical alternation I intend two verbs that are completely different from a morphological point of view, but that share a very similar lexical meaning: while one verb has a singular reading, the other one has a plural reading.

(18) Ngiti (Central Sudanic, Lenduic)

SINGULAR	PLURAL	
aràta	*owuta*	'to go'
ɨràta	*iwútá*	'to come'
adɨta	*okota*	'to sit down'
idèta	*ikòta*	'to get up, to stand'
ɔkɨta	*otseta*	'to run away'
ɨkʉta	*itsétá*	'to run toward'
ingota	*inzuta*	'to return here from'

15. This is not always the case, however. In some languages, repetition at the syntactic level may serve a grammatical purpose; for example, syntactic discontinuous reduplication in Italian as described by Mattiola and Masini (2018) (defined as "the repetition of an item X within a larger configuration built around a pair of spatial adverbs with opposite meaning", for example *cerca di qua, cerca di là* 'search here, search there') expresses distributivity, dispersion, and so on. These cases can probably be explained referring to the concept of "non-canonical reduplication" as proposed by Stolz (2018).

ongota	*onzuta*	'to return there from'
ayita	*oyìta*	'to lie down'
ahɨta	*uvòta*	'to leave'
ɨtsɨ̀ta	*avhàta*	'to fall'

(Kutsch Lojenga 1994: 283)

(19) Koasati (Muskogean, Alabaman-Koasati)

a.

SINGULAR	DUAL	PLURAL	
haccaá:lin	*hikkí:lin*	*lokkó:lin*	'to stand'
cokkó:lin	*cikkí:kan*	*í:san*	'to sit'

(Kimball 1991: 323)

b.

SINGULAR/DUAL	PLURAL	
íllin	*hápkan*	'to die'
óntin	*ilmá:kan*	'to come'

(Kimball 1991: 323)

c.

SINGULAR	PLURAL	
hóklīn	*áɬɬin*	'to put something in'
naksáhkan	*sakáplin*	'to make noise'

(Kimball 1991: 323)

In contrast with the other two strategies, in the majority of cases, lexical alternation tends to express more often a specific pluractional function: participant plurality.

(20) Koasati (Muskogean, Alabaman-Koasati)

a. *okipófka-k o:w-á:y*
whale-SBJ in_water-go_about.SGAC/DUAC[16]
'A whale is swimming about' (Kimball 1991: 446)

b. *okipófka-k o:w-á:yá-:c*
whale-SBJ in_water-go_about.SGAC/DUAC-3NSG
'Two whales are swimming about' (Kimball 1991: 446)

c. *okipófka-k o:-yomáhl*
whale-SBJ in.water-go_about.PL
'There are some whales swimming about' (Kimball 1991: 446)

The participant involved tends to be the patient of transitive clauses and the only semantic role expressed in intransitive clauses, independently of its value (it can be an agent, a patient, etc). Durie (1986) notes that usually these arguments represent the participant that is mostly affected by the occurrence of the situation.

16. Here, with the gloss DUAC I mean *duactional*, in the sense of a situation involving two participants.

From a distributional point of view, this strategy of marking can be found in every geographic area, but it is particularly widespread in the languages of Native North America (cf. (19), (20), and (21)).

(21) North America: Hopi (Uto-Aztecan, Northern Uto-Aztecan)
a. *taaqa taavot niina*
man cottontail killed.SGAC/DUAC
'The man killed a cottontail.' (adapted from Hill 1998: 878)
b. *taaqa taataptuy qöya*
man cottontail.PL killed.PLAC
'The man killed (three or more) cottontails.'
(adapted from Hill 1998: 878)

(22) South America: Shipibo-Konibo (Pano-Tacanan, Panoan)
a. *ja-0-ra Kako-nkoniax jo-ke.*
3-ABS-AS Caco-from.INTR come-COMP
'(S)he came from Caco.' (Valenzuela 1997: 49)
b. *ja-bo-0-ra Kako-nkoniax be-kan-ke.*
3-PL-ABS-AS Caco-from.INTR come.PLAC-PL-COMP
'They came from Caco.' (Valenzuela 1997: 49)

(23) Africa: Sandawe (Isolate, Africa)
a. *mátó=sí̥* ↓síyé
gourd=1SG take.SGAC
'I took a gourd.' (Steeman 2012: 136)
b. *mátó=sí̥* *tɬ'àá*
gourd=1SG take.PLAC
'I took gourds.' (Steeman 2012: 137)

(24) Australia/Papunesia: Imonda (Border, Warisic)
a. *õh-nèi ka së fa-ne-uõl fe-f-me*
PX-SRC 1 NEG CL-eat-PLAC do-PRS-NEG
'I do not customarily eat this' (Seiler 1985: 86)
b. *aia-m kles ue-hla-f*
father-GL mosquito CL-eat-PRS
'Father is stung by mosquitos' (Seiler 1985: 82)

(25) Asia: Ainu (Ainu, Hokkaido Ainu)
a. *an-an.*
be-1SG
'I was (there).' (Shibatani 1990: 50)
b. *oka-an.*
be(PLAC)-1PL
'We were (there).' (Shibatani 1990: 51)

(26) Europe: Ingush (Nakh-Daghestanian, Nakh)

a. *yzh itt chy-vuoda*
DEM.PL ten in-V.GO.PRS
'The ten of them go in.' (Nichols 2011: 313)

b. *yzh chy-b-olx*
3PL in-B-GO.PLAC.PSR
'They go in.' (Nichols 2011: 313)

It is also important to say that lexical alternation usually affects only few verbs in a language. The number can vary, but they are between one to eighteen verbs. For example, in (18) all the verbal pairs of Ngiti are listed, and they are only 11. In any case, the set of verb pairs of Ngiti is one of the largest in the languages of the world. Veselinova (2006) found 33 languages (out of her 194-language sample) that show lexical alternation, and she lists the number of verbs generally involved:

> The number of such verbs per language shows greater variation when compared with the number of suppletive verbs according to tense-aspect or imperative. In approximately half of the languages such verb pairs/triples are between 1 and 4; in another group of 7 languages the number of such verbs ranges between 5 and 7; finally, 9 languages show 10 and more such verbs. (Veselinova 2006: 153)

At the same time, while languages display only few lexical pairs, the verbs involved are often some of the most frequent within the language, such as 'go', 'kill', 'die', etc. Mithun (1988: 213) lists the most frequent verbs that present two forms alternating for number in Native North American languages, and they are: 'sit', 'lie', 'stand', 'go', 'walk', 'run', 'fly', 'die' (intransitive verbs), 'take', 'pick up', 'carry', 'throw', 'kill' (transitive verbs).

3.3.1 Suppletion *vs*. lexical alternation

Often, it is possible to find grammars and descriptive works that refer to lexical alternation as a case of suppletion. However, what I call here lexical alternation does not seem to be an actual case of suppletion.

In the literature, there are obviously two positions concerning this issue. The first one conceptualizes the verb pairs presented in this section as a case of separate lexical items that therefore cannot be described as suppletive stems. This position is mainly supported by Mithun (1988). The second position proposes understanding such pairs as a non-prototypical case of suppletion, i.e., an intermediate situation between separate lexical items and suppletive stems. This position is mainly supported by Veselinova (2006).

In linguistics, suppletion is usually defined as an alternation between forms that do not have any phonological similarity, but that are part of the paradigm of the same lexeme (cf. Bybee 1985, Mel'čuk 1994, Haspelmath 2002, Booij 2005, among others). A typical example is provided by the English alternation between

the two forms of the verb go, *go* and *went*. In this case, what conditions the alternation is the value of English category Tense, Present Simple in *go* and Past Simple in *went*; however, even if they are completely different, they occupy two different cells of the paradigm of the same lexeme.

The pairs of verbs presented above do not show any kind of morphological relation, neither derivational, nor inflectional. Their alternation affects just a semantic feature of the context, that is, the number of participants involved in a specific occasion. The semantic alternation is not a characteristic of the single verb, but it seems to convey more a contextual property in the sense that these verbs involve, at the same time, both a characteristic of the verb and a characteristic of one of its argument. A piece of evidence of the semantic scope of such pairs is provided by the scarce relevance that they play in the syntactic context, and specifically in the syntactic agreement.

For example:

(27) Navajo (Athabaskan-Eyak-Tlingit, Athabaskan)
shí ashkii bi-ł yi-sh-'ash
I boy him-with PROG-1SG-walk.DUAC
'I'm walking with the boy.' (Durie 1986: 358)

In (27), we have a sentence of the Navajo language (Athabaskan-Eyak-Tlingit, Athabaskan). What comes out from the example is that in Navajo the number value of the participants involved in the context can be different from the value conveyed by the marker of agreement on the verb. Let's look at the example more in detail. In (27), we have an occasion in which two different participants are performing the same situation, that is, walking. At the grammatical level, we have two different markers that concerns to the number category, the first is the agreement marker *-sh* 1SG and the second is the verb *'ash* walk.DUAC. They differ depending on the number value they express: the first marker has a singular value, the second marker a dual value. This happens because while the morpheme *sh-* reflects the same value of the subject of the sentence (singular), the value of the verb stem reflects the value of the agent of the occasion, in this case we have two agents (dual). Therefore, while the agreement marker works on the syntactic ground, lexical alternation works following the contextual value, that is, it seems to work on semantic bases. The general outcome of this situation is that a contextual characteristic can hardly be understood as an inflectional category. Mithun (1988) notes that

> In the strictest sense, suppletion refers to allomorphic alternation conditioned by a systematic inflectional distinction. […] The implied plurality of effect is a feature of their [i.e., pairs of verbs, SM] basic meaning. Walking alone is classified lexically as a different activity from walking in a group; speaking is different from conversing; murdering an individual is different from massacring a village. The pairs of verbs are related semantically but not inflectionally. (Mithun 1988: 214)

Mithun (1988) compares these pairs of verbs with the case of classificatory verbs, which are not related from a grammatical point of view but by the semantic characteristic of the argument involved.

For example, in Klamath (Isolate, North America) there are four different verbs that encode the basic lexical meaning of 'give':

(28) Klamath (Isolate, North America)[17]

l^{v}oy	'to give a round object'
n^{e}oy	'to give a flat object'
ks^{v}oy	'to give a live object'
s^{ʔ}ewan^{ʔ}	'to give plural objects'

(Barker 1964: 176)

In other words, it is possible to hypothesize that the number of participants is comparable to any other property of the object, such as its shape or animacy. At the same time, it seems to exist a slight difference between number and other characteristics of objects involved. While the other properties are typical of the object itself, the number seems to be typical of the whole occasion.

The core of the problem that is under investigation in this section is the strictness of the definition of suppletion. In fact, the main difference between the two approaches to lexical alternation depends on the type of definition given for suppletion. Veselinova (2006) adopts a wider definition of this phenomenon than that proposed by Mithun (1988):

> The term suppletion is typically used to refer to the phenomenon whereby regular semantic and/or grammatical relations are encoded by unpredictable formal patterns. (Veselinova 2006: xv)

In this sense, she extends the scope of suppletion also to situations in which there is no paradigmatic alternation. This position leads to the inclusion of derivational patterns in the notion of suppletion.

In any case, I believe that often in linguistics it is more important to maintain a certain specificity in the definitions of some phenomena. This strictness is useful for avoiding a possible bleaching of their descriptive value and, consequently, also prevents the possibility of a reduction of their explanatory force.

At the same time, Veselinova (2006) presents interesting pieces of evidence in support of her position. She notes that, from a diachronic point of view, suppletive stems often originate from two different lexemes that, at some point, start to be associated because of their similar lexical meaning. And this can also happen for a specific grammatical category (such as number) because of their (contextual)

17. This example is also present in Chapter 2 as (9).

alternation (singular *vs*. plural). Thus, this evolution can lead to conceptualize them as parts of the same paradigm (cf. Veselinova 2006: 168).

In other words, she recognizes pluractional verb pairs as a case of suppletion, though not in a prototypical way. Consequently, in this approach the productivity of such pairs is pivotal for confirming their derivational or inflectional relationship.

> [T]he fact that such words incorporate number in their meaning makes them also prone to become associated with derivational or inflectional processes where verbs are involved such as derivation for plural action and agreement. […] The verbal number pairs discussed here are only semantically related in languages where the derivation of verbal number is very restricted or the stem selection comes in marked contrast with the rules of syntactic agreement as in Navajo above. However, in languages where the derivation is very wide spread and is used for more general aspectual meanings, these pairs appear also paradigmatically related as in Krongo and languages similar to it. Finally, there are languages such as Shipibo-Konibo above where the verbal number pairs are clear exceptions to general patterns of syntactic agreement. Thus synchronically we can see a scale where lexical expressions for verbal number are only semantically related on the one end and paradigmatically related on the other with a lot of cases in between. So as regards the typology of suppletion, they should be described as intermediate cases between prototypical suppletives and different lexical items. They are not just semantically related lexical items but words which easily evolve into grammatical markers and thus build paradigmatic relations.
>
> (Veselinova 2006: 173)

This situation can underlie some of these verb pairs. However, a similar diachronic origin and a possible similar development do not make these pairs necessarily suppletive synchronically. Furthermore, Veselinova (2006) merges two different interpretations of productivity: (i) the applicability of a specific phenomenon within the lexicon, i.e., the number of items involved; and (ii) the frequency with which that phenomenon appears in texts. The verb pairs that alternate are found very frequently in texts because they apply to very common verbs, but they cannot be considered fully productive from a morphological point of view because they affect only a restricted set of verbs. The frequency of other pluractional derivations, such as the ones in Krongo and Shipibo-Konibo cited by Veselinova (2006), concerns a different type of pluractional constructions that are not grammatically related to lexical alternation, in the sense that they are different marking strategies and so are correlated to lexical alternation only from a functional point of view.

In the majority of cases, the pairs that I am analyzing in the present section are not inflectionally related and consequently cannot be conveyed as suppletive. Their relationship lies only on semantic grounds and it is controlled by indexical characteristics.

Another issue concerning lexical alternation is a terminological one. Indeed, I used the term "lexical alternation" to refer to this marking strategy. In addition to the term suppletion, in the literature we can also find "stem alternation". However, also this term can be misleading, though for a different reason in respect to suppletion. Since I have just demonstrated that the two elements that alternate to express pluractionality are not part of the same paradigm, but they rather seem to be two different lexical items, I cannot use the term stem to refer to them. In the morphological tradition, a stem is generally defined as "the base of an inflected word-form" (Haspelmath 2002: 274) and consequently it makes reference once again to the inflectional paradigm, and it can actually comprise also the stem that are derived from another one. This is partly in conflict with the discussion I faced in this section. Since we are dealing with two different lexical items that have a similar lexical semantics, in this case I prefer to adopt the term lexical alternation to make this distinction more evident.

3.4 Other marking strategies

Cross-linguistically, the three marking strategies presented in the previous sections are extensively widespread. However, this remarkable distribution does not make them the only devices that the languages of the world adopt in order to mark pluractionality. In this section, some less frequent strategies for each macro-area will be briefly presented.

In African languages, reduplication and suffixation are the most common pluractional markers. Still, it is also possible to find languages in which such functions are encoded through tonal change (cf. (29)), ablaut (cf. (30)), vowel lengthening (cf. (31)), or a(n) (quasi-)auxiliary (cf. (32)).

(29) Krongo (Kadugli-Krongo, Central-Western Kadugli-Krongo)

BASIC FORM		FREQUENTATIVE FORM	
à-byáanì àlàkà	→	*a-byàanì àlàkà*	'to spit'
ò-kídò-ònò	→	*ò-kìdò-onò*	'to cut off'
ò-kírò-ònò	→	*ò-kìrò-onò*	'to move out'
à-sá-ánà	→	*à-sà-anà*	'to sow, scatter'

(Reh 1985: 206)

(30) Beja (Afro-Asiatic, Cushitic)

a. *ʔawi=b* *jhak-s-an=t* *a-gid.*
stone=INDF.M.ACC get_up-CAUS-PFV.1SG=CNJ 1SG-throw\PFV
'I took a stone and threw it.' (BEJ_MV_NARR_05_eritrea_389)

b. *ti=takat* *digiː-ti*
DEF.F=woman turn_back-CVB.CSL
hoːsoː *geːd-ti=jeːb=ka*
3SG.ABL throw\INT-AOR.3SG.F=REL.M=DISTR
'the woman was throwing stones at it away from her.'
(BEJ_MV_NARR_05_eritrea_130)

(31) Tima (Katla-Tima)

BASIC FORM			PLURACTIONAL FORM	
ŋàl-í	'smell it'	→	*ŋáál*	'smell several times'
dàh-í	'say sth.'	→	*dááh*	'say sth. repeatedly'
mùr-í	'pick it up'	→	*múúr*	'pick up several times'
lɔ̀h-í	'mix it'	→	*lɔ́ɔ́h*	'mix several times'

(Alamin 2012: 105)

(32) Eton (Atlantic-Congo, Volta-Congo)
|à-ŋgá-bɛ́ *L-dìŋ-Lgì* *L-tìl* *H* *bɔ̀* *kálàdà|*
I-RM.PST-IPFV INF-HAB-G INF-write LT PL letter
'He usually wrote letters.' (van de Velde 2008: 235)

In North America, reduplication and lexical alternation are certainly the most common strategies. Other strategies occur as well, such as substitution of a formative (cf. (33)) and combinations of different strategies (cf. (34)).

(33) Hopi (Uto-Aztecan, Northern Uto-Aztecan)
a. Plural Subjects

SINGULAR/DUAL	PLURAL	
tsayo(k-)	*tsay.mti*	'pop out of the husk'
ts.akwa(k-)	*tsakw.mti*	'wear out'

(Hill 1998: 877)

b. Plural Objects

SINGULAR/DUAL	PLURAL	
pìitakna(~ya)	*pitamna (~ya)*	'affix, stick on'
ngǿlökna (~ya)	*ngölömna (~ya)*	'bend'

(Hill 1998: 877)

(34) Southern Wakashan/Nootkan (Wakashan, Southern Wakashan): Reduplication + *-š*

	BASIC FORM	ITERATIVE I FORM	
a.	*mitx^{w}*	*mitx~mitx-š*	
	turn	PLAC~turn-ITER	
	'turn'	'turn at intervals'	(Davidson 2002: 240)
b.	*ɬuːčaq*	*ɬuː~ɬuːčaq-š*	
	trap_with_deadfall	PLAC~trap_with_deadfall-ITER	
	'trap with a deadfall'	'trap with a deadfall'	(Davidson 2002: 241)

c. Lengthening of first two vowels + substitution of *-ƛ* with *-ɬ*

Perfective form	Iterative II form
hisak^{w}isačištuƛ	*hi:sa:k^{w}isačišt:ɬ*
hisa-k^{w}is-ačišt-uƛ	*hi:sa-k^{w}is-ačišt-uƛ*-[ITERL]
there-move_away-on_ocean-PFV	there-move_away-on_ocean-PFV-ITER
'come up there out of the sea'	'come up there out of the sea at intervals'

(Davidson 2002: 243)

In South America, it is possible to find mixed strategies (cf. (35)), and also the use of auxiliaries (cf. (36)).

(35) Mapuche/Mapudungun (Araucanian): Reduplication + *-nge*

aku-	'to arrive'	→	*aku~aku-nge*	'to arrive bit by bit'
lüykü-	'to drip'	→	*lüykü~lüykü-nge*	'to drip constantly'
nengüm-	'to move'	→	*nengüm~nengüm-nge*	'to move constantly'
ngüma-	'to cry'	→	*ngüma~ngüma-nge*	'to cry constantly'

(Smeets 2008: 305)

(36) Barasano (Tucanoan, Eastern Tucanoan)

SINGULAR	PLURAL	
bahi roka	*bahi rea*	'to die'
roka roa	*rea rode*	'to get in water'

(Jones & Jones 1991: 24)

In the languages of Australia and Papunesia, the most common strategy is reduplication. However, in Rapanui the verb that means 'go' can also be used as an auxiliary in order to express iterativity, frequentativity, spatial distributivity, and event-internal plurality.

(37) Rapanui (Austronesian, Malayo-Polynesian)

a. *e, koroiti~koroiti i kai i oho mai ai*
EXC slow~ADV PST eat PST go TOW PHO
'Well they went on eating it and slowly they got used to it.'
(Du Feu 1996: 162)

b. *he ha'aki he oho penei e…*
ACTN announce ACTN go like this…
'They went around announcing that…' (Du Feu 1996: 162)

In the languages of Asia (specifically the ones spoken in the Indian sub-continent), it is quite common to find pluractional functions marked with an auxiliary.

(38) Bengali (Indo-European, Indo-Iranian)
meyeti citkar-kôre thake.
girl.CL shout-do.PP stay.3.PRS
'The girl keeps shouting.' (Thompson 2012: 283)

(39) Brahui (Dravidian, North Dravidian)

A verbal participle in *-isa* combined with a finite form of the verb *hining* 'to go' or *banning* 'to come' is used to express a prolonged or regularly repeated action: e.g., *nī kōšišt karisa hin* 'Go on making your efforts', *ō dušmanān har vaxt narrisa kāik* 'He runs away from the enemy every time', *tīvaġā dē ōde pārisa bassunuṭ ki daun kappa* 'The whole day I was telling him not to do so'.

(Andronov 2001: 105)

(40) Hindi (Indo-European, Indo-Iranian)

bəcpən	*mẽ*	*həm*	*kəbəɖɖī*	*kʰela*	*kərte*	*tʰe.*
childhood	in	we	kabaddi	play.PFV.M.SG	FREQ.IPFV.M.PL	PST.M.PL

'We used to play kabaddi in (my) childhood.' (Kachru 2006: 154)

Finally, also in European languages it is possible to find both internal modification of the verb stem (cf. (41)) and auxiliaries (cf. (42)).

(41) Ingush (Nakh-Daghestanian, Nakh)

SINGULAR	PLURAL	
oll	*ellaa*	'to hung up'
ott	*ettaa*	'to stand up'
tull	*tillaa*	'to put, lay'
xou	*xeina*	'to sit down'

(Nichols 2011: 314)

(42) Maltese (Afro-Asiatic, Semitic)

a. *ʔabɛl ma ipɔddʒu bi-l-ʔɛˤda kiənu jɔʔˤɔdu*
before that IPFV.sit.PL with-ART-seated be.PFV.3PL IPFV.DUR.PL

imissu s-siddʒu
IPFV.touch.PL ART-chair

'Avant de s'asseoir, elles touchaient la chaise à plusieurs reprises' (literal translation: 'Before sitting down, they touched the chair several times' [SM]) (Vanhove 2001: 70)

b. *wara li ʔaˤdu jˤɛddu:-ħ u jˤajtu*
after that sit.DUR.PFV.3PL IPFV.threaten.PL-him and IPFV.yell.PL

miəˤ-u ħadu:-l-u is-sɛrdu:ʔ
with-him take.PFV.3PL-to-him ART-rooster

'Après qu'ils l'eurent menacé à plusieurs reprises et qu'ils lui eurent crié après, ils lui ont pris le coq' (literal translation: 'After they threatened him several times and they yelled at him, they took him the rooster' [SM]) (Vanhove 2001: 70)

Though these strategies are rare and thus it is hard to advance some interesting generalizations, they deserve mention in order to show that there actually exists a

wide range of different strategies that are less relevant cross-linguistically, but that can be extremely important and relevant in specific languages.

3.5 The problem of participant plurality: Syntactic agreement (nominal number) or semantic selection (verbal number)?

An important issue that affects the morpho-syntax of pluractional constructions and that I have already and briefly addressed in several points of the work concerns the possibility of describing participant plurality as an instance of nominal number rather than one of verbal number (pluractionality). Often, a device that modifies the verb and that signals the number of entities involved in an occasion is described as a case of agreement between the argument (the controller) and the verb (the target).

So far, I have described participant plurality as that function of pluractionality that expresses a situation in which a plurality of situations also affects a plurality of participants. These participants consist in the argument that is most affected by the situation: thus, the patient of transitives (mainly the object, but not necessarily) (cf. (43)) and the only argument (subject) of intransitives (cf. (44)).

(43) Nisgha/Nass Tsimshian (Tsimshian, Nishga-Gitxsan)
NLk'ẽ ad'~ā'd'îk·sk^{u}L wī:hē'ldEm qē'wun.
then PLAC~came many gull
'Now many gulls came.' (Boas 1902: 113.13 cited in Mithun 1988: 218)

(44) Nisgha/Nass Tsimshian (Tsimshian, Nishga-Gitxsan)
NLk'ẽ q'ax·~q'ayā'ant.
then PLAC~he.clubbed.them
'Then he clubbed them.' (Boas 1902: 70.9 cited in Mithun 1988: 219)

Durie (1986) has deeply investigated this situation in order to understand whether this phenomenon is actually something different from agreement, and, if it is, in which way differs. He analyzes a sample of about 40 languages. The majority of them are languages spoken in North America which explains why he refers mainly to lexical alternation (suppletion/suppletive stems in his words) giving less importance to the other strategies. Durie (1986) notes, paraphrasing the words of Boas (1911: 381), that:

> [A] number suppletive verb selects an argument of the appropriate number in much the same way that verbs *select* an argument whose referent has the appropriate form: in the same way, for example, that English verb peel selects an object whose referent has a skin, or that massacre selects an object referring to a group of people.
>
> (Durie 1986: 355, underlined words are in the original, italics is mine)

In this passage, Durie (1986) introduces the pivotal concept of "semantic selection" that basically consists in the need for a verbal construction of the presence of specific arguments with particular semantic properties, such as the form of the objects or the fact of having a skin, and this specific trait is fundamental for the semantic interpretation of the whole context. As there are verbs that necessitate of an animate argument, for example breathe (*the dog is breathing heavily* vs. **the rock is breathing heavily*), there are also verbs that semantically require a plural argument in order to encode a coherent situation.

For example:

(45) Pero (Afro-Asiatic, Chadic)

a. *kpéemùn lée-kò*
woman give_birth-COMP
'woman gave birth' (Frajzyngier 1989: 96)

b. *kpéemùn léyyí-kò*
woman give_birth.PLAC-COMP
'woman gave birth (to many children)' (Frajzyngier 1989: 96)

(46) Pero (Afro-Asiatic, Chadic)

a. *nì-díg-kò mínà*
1SG-build-COMP house
'I built a house' (Frajzyngier 1989: 96)

b. *nì-díkkú-jù-kò mínà*
1SG-build-PLAC-COMP house
'I built many houses' (Frajzyngier 1989: 96)

In both examples from Pero (Afro-Asiatic, Chadic), the plurality of the objects (the most affected argument) in (45b) and (46b) is required by the fact that several actions occur in the occasion. Therefore, since it is not possible to give birth several times to the same human being and to build the same house several times, the context necessitates a plurality of entities involved to be correctly interpreted. And this plurality of participants needs not to be overtly marked (as in the examples of Pero). In other words, the usage of a specific verb requires the presence of a specific type of argument. In these cases, it is the verb that governs the occurrence of an argument, and this requirement seems to work on semantic bases (as already noted in the previous sections) rather than on syntactic ones (like agreement does). In syntactic agreement, the opposite is true: it is the argument that requires the presence of a specific marker on the verb.

Even though this kind of situation appears to be theoretically clear and different from syntactic agreement, operationally it is not always easy to distinguish cases of these two phenomena one to the other. For this reason, Durie (1986) proposes five criteria that can help on this matter.

The first criterion is the most important one and states some ideas already presented in this section.

> I. Suppletion [i.e., lexical alternation, SM] is not triggered by a surface syntactic relation; rather it selects for the number of a particular semantic role of the verb. (Durie 1986: 357)

Semantic selection affects the patient of transitive sentences, and the only argument of the intransitive. From a syntactic point of view, the arguments that are more often affected by the action tend to be the absolutive argument (transitive object and intransitive subject). It is interesting to note that this also works in languages in which the alignment system is not ergative-absolutive, but nominative-accusative or other types. However, it is not completely true to say that semantic selection works following an absolutive-ergative basis because it takes into consideration the semantic rather than the syntactic context. This is particularly evident in the example (6) of Huichol (Uto-Aztecan, Southern Uto-Aztecan) analyzed in Chapter 2, repeated here as (47).

(47) Huichol (Uto-Aztecan, Southern Uto-Aztecan)

a. *nee* *waakana* *ne-mec-umiʔii-ri* *eekɨ*
1SG chicken.SG 1SG.SBJ-2SG.OBJ-kill.SGAC-BEN 2.SG
'I killed you the chicken' (Comrie 1982: 113 cited in Durie 1986: 357)

b. *nee* *waakana-ari* *ne-mec-uqɨʔii-ri* *eekɨ*
1SG chicken-PL 1SG.SBJ-2SG.OBJ-kill.PLAC-BEN 2.SG
'I killed you the chickens.' (Comrie 1982: 113 cited in Durie 1986: 357)

In (47), we have an occasion in which the agent/subject performs a single situation of killing in (47a) and a plurality of the same situation in (47b). Since the situation in this case consists in a single or several killing(s), it follows that when we have a singularity only a single entity will be involved, but when we have a multiplicity of killing situations we will also have a multiplicity of entities killed. We can note that in this case the argument that is mostly affected by this situation is obviously the chicken(s) that syntactically representes the demoted object, while the beneficiary is promoted to object status (cf. the morpheme *mec-* 2SG.OBJ). However, despite this syntactic order in which the patient/object is demoted to a non-absolutive position, the verb form follows the semantics and not the syntactic context. In other words, it selects the required form of the most affected argument independently by its syntactic position. Then, we will have a plural form that semantically agrees nor with the subject or the object (both singular), but with the inderect object (plural).

The second criterion is strictly related to the first one.

> II. Where there is discord between the number of participants bearing the appropriate semantic role and the strict morphological Number of the syntactic relation-bearing NP, suppletion will reflect the former, agreement the latter. (Durie 1986: 358)

The verb that expresses a plurality of participants refers to the actual number of the most affected participant in the context rather than the grammatical number value of the syntactic argument. Example (27) (repeated here as (48a)) is again significant.

(48) Navajo (Athabaskan-Eyak-Tlingit, Athabaskan)

a. *shí ashkii bi-ł yi-sh-'ash*
I boy him-with PROG-1SG-walk.DUAC
'I'm walking with the boy.'
(Jeanne, Hale & Pranka 1984 cited in Durie 1986: 358)

b. *nihí ła' di-iid-áát*
we subset FUT-1NSG-walk.SGAC
'One of us will go.'
(Jeanne, Hale & Pranka 1984 cited in Durie 1986: 358)

The situation of (48a) was already analyzed, while the syntactic subject is singular, in the context the action is performed not by a singular agent but by two different participants and, consequently, the verb stem is dual. We have the opposite situation in (48b). In this case, we have a plural syntactic subject (*nihí* 'we') that rightly control the number of the marker of agreement on the verb (*iid-* 1NSG). However, despite the syntax, the situation is performed by a single participant (*ła'* 'subset' is the detector element) and, in fact, we have the singular form of the verb. Both the examples clearly indicate that lexical alternation works on semantic (cf. semantic selection) and not on syntactic grounds (cf. syntactic agreement).

The third criterion is particularly relevant.

> III. Stem suppletion may distinguish Number features which are not nominal Number features of the language: that is, they are not formally marked in any way in the nominal morphology, neither by nouns nor pronouns. (Durie 1986: 360)

This is an interesting aspect that illustrates an imperfect parallelism between nominal number and participant plurality. In the languages of the world, the number values that pertain to the nominal number system do not necessarily correspond to the values that lexical alternation (and more generally participant plurality) can express. This is not a frequent case, but some examples can be found in the languages of Native North America. For example, in Mojave (Cochimi-Yuman, Yuman), there exist three verb stems (not actual lexical alternation, but rather modification of the verbal stem and, thus, more similar to suppletion; cf. Appendix II) meaning 'put in jail' that distinguish between one, a few, and multiple participants, that is, singular *vs.* paucal *vs.* plural. These values are not symmetrical to those of the nominal system (nouns and pronouns), that contrariwise shows a distinction only between singular and plural entities (cf. Munro 1974: 38).

(49) Mojave (Cochimi-Yuman, Yuman)
a. *ʔ-aher-k* 'I put him in jail'/'We put him in jail'
b. *ʔ-ahi:r-k* 'I put them (a few) in jail'
c. *ʔ-ačhi:r-k* 'I put them (many) in jail'

(Munro 1974: 15)

This fact is a strong piece of evidence of the non-exact overlapping between participant plurality and nominal number, and indeed it seems to suggest us to keep these two phenomena apart.

Criteria IV and V both take in consideration formal characteristics of the languages.

In particular, the fourth criterion is the following one:

> IV. In syntactic contexts where agreement is characteristically absent, where a language systematically omits agreement morphology to form an infinitive, stems still supplete for number. These contexts include: control constructions, imperative and attributive usage. (Durie 1986: 361)

In other words, the alternation between different lexical items according to the number of participants does also apply to the situations in which usually nominal number does not.

An example of this difference is provided by Chickasaw (Muskogean, Western Muskogean). In (50), I report some forms of two Chickasaw verbs: one of which alternates for number (e.g. *run*) and the other one that does not (e.g. *dance*).

(50) Chickasaw (Muskogean, Western Muskogean)
a. *hilha-li* 'I dance.'
b. *kii-hilha* 'We dance.'
c. *malili-li* 'I run.'
d. *kii-tilhaa* 'We run.'

(Durie 1986: 361)

In (51) and in (52), I show how these verbs behave differently in two of the constructions that Durie (1986) lists in the definition of Criterion IV, specifically, in control constructions (cf. (51)) and in imperative constructions (cf. (52)).

In (51), we can see how the two sentences differ according to the number value of the verb *run*, though they appear in a kind of construction that usually is not affected by values of nominal number. This value is determined by the context.

(51) Chickasaw (Muskogean, Western Muskogean)
a. *malili* *sa-banna*
run.SGAC 1SG-want
'I want to run.' (Durie 1986: 361)

b. *tilhaa* *po-banna*
run.PLAC 1NSG-want
'We want to run.' (Durie 1986: 361)

In (52), I show how they behave differently in imperative constructions.

(52) Chickasaw (Muskogean, Western Muskogean)
a. *hilha!* 'Dance!' (one or more people)
b. *malili!* 'Run!' (one person)
c. *tilhaa!* 'Run!' (more than one person)
(Durie 1986: 361)

A similar situation can also be found in Kiowa (Kiowa-Tanoan). In this case, (53) shows how syntactic agreement and participant plurality work differently in this language.

(53) Kiowa (Kiowa-Tanoan)
a. *á˙-dɔ̀* *è-cél*
tree-INV 3INV-set.NPL
'A tree is standing there.' (Watkins 1984 cited in Durie 1986: 359–360)
b. *á˙* *ɛ̨̀-cél*
tree 3DU-set.NPL
'Two trees are standing there.'
(Watkins 1984 cited in Durie 1986: 359–360)
c. *á˙* *Ø-sɔ́l*
tree 3PL-set.PLAC
'Trees (more than two) are standing there.'
(Watkins 1984 cited in Durie 1986: 359–360)

While (54) shows how a verb that alternates for number works when it is used attributively (in Kiowa stative verbs can be used as adjectives in an attributive construction).

(54) Kiowa (Kiowa-Tanoan)
a. *t^{h}àlì˙-kyǫ́y*
boy-tall.SG
'(one) tall boy' (Durie 1986: 361)
b. *t^{h}àlì˙-kɛ̨́˙ní˙*
boy-tall.NSG
'(two) tall boys' (Durie 1986: 361)
c. *t^{h}àlì˙-kɛ̨́˙ní˙-gɔ̀*
boy-tall.NSG-INV
'(more than two) tall boys' (Durie 1986: 361)

Finally, the Criterion V proposed by Durie (1986) states that:

> V. Stem suppletion for number is preserved in derivational word formation, but inflectional agreement is not. (Durie 1986: 361)

Agreement markers do not appear on a specific form when it is used as a base for derivation because they are inflectional values that are governed by the syntactic context. Conversely, both the forms that alternate for number can be used as a base for derivational purposes. This is because they play a central role for the semantics of the context and, thus, the semantic distinction that they convey is also pertinent for the derived form.

For example, in Nxaʔamxcin/Moses-Columbian (Salishan, Interior Salish) there are several deverbal nouns that are derived starting from the verbs that encode participant plurality (cf. (55)), while in Kiowa (Kiowa-Tanoan) we can see the similar situation that involves some deverbal adverbs (cf. (56)).

(55) Nxaʔamxcin/Moses-Columbian (Salishan, Interior Salish)
łáq-lx 'sit.SGAC' → *kłqlz-áẇ sn* 'chair'
yər-íx 'sit.PLAC' → *(n)k-yəŕ x-áẇ sn* 'chairs.NSG'
(Kinkade 1977 cited in Durie 1986: 362)

(56) Kiowa (Kiowa-Tanoan)
ét 'big.SG' → *ét-té* 'a lot'
bîn 'big.NSG' → *bîn-dè* 'a lot, much'
(Watkins 1984 cited in Durie 1986: 362)

The criteria presented in this section are very useful to distinguish two phenomena like participant plurality (pluractionality) and syntactic agreement (nominal number). However, at the same time they also raise some issues that cannot be underestimated.

The five criteria are operatively extremely relevant and can actually help a lot in separating different phenomena. However, from a theoretical point of view they present some small weaknesses.

For instance, basically all the criteria require that both phenomena are present at the same time in the same context or in similar contexts in order to be compared. Obviously, this is not always the case.

In addition, these criteria seem to be almost always applicable in a language-specific analysis, but they are more hardly applicable in cross-linguistic perspective. Another issue is that none of them is completely decisive alone (except maybe I), but only their co-occurrence can provide some strong pieces of evidence. Thus, if we have a situation in which only some of them are verifiable their predictability descreases drastically.

In other words, though they are certainly valuable, these criteria cannot be considered universally valid at least from a theretical point of view. As for the criteria analyzed to distinguish (total) reduplication and repetition, the ones proposed by Durie (1986) are powerful operational tools, but they do not solve the question from a theoretical and typological point of view.

In conclusion, the only difference that is certainly valid to distinguish participant plurality by nominal number both in language-specific and cross-linguistic investigations and that maintains a theoretical validity is the functions that these two phenomena have. While the function of syntactic agreement is to redundantly express the value of number of a referent involved in a situation, the main function of participant plurality is the one of "quantify[ing] the effect of actions, states, and events" (Mithun 1988: 214) on the participants involved in the situation.

CHAPTER 4

Pluractional constructions

Some case studies

This chapter investigates in detail how pluractional constructions work in specific languages. The case studies provided in what follows also have the purpose of verifying the statements and the results that were pointed out in the previous chapters.

The reason that lies behind the present chapter is that I believe that in a large-scale typological work it should be mandatory to substantiate the general assumptions and the generalizations found through the cross-linguistic comparison and analysis through the application of such outcomes to specific languages. This is possible only exploring in detail the phenomenon that is under investigation in single languages.

This stage of the work is particularly important because often the cross-linguistic analysis does not permit to explore in detail what actually happens in single languages while analyzing such a large number of languages, it allows to scraping the surface of phenomena revealing their generalities. Consequently, it is possible that some interesting and crucial issues do not emerge. Thus, in such a type of works language-specific studies are highly appreciated.

From a methodological point of view, the choice of the language(s) to be investigated must not be casual. First, the number of analysis should not be limited to a single language, but preferably extended to at least two languages. In the second instance, it becomes essential that at least one of the languages examined in the case studies does not belong to the sample adopted for the cross-linguistic analysis. Ideally, at least one language should belong to the sample, and the other one should not. This is because the investigation of the former allows to look for issues within the sample that did not emerge from the cross-linguistic comparison, while the latter type of language consents to have a point of view that is external to the languages taken into consideration. In addition, the languages should not be related in any way and hopefully not spoken in the same area.

For all these reasons, in what follows I will present and discuss how pluractional constructions work in three languages: Akawaio (Cariban, Venezuelan Cariban), Beja (Afro-Asiatic, Cushitic), and Maa (Nilotic, Eastern Nilotic). Two of these languages do not belong to my language sample, namely, Akawaio and Maa; while Beja is actually one of the languages already examined. The choice of these

languages is not accidental. In fact, South America and Eastern Africa are areas in which usually we can find languages that show complex pluractional systems. In addition, I had the opportunity to dispose of extensive texts for these languages, and, then, I could work on direct data, and not on secondary data and analyses, like grammatical descriptions.

4.1 Pluractionals in Akawaio (Cariban, Venezuelan Cariban)

Akawaio is a variety of the Cariban language Kapóng spoken by the Guyanese Amerindian tribe of Akawaio that counts about 6.000 people in Upper Mazaruni District in Region 7 (Cuyuni-Mazaruni) in Guyana (North-East of South America, between Suriname and Venezuela) (Caesar-Fox 2003: 50).

From a genetic point of view, Akawaio belongs to the Pemón group of the Cariban family, which is generally considered part of the Venezuelan branch (cf. Gildea 2012). The genetic classification of Cariban languages is highly debated and in a certain way an exact classification does not exist mainly because of lack of structured documentation, and also of diachronic data (Gildea 1998, Chapter 1).

Akawaio, as many other Cariban languages, is agglutinative, that is, usually the verbs have from two to seven affixes and nouns from zero to three ("mildly polysynthetic", cf. Gildea & Caesar-Fox 2006: 3). However, Akawaio shows also some "analytical constructions that seem to be replacing older morphological operations" (Gildea & Caesar-Fox 2006: 3).

> In this language, the distinction between roots and words is important. For roots, clear open classes are nouns and verbs, with moderate-sized (probably-closed) classes of adverbs, postpositions, sound-symbolic words, and particles; for words, extremely productive category-changing derivational morphology shifts roots from one category to another, effectively making adverbs an open class and roots with adjectival meanings are split between abstract nouns (size, weight, texture) and adverbs (color, etc.). (Gildea & Caesar-Fox 2006: 3)

Concerning verbs, they can be either transitive or intransitive. Labile, ambitransitive, and trivalent roots-stems are not attested. However, Gildea and Caesar-Fox (2006: 3) note that "[v]alence may be adjusted morphologically by means of detransitivizing prefix and transitivizing suffix".

The texts analyzed for this section was provided to me by Prof. Spike Gildea (University of Oregon) and were collected, transcribed, and glossed by Desrey Caesar-Fox (and Spike Gildea) for her PhD thesis on sociolinguistic and anthropological aspects of Akawaio[18] speech genres defended at Rice

18. Specifically, the variety of Akawaio spoken in the village of Waramadong, Guyana.

University (cf. Caesar-Fox 2003, the texts are still unpublished). The corpus is composed of twenty-seven texts belonging to different genres. They are mainly traditional stories or personal narratives (seventeen texts, 12 and 5 respectively), but also traditional chants and rhymes (ten texts, 6 and 4 respectively). The total amount of words is about ten thousand and eight hundred (about 10.800).

In the corpus, I found 242 occurrences of the Akawaio pluractional marker *-pödï* and its allomorphs. Unfortunately, it was not clear to me how to interpret 22 of these occurrences. It is important to say here that the texts which I have analyzed were not collected for the purposes of this work. Consequently, the interpretations and the translations are not always as precise as the functional distinctions of the present work require. For this reason, I decided not to consider these ambiguous occurrences and to analyze only the other 220 ones.

4.1.1 Strategies of marking and functions of Akawaio pluractionals

In Akawaio, the derivational suffix *-pödï*, glossed as Iterative or Habitual in Caesar-Fox (2003), expresses pluractional functions. This is a quite productive morphological device. It is widely used and can also serve as a base for further derivations (like nominalizations starting from pluractional verbs). This is a strong piece of evidence of its vitality.

There are at least six allomorphs of this marker, half based on variation in voicing of the initial stop and four based on reduction of the final syllable to a glottal stop (when followed by another morpheme) or velar stop (word finally): *-pödï/-bödï* and the contracted forms *-pö'/-bö'*, *-pök/-bök*. It is also noteworthy that sometimes this marker can be iterated (even though in the texts that I have analyzed, it happens only twice).

This morpheme covers a wide, but precise range of functions. All of them are part of the functional domain of pluractional constructions, both core and additional functions too.

In the analysis, I classified the occurrences in different sets of functions rather than in single functions. This is mainly because often the same sentence can have different readings depending on the context or, for instance, on the actional value of the verb. Consequently, it can be more useful to list all the possible readings that a form can have. For these reasons, several occurrences are classified in more than one function, mainly a double reading but sometimes also a triple or a quadruple one, though rarely.

The main functional sets of Akawaio are: (i) frequentative/habitual/generic imperfective readings; (ii) iterative-like readings (event-internal plurality, iterative, frequentative); (iii) participant plurality reading; and, finally, (iv) a set of

functions connected with continuativity. In what follows, I will briefly present each of these sets providing also some examples.

Frequentative/habitual/generic imperfective set. This is the most recurrent set of functions, that is, the functions included in this set are the ones that the pluractional marker of Akawaio encodes most often.

I have found occurrences with a frequentative/habitual reading (cf. (1)), a frequentative reading (cf. (2)), a generic imperfective reading (cf. (3)), and finally some occurrences that can be interpreted with a frequentative/habitual/generic imperfective reading (cf. (4)).

(1) Akawaio (Cariban, Venezuelan Cariban): frequentativity/habituality
mör-yau tok eji mörö ta-pödï-'pï i-ya turonnö-gong
that-LOC 3PL be FUT say-ITER-PST 3-ERG another-PL
anö-'pï i-ya ganang
eat_meat-PST 3-ERG already
'Then he would always say "they are all there", but he had eaten the others already'[19] (RA Piyai'ma Story 017 <45.856>)

(2) Akawaio (Cariban, Venezuelan Cariban): frequentativity
möröbang yau tok eji iwang pe wenai tö-bödï
thereafter LOC 3PL be hunger like because go-ITER
'So, because they are hungry, I keep going to Venezuela several times'
(RA Personal Narrative 168 <593.426>)

(3) Akawaio (Cariban, Venezuelan Cariban): generic imperfectivity
ka'pong pe na'kö ka'pong pe sa'ne ji
person like maybe person like EM EM
y-eji-bödï-'pï
3-be-HAB-PST
'Maybe he was a person, he was a person' (TL Makanaimo 013 <45.915>)

(4) Akawaio (Cariban, Venezuelan Cariban): frequentativity/habituality/generic imperfectivity
ö'rö kaza rögeng tok n-eji-bödï-dai ka'pong pe rö na'kö tok
what like only 3PL 3SBJ-be-HAB-PST person like EM maybe 3PL
eji-bödï-'pï mö
be-HAB-PST UNCRTN
'I do not know how they used to be, maybe they used to be humans'
(TL Turtle Story 007 <b 39.236>)

19. This tale is about the so-called *idodo-killers*, i.e., Amerindian killers.

These examples show that in real contexts, the functional differences can be very small even though theoretically the distinctions seem to be clear.

In the cases of these examples, but also more generally speaking, what plays a crucial role in the process of classification of the occurrences is the current context of use, but also the actional type of the verb. For instance, a stative verb can have more likely a habitual or a generic imperfective reading than, for instance, a punctual verb (cf. Section 2.4 and Figure 9).

Iterative-like set. The functions of this set that can be found in Akawaio texts are: (i) iterative/frequentative (cf. (5)), (ii) iterative (cf. (6)), event-internal plurality/iterative (cf. (7)) readings.

(5) Akawaio (Cariban, Venezuelan Cariban): iterativity/frequentativity
naigaza kuru pöröu ennogï-bödï zerö ta-'pï i-ya ji mörö
how EM arrow shoot-ITER this say-PST 3-ERG EM AI(?)[20]
"'How, really, will we shoot the arrow more than one time?" he said.'
(RA Piyai'ma Story 033 <106.543>)

(6) Akawaio (Cariban, Venezuelan Cariban): iterativity
im mörö wenai kuru u-tö-bödï mörö
um that because EM 1-go-ITER AI(?)
'That is really why I keep going up and down'
(RA Personal Narrative 156 <546.078>)

(7) Akawaio (Cariban, Venezuelan Cariban): event-internal plurality/iterativity
e'tane mörö poro enda ta-zak-i-ya i-turumï-bödï pök
but that via go.IMPS say-PFV-3-ERG 3-whistle-ITER from
enari'ke-be a-eji a'tai a-enna'po-zak a'tai
frightened-ATTR 2-be if 2-return-PFV if
'but if you do not obey what it said about going a particular way for the hunt, and if you are afraid of its whistling and you decide to return home;'
(EW Kanaimö 029)

It is important to remind that cross-linguistically, event-internal plurality tends to be the function that more often is determined by the sum of the functional value of the pluractional marker and the actional value (Aktionsart) of the verb stem. Thus, this function tends to be the trickiest to recognize and in addition it is also difficult to explain why it is not determined only by the mere presence of a pluractional

20. The form *mörö* can create some problems in understanding its actual function. Indeed, it can function as a inanimate singular distal demonstrative (*that* as in (6) and (7)), as a post-verbal particle indicating future and other unknown functions (as in (1)), and also as a marker of addressee involvement (AI) as in (5). The question mark in this example and in a couple of other examples in what follows indicates that the author was not sure in glossing *mörö* as AI.

marker. For example, in (7) the verb whistle is in some way inherently plural, and using the words of Cusic (1981), it is a repetitive verb. Then, it is possible that in Akawaio this actional value sometimes must be explicitly marked through the Iterative morpheme.

Participant plurality set. This is the last set that presents a remarkable number of occurrences. In Akawaio texts, I have found at least two different functions connected with the vertical parameter of distributiveness (cf. Chapter 2): (i) participant plurality (cf. (8)), and (ii) participant plurality/iterativity (cf. (9)).

(8) Akawaio (Cariban, Venezuelan Cariban): participant plurality
möra'tai ji kajiri engji tok ya a'tai mörö ji tok
at_that_time EM manioc_beer drink 3PL ERG when AI(?) EM 3PL
ma'ta-bödï-'pï haing!
die-ITER-PST drama
'At that time when they drank the kasiri, they died one by one haing!'
(RA Piyai'ma Story 096 <312.802>)

(9) Akawaio (Cariban, Venezuelan Cariban): participant plurality/iterativity
a-yebï-zak a'tai t-agïdï-bödï-ze-k murang pona
2-come-PFV when ADV-cut-ITER-PTCP-STYLE charm onto
i-nongga-au-ya n-ka-dai-ne tok ko
3-leave-2-ERG 3S-say-PST-EM 3PL EM
'When you have returned (from the hunt), you have to cut (the game) into pieces then place it on the charm.' (EW Kanaimö 044)

Continuative set. Even though this set does not present a number of occurrences that can be considered significant, it is interesting to report some examples in order to give a comprehensive account of the pluractional marker of this language.

I basically found two functions: (i) continuativity/iterativity (cf. (10)), and (ii) event-internal plurality/continuativity/iterativity (cf. (11)).

(10) Akawaio (Cariban, Venezuelan Cariban): continuativity/iterativity
yöi naga'pï po y-enggurumï-bödï-ng
tree stump on 3-wait-HAB-STYLE
'He would just rest there on top of a piece of tree stump'
(PS Duck Story 027 <116.598>)

(11) Akawaio (Cariban, Venezuelan Cariban): event-internal plurality/continuativity/iterativity
ö'rö pe y-eji y-aburö-bödï
what like 3-be 3-praise-ITER
'Why is she being praised?' (CB. Personal Narrative 071 <227.002>)

4.1.2 The semantic map of pluractionals in Akawaio

From the examples presented in the previous section, it comes out that the situation of Akawaio seems to be relatively clear. Certainly, this clarity is mainly due to the existence of only one marker (*-pödï*). This is a quite rare situation in the languages of the world. Often, we find more than one marker to cover pluractional functions. In any case, this is useful to better understand the position of pluractional constructions within the Akawaio grammar, but also the typological situation since it helps to test some facts of the cross-linguistic analysis. Thus, observing the number of the occurrences found in the texts analyzed, it is possible to propose at least two different semantic maps for this language. The first semantic map shows all the possible readings that the pluractional marker can express in Akawaio.

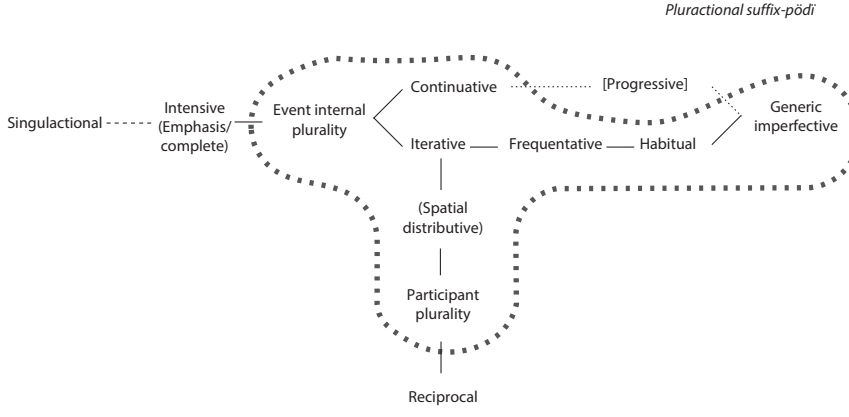

Figure 10. Extended semantic map of Akawaio pluractional marker *-pödï*

The semantic map in Figure 10 clearly shows that in Akawaio the pluractional marker *-pödï* covers a broad functional area. This area comprehends both the part of the pluractional core functions (iterativity, frequentativity, spatial distributivity, and participant plurality) and also some part of the area of additional functions. In fact, the Akawaio pluractional domain can go further than the center of the map on both sides: on the left, it can encode functions till event-internal plurality, while on the right it can cover functions till the extreme of the space, that is, habituality and generic imperfectivity. In a few cases, it can also encode continuativity on the top of the space.

However, the picture drastically changes if we take into consideration the relative frequency within the corpus of the occurrences of the functional sets presented above.

When we give the right weight to frequency, the situation becomes more definite and explicit. The number of occurrences for each set is shown in Table 3.

Table 3. Frequency of the occurrences of the functions encoded by the Akawaio pluractional suffix *-pödï*

Set(s)	Function(s)	Occurrence(s)
Frequentativity/habituality /generic imperfectivity	*frequentative/habitual*	101 (45,9%)
	frequentative	18 (8,2%)
	generic imperfective	12 (5,5%)
	frequentative/habitual/generic imperfective	15 (6,8%)
	Total occurrences	**146 (66,4%)**
Iterativity-like	*iterative/frequentative*	30 (13,6%)
	iterative	13 (5,9%)
	event-internal	
	plurality/iterative	10 (4,6%)
	Total occurrences	**53 (24,1%)**
Participant plurality	*Participant plurality*	8 (3,6%)
	Participant plurality/iterative	2 (0,9%)
	Total occurrences	**0 (4,5%)**
Continuativity	*continuative/iterative*	4 (1,8%)
	event-internal plurality/continuative/iterative	2 (0,9%)
	Total occurrences	**6 (2,7%)**
	Other minimal functions	**5 (2,3%)**
	Total occurrences	**220 (100%)**

The situation shown by Table 3 is considerably different from the one that the first semantic map reveals. It is undeniable that there is a relevant imbalance amongst the number of occurrences of the different sets.

If we consider only the functional sets with a significant number of occurrences, say, for instance, more than 25 (about 10% of the total number of the occurrences), only the first two sets, namely frequentativity/habituality/generic imperfectivity and iterativity-like, exhibit a specific importance.

Consequently, it is possible to draw a new semantic map that makes evident the relative weight of the sets (cf. van der Auwera 2013: 158–159). A map that highlights the actual (in the sense of the most frequent functions) importance within the functional domain of pluractional constructions of Akawaio. I decided to indicate the part of the most frequent functions together with the extended area stressing the former through the colored area on the space.

The semantic map is the following one:

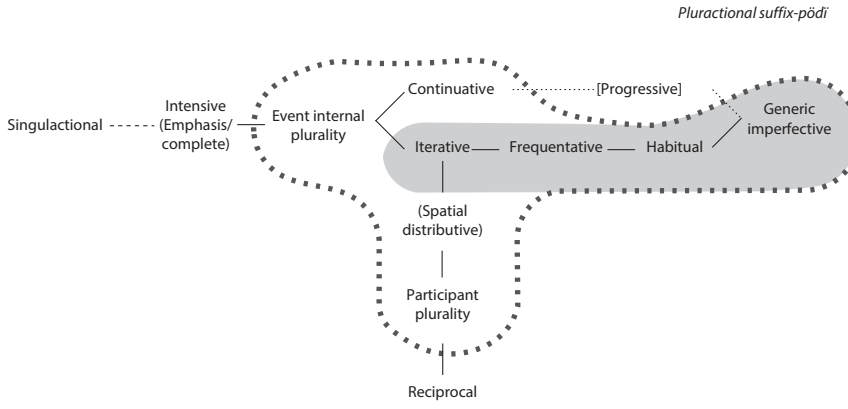

Figure 11. Restricted semantic map of Akawaio pluractional marker *-pödï*

The differences that exist between the two semantic maps reveal us something extremely interesting. In fact, it seems that in Akawaio the pluractional marker *-pödï* is in an ongoing process of grammaticalization. There exist at least three proofs that seem to confirm this statement.

Firstly, in Akawaio the frequency of the functions that cross-linguistically tend to be more grammaticalized is particularly high. In fact, as noted in Chapter 2, the Pluractional Conceptual Space shows some interesting linguistic correlations. One of them deals with the fact that cross-linguistically the functions on the right part of the space tend to be encoded through more grammaticalized devices, such as grammatical aspect, while the functions on the left tend to be expressed by less grammaticalized devices, such as Aktionsart. On this point, the semantic maps of Akawaio are extremely explicative: even though there are occurrences of less grammaticalized functions (e.g. event-internal plurality), the most frequent ones are exactly the ones in the right part (frequentative-like and iterative readings). This acquires even more relevance within the group of most frequent functions: frequentativity and habituality (usually more grammaticalized than iterativity) are largely the most frequent.

The second piece of evidence is provided by the Aktionsart of the verb stems. As already pointed out, the semantic interpretation of event-internal plurality follows a common process: to indentify an actual instance of this function, we need a verb stem with a specific actional value (repetitive) to which is added the derivational suffix *-pödï*. Consequently, the whole reading is given not only by the lexical meaning of the verb, the pluractional suffix, and the context but rather we have to take into account also the lexical aspect of the verb. In other words, in this case the outcome is composed in a slightly different way than the other functions: event-internal plurality is formed through the sum of the Aktionsart of the

verb stem and the functional value of the pluractional marker. This means that we have, for instance, a continuative or an event-internal plural reading only if the verb stem has some specific lexical characteristics. On the other hand, the functions in the right part of the space (e.g. frequentativity, habituality, etc.) are mainly constructed through the bare presence of *-pödï* and the contextual environment, independently by the actional value of the stem. A habitual occurrence will be always habitual basically with all types of verbs, a continuative or event-internal plural occurrence will be continuative or event-internal plural only with certain types of verbs. The lexical influence that affects the functions on the left is another piece of evidence for their less grammaticalized nature. Therefore, the distribution of Akawaio plaractional occurrences is not balanced. Indeed, we have seen that the most frequent functions are exactly the ones on the right (frequentative-like and more grammatical), and the scarce presence of the functions on the left suggests that Akawaio pluractional marker is quite grammatical or is becoming more grammatical (since we have some occurrences of more lexical functions).

Finally, the third piece of evidence deals with the presence of other derivational markers that cover the functional area of the functions that *-pödï* expresses less frequently. In Akawaio, there exist at least two other morphemes that mark respectively progressivity and the plurality of participants (of the absolutive argument): *-bök* PROG (progressive) and *-gong* PL (collective) (cf. Section 4.1.3).

(12) Akawaio (Cariban, Venezuelan Cariban): Progressive
kajiri *engji-bök* *tok* *eji-'pï-ng-ng*
manioc_beer drink-PROG 3PL be-PST-STYLE-STYLE
'They were drinking kajiri' (EW Kanaimö 134)

(13) Akawaio (Cariban, Venezuelan Cariban): Collective (or Plural Absolutive)
a-ma'ta-gong *tawong* *eda-'pï* *tok* *ya*
2-die-PL saying hear-PST 3PL ERG
'"You will all die!" they heard.' (RA Piyai'ma Story 083 <272.332>)

The presence in the grammar of Akawaio of these two markers increases the awareness that the continuative(/progressive) and participant plural occurrences of the marker *-pödï* within the corpus are only marginal facts. We can also suppose that the few examples that I found are a sort of residual occurrences and that nowadays the actual progressive and participant plural markers are respectively *-bök* and *-gong*, and no more the pluractional suffix *-pödï*.

4.1.3 The case of the collective *-gong* in Akawaio

In the previous section, the presence of a collective marker *-gong* in Akawaio was pointed out. A possible issue concerns the possibility that this morpheme can

be analyzed as a pluractional marker (distinct from *-pödï*) with the function of encoding the plurality of the participants involved in the occasion.

Indeed, if we look at the examples in the texts, it is evident that *-gong* can be used in contexts in which usually a pluractional marker is used as well. In other words, it is possible to find this morpheme in prototypical pluractional situations, that is, occasions in which a plural action is performed by or on plural participants (cf. (14), but also (13)).

(14) Akawaio (Cariban, Venezuelan Cariban): Collective (or Plural Absolutive)
Klef ah Sora kuru Sora Klef i-ma'ta-'pï mang tiginnö ane
Cliff ah Zorah EM Zorah Cliff 3-die-PST 3.be.PRS one wait.IMP
i-ma'ta-zak-gong beng
3-die-PFV-PL.ABS NEG
'Cliff, it is really Zorah first so it is Zorah, Cliff, one of them is dead, let's deal with those that are not dead' (RA Personal Narrative 147 <497.969>)

In this example, it is particularly evident that, when the situations and the participants are plural, the marker *-gong* is present (cf. the second occurrence of *die*), and when the situation and the participant are both singular the morpheme is not present (cf. the first occurrence of *die*).

However, the morpheme *-gong* is described as a nominal number marker (Caesar-Fox 2003: 86), even though this is not in a traditional marker of this category:

> [P]lurality in Akawaio in the traditional sense was not based on whether or not there was more than one of an item within a category. Rather, *items were assessed collectively as mass nouns or as generic and particular forms*, resulting in the absence of nouns which [are] marked as singular and plural in the Akawaio grammar. In more recent times and because of contact with particularly western cultures, new plural forms have evolved that mimic English language structures. Presently, Akawaio has at least six plural forms: ***yamök/amök***, ***-tong/-dong***, ***-sang***, ***-rang***, ***nang***, and ***gong/kong***.
>
> (Caesar-Fox 2003: 86, bold is in the original, italics is mine)

In other words, in a precedent diachronic stage of the language, all these markers were not real nominal number markers.[21] This is suggested by the fact that some of them (for example, *-gong*) can be applied not only to nouns, but also to verbs.[22]

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21. For instance, **=komo* 'collective possessor' > *-gong/-kong*, **=tomo* 'collective N' > *-tong/-dong* (Gildea p.c.).

22. This is mainly due to the reanalysis of nominalizations as main clause verbs (cf. Gildea 2012: 465–469, or Gildea 1998: Chapters 6–7).

However, in the majority of cases, we find the suffix *-gong* applied to nouns rather than to verbs. In the texts that I have analyzed, among 108 occurrences of this morpheme, only 20 are applied to a verb. The others are applied to nouns. This unbalanced distribution is probably a consequence of the process of becoming a canonical (or English-like) nominal number marker that Caesar-Fox (2003) described in her work and that is mainly caused by the contact with western languages (e.g. Spanish and English).

From a synchronic point of view, the fact that *-gong* is more often used with nouns than with verbs is the first strong proof of the non-pluractional nature of this marker.

In addition, I also found an example of the strongest piece of evidence for demonstrating that *-gong* is not an actual pluractional marker. Indeed, I found a single occurrence of the suffix *-gong* used with plural participants, but without a plurality of situations involved. Look at the example in (15):

(15) Akawaio (Cariban, Venezuelan Cariban): Collective (or Plural Absolutive)
e'tane zerö ji a-do'kanïgï-gong-bök eji-aik wagï be bra rö
but this EM 2-understand-PL.ABS-PROG 1-be-PRS good like NEG EM
zero si-do'kanïgï-aik
this 1A-understand-PRS
'But, now, I am beginning to understand you (all) and it is not good, I understand.' (R Personal Narrative 026 <121.226>)

The verb *ado'kanïgïgongbök* seems to express a single instance of understanding, i.e., an occasion in which the subject (singular) is performing the event of understanding only once. The presence of the marker *-gong* is due to the fact that the singular subject starts to understand a plurality of participants (cf. *you (all)* in the translation) that however are conceived as a whole in terms of instances of understanding. In other words, the event of understanding is not plural since the subject does not understand the participants individually, but she/he performs a single occurrence of understanding the totality of the participants involved.

In this sense, I cannot say that *-gong* is an actual pluractional marker. However, it deserves mention as well that in the majority of cases this marker does actually appear in situations that are prototypically pluractional.

4.1.4 Beyond Akawaio: Pluractionality in other Cariban languages

In this section, the situation of Akawaio will be compared to the one of other Cariban languages in order to investigate some possible correlations and to try to capture the general perspective of pluractional constructions in this language family. In particular, I will focus on the Cariban languages of my sample, and also

on an additional one, that is, Arara (Cariban, Pekodian). My sample includes four Cariban languages: Carib (Cariban, Guianan), Hixkaryana (Cariban, Parukotoan), Panare (Cariban, Venezuelan Cariban), and Macushi (Cariban, Venezuelan Cariban). Of these languages, only Hixkaryana does not have a specific pluractional marker (cf. Derbyshire 1979). All the other languages cited above exhibit a morpheme that encodes pluractional functions.

In Carib, the suffix *-poty* encodes mainly iterativity, frequentativity, and habituality, but also spatial distributivity (Courtz 2008: 82). Some examples of this morpheme (with its allomorph *-pò*) are given in the following examples:

(16) Carib (Cariban, Guianan)
y-(w)yto-ry ta y-jàmun ky-ni-ase-tỳka-poty-jan-no wara
1-go-POSSC in 1-body ALLEG-AEO-RXC-shock-ITER-PRSU-ADN like
'As I went, my body seemed to shiver continually, as it were.'
(Courtz 2008: 181)

(17) Carib (Cariban, Guianan)
w-(w)yto-poty-ja te pàporo moro-kon pakira
1M-go-ITER-PRS but all that-PL collared_peccary
ase-kupi-tòkon wararo
RXC-bathe-NIPL at_every_instance_of
'But I went to all the places where peccaries bathe.' (Courtz 2008: 188)

Also in Macushi there exists a suffix *-pîtî* that covers basically the same domain of functions of the suffix *-pödï* in Akawaio. Specifically, it often gives an iterative, frequentative, or habitual reading to the verb (Abbott 1991: 118).

(18) Macushi (Cariban, Venezuelan Cariban)
paapa-ya yei ya'tî-pîtî
father-ERG tree cut-ITER
'Father cuts the tree (repeatedly)' (Abbott 1991: 118)

(19) Macushi (Cariban, Venezuelan Cariban)
mîîkîrî i-n-koneka-'pî yapurî-pîtî-'pî to'-ya
3.PRO 3-OBJ.NMLZ-make-PST praise-ITER-PST 3.PRO.PL-ERG
'They used to worship that which he made' (Abbott 1991: 118)

Slightly different is the situation of Panare in which the suffix *-pëtï* covers a wider range of pluractional functions. In particular, this morpheme can encode mainly iterative or frequentative readings, and also participant plurality (cf. (22), and also (54) in Chapter 2).

(20) Panare (Cariban, Vanezuelan)
pata-n y-ákama-pëtï-mpëj mën ano.
foot-POSS TR-DI.worsen-ITER-IPFV.T IN.INVIS dirt
'The dirt keeps making my foot worse' (Payne & Payne 2013: 185)

(21) Panare (Cariban, Vanezuelan)
kën *t-pa-pëtï-i* *yu*.
AN.INVIS 1SG.A-feed-ITER-PPERF2 1SG
'I used to feed him/her' (Payne & Payne 2013: 185)

(22) Panare (Cariban, Vanezuelan)
y-ankë-pëtï-ta' *ñaj*.
3-take-ITER-IMP.MVMT there
'Go take them.' (Payne & Payne 2013: 185)

Finally, in Arara the morpheme *-tke* covers the following pluractional functions: participant plurality, iterativity, frequentativity, habituality.

(23) Arara (Cariban, Pekodian)
ugon *'carro'* *erengmy-tke-nangry*
man car hit-ITER-IPFV
'The man is hitting the car several times' (Carol Alves p.c.)

(24) Arara (Cariban, Pekodian)
jei *amtem* *poda=p* *kun-wo-tke*
wood house inside=ATBZ 3.RM.PST-kill-ITER
aturãu *Karaja-mkeni*
cattle Karaja-deceased
'The late Karaja killed many cattle in the wood house' (Carol Alves p.c.)

(25) Arara (Cariban, Pekodian)
y-bage-dup *kafe* *j-okpe-tke-nangry*
1S-wake_up-SUB coffee 1A-make-ITER-IPFV
'When I wake up, I make coffee' (Carol Alves p.c.)

(26) Arara (Cariban, Pekodian)
opty-me-tke-ni
medicine-VBZ-ITER-NOM
'Shaman' (the person who habitually gives medicine) (Carol Alves p.c.)

Thus, it is evident that in the Cariban languages considered, the situation is incredibly similar to the one in Akawaio. In any case, at least three different considerations can be drawn up.

In three of the five Cariban languages mentioned in this section, pluractionality is marked through a morpheme that seems to have the same diachronic origin of the Akawaio marker *-pödï* (cognate suffixes): *-poty* in Carib, *-pîtî* in Macushi, and the morpheme *-pëtï* in Panare. In addition, also the functions that these markers cover are almost the same as in Akawaio. This highlights that, at least in the domain of event plurality, these languages have a strict relationship.

On the other hand, in Arara we find a pluractional marker that shows a completely different form, though from a functional point of view it covers practically the same functions as *-pödï* in Akawaio and the other Cariban pluractional morphemes, in particular the Panare morpheme *-pëtï*.

In conclusion, I can say that pluractionality is a widespread phenomenon in several Cariban languages. We can find it in almost all the branches that compose this family: Guianan (Carib, but also in Tiriyó cf. Meira 1999 and Ye'kwana cf. Cáceres 2011); Pekodian (Arara, but also in Ikpéng cf. Pachêco 2001); and Venezuelan (Akawaio, Macushi, Panare, Yawarana – Cáceres & Gildea p.c. –, Tamanaku – Meira & Gildea p.c.).

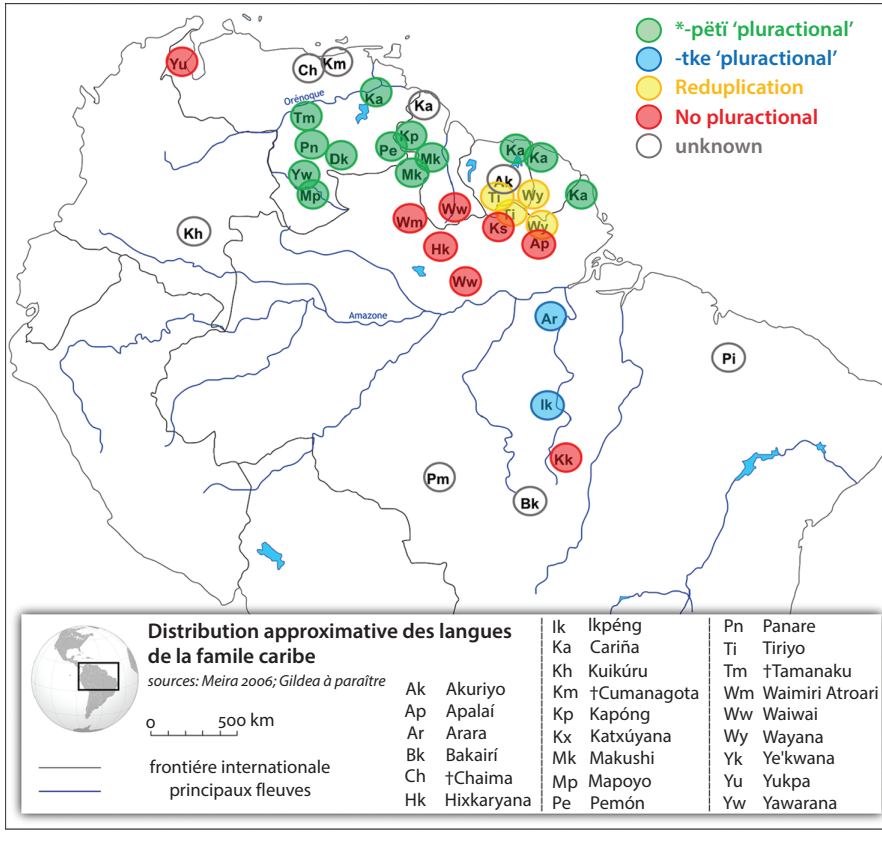
Conversely, there is also a branch in which this type of constructions seems to be absent: specifically, in Parukotoan languages (for example in Hixkaryana cf. Derbyshire 1979 and in Waiwai cf. Hawkins 1998).

This issue can find a possible explanation in the fact that the Parukotoan branch seems to be the first branch that was separated by the rest of the Cariban languages (cf. Meira, Hoff & Gildea 2010 and Gildea 2012). Consequently, even though geographically this branch is placed almost in the center of the Cariban area, Parukotoan languages do not have a specific morphological device that encode such situations.

Some other considerations can be drawn as well. If we check which Cariban languages have a pluractional marker and which have not, we have the following situation (following the classification proposed by Gildea 2012: 445):

(27) Pluractional contructions in Cariban (Spike Gildea p.c.)
Parukotoan (A): No pluractional
Pekodian (B–C): Unknown for B; non-cognate form for C
Venezuelan (D–H): Robustly attested in all described languages
D: Akawaio & Macushi
E: Panare
F: (extinct)
G: Yawarana, Mapoyo (attested, Spike Gildea p.c.)
H: Tamanaku (attested, Spike Gildea p.c.)
Nahukwa (I): No pluractional
Guianan (J-M): Yes and No
J: (Kari'nja) and K (Ye'kwana) have reflex of *–*pëtï*
L: (Tiriyó) and M (Wayana) have reduplication
M: (Karihona and Akuriyó) No pluractional attested, very limited descriptions
Residue (N-O-P): Probably no pluractional
N: (Apalaí) No pluractional (Spike Gildea p.c.)
O: (Waimiri-Atroari) No pluractional attested (limited descriptions)
P: (Yukpa) No pluractional attested (very limited descriptions)

Then, if we display these results on a map, we will have the situation shown in Map 2.



Map 2. Geographical distribution of Cariban pluractional markers (Spike Gildea p.c. based on map by Cáceres & Wostyn)

Thus, it seems that Cariban pluractional markers follow an areal distribution (Spike Gildea p.c.): **-pëtï* is mainly found in Venezuela, in the western Guiana Plateau, and in a limited area in the East; *-tke* is present only in two related and adjacent languages; reduplication is found in a few adjacent languages; absence of pluractional markers is found in the South of the Guiana Plateau and in two isolated spots, i.e., Kuikuro in the South and (maybe) Yupka in the North-West. Unfortunately, I do not have diachronic data that allow me to reconstruct an original form for this marker. However, the picture shown by (27) and Map 2 seems to suggest the existence of three separate diachronic sources that have led to three different constructions.

In conclusion, this case study has revealed that in Akawaio and more generally in Cariban languages, pluractionality is a widespread phenomenon and displays

some specific characteristics. These characteristics allow me assume that probably the Cariban pluractional constructions are following a specific path of grammaticalization. Specifically, they are apparently shifting from the functions placed in the left part (more lexical) of the conceptual space to the ones in the right, i.e., to more generic and aspectual values. Thus, it is possible to presume that in some future stages the Akawaio *-pödï* can become a true aspectual value, with habitual and, then, generic imperfective readings.

If we compare these characteristics with the cross-linguistic peculiarities of pluractional constructions, it is also possible to say that Cariban languages confirm some general issues. Firstly, they seem to provide a piece of evidence for the correlation between the conceptual space and the degree of grammaticalization of the functions (cf. Chapter 2). In addition, they also suggest a possible direction of the grammaticalization process, from the left to the right of the space. This is what I theorized in Chapter 2 and what we expect from this kind of situations.

4.2 Pluractionals in Beja (Afro-Asiatic, Cushitic)

Beja (or *beɖawije=t* for native speakers) is a language that belongs to the Afro-Asiatic family, and, specifically, to the Cushitic branch. Within this branch, it is the only component of the Northern group.

Beja is spoken by about 1.160.000 of people. About 1.100.000 speakers in the Eastern part of Sudan, and the remained part in the Northern area of Eritrea. It is widely accepted that Beja has two main different varieties plus a transition zone: a northern variety called *miːmˈh-i=t beˈɖawije* and a southern variety called *gaːˈʃ-i=t beˈɖawije* (Vanhove 2014: 4).

From a linguistic point of view, Beja (as many other Cushitic languages) has a basic word order SOV, with postpositions and a subordinate-main clause order. The morphology of Beja is extremely rich, in particular for what concerns the verbal system (cf. below). In the nominal domain, Beja presents mainly three grammatical cases: nominative, accusative, and genitive (also a vocative). The gender system includes a masculine and a feminine value, while number systems is slightly less complex than in other Cushitic languages (in particular Omo-Tana and Dullay), and presents a singular-plural distinction with a singulative form used to refer to a single entity or quantity of generic nouns (cf. Vanhove 2014).

In Beja there exist two different verb classes: the first class V1 (cf. Vanhove 2014, 2017) is composed of verbs that conjugate through prefixes. The second class V2 (cf. Vanhove 2014, 2017) is composed of verbs that conjugate through suffixes.

In addition, the root of verbs belonging to V1 class may be subject to vowel changing depending on Tense/Aspect/Mood (henceforth TAM), while the root of V2 verbs is immutable.

In Beja, Indicative verbs can be conjugated for temporal-aspectual values (Imperfective, Perfective, and Aorist) and two moods (Imperative and Optative).

In this language, several verbal derivations are available. V1 verbs can be derived in order to create Intensive, Pluractional, Middle, Causative, Double Causative, Passive and Reciprocal forms. On the other hand, V2 verbs can be derived to create Pluractional, Middle, Causative, Double Causative, Reciprocal, and Inchoative.

The texts that I have analyzed for this case study were provided to me by Prof. Martine Vanhove (CNRS-LLACAN) who collected and glossed them. Almost all texts are freely accessible on the website of the CorpAfroAs project (cf. https://doi.org/10.1075/scl.68.website), while the ones that are not available so far will be accessible soon at same website.

These texts were recorded in Sinkat (a village of the transition zone of the southern variety located in the central-eastern part of Sudan). They are thirty-seven and all of them, but one, belong to the narrative genre. The total amount of words is about eleven thousand (11.000).

It is noteworthy that:

> Beja speakers have a strong awareness of a hierarchy of speech related to rules of honour, politeness, and to taboos. Poetry recited by men and greetings are at the top of this hierarchy, while casual talk and ordinary conversations are at the very bottom. (Vanhove 2014: 4)

In the texts, I have found 259 occurrences of pluractional markers.

In what follows, I will present the main characteristics of pluractional constructions in Beja (and briefly also of other Cushitic languages) starting from the analysis of the data.

4.2.1 Strategies of marking and functions of Beja pluractionals

As it was pointed out in the previous section, Beja exhibits two different verb classes. Each class has its own way to mark pluractionality, however from a functional point of view they mainly match each other.

In Beja, there exist two morphological devices that encode pluractional functions, i.e., Intensive (182 occurrences) and Pluractional (77 occurrences). The former applies only to V1, while the latter can apply both to V1 and V2, though with some small morphological differences.

4.2.1.1 *Strategies of marking pluractionality in Beja*

In Beja, V1 verbs exhibit two marking strategies, one is used to derive Intensive forms and the second Pluractional.

V1 Intensive forms are marked through the ablaut of the verb stem. Vanhove (2014: 24–25) describes this strategy as follows:

> All the prefixes have a long *eː-* in the IPFV and retain the characteristic *-a* of 2SG.M, *-i* of 2SG.F and *-na* in 2[PL, SM] & 3 PL of the base form; the stem vowel becomes *i* and *aː* drops in disyllables, while a suffix *-i* is added in monosyllables: *eː-ktim* 'I/he arrives', *eː-jim-i* 'it rains'. (Vanhove 2014: 24–25)

An example of this strategy is provided in (28). While in (28a) we can see the underived form, in (28b) there is the same verb derived for Intensive:

(28) Beja (Afro-Asiatic, Cushitic)

a. *ʔawi=b* *jhak-s-an=t* *a-gid*
stone=INDF.M.ACC get_up-CAUS-PFV.1SG=CNJ 1SG-throw\PFV
'I took a stone and threw it.' (BEJ_MV_NARR_05_eritrea_389)

b. *geːd-eːti* *hoːsoː* *tiː-simh=jeːb=ka*
throw\INT-CVB.CSL 3SG.ABL 3SG.F-get_rid_of\AOR=REL.M=DISTR
'Each time she throws stones at it to get rid of it.'
(BEJ_MV_NARR_05_eritrea_147)

The second strategy that can be applied to a V1 verb is reduplication and it is used to derive Pluractional forms.

The reduplication can be partial (in monosyllabic and disyllabic verbs) or full (in disyllabic). These strategies are illustrated in the following examples:

(29) Beja (Afro-Asiatic, Cushitic)

a. *naː=t* *bi=t-katiːm* *mhiːn*
thing=INDF.F NEG.OPT=3SG.F-arrive\OPT place
'(The donkey stopped) in a place where nothing can arrive,
(in the cliffs)' (BEJ_MV_NARR_05_eritrea_183)

b. *i=mag^{w}al* *hoːg-aː=b=u=it*
DEF.M=reservoir descend-CVB.MNR=INDF.M.ACC=COP.3SG=CSL
ki=i-t-kat~tam
NEG.IPFV=3.SG.M-MID-arrive~PLAC.PFV
'since the reservoir was deep, it cannot be reached.'
(BEJ_MV_NARR_05_eritrea_083)

On the other hand, V2 verbs show two ways to encode Pluractional forms. We can find partial or full reduplication for both mono- and disyllabic verbs.

In the partial reduplication, there is always the use of the vowel *a* in the reduplicant independently of the vowel of the verb stem.

In monosyllabic verbs, this gives the C_1a~ schema (cf. (30b)). In disyllabic verbs, we can find three different schemas: the first, and clearly the more widespread, consists in the insertion of a ~C_2a- after the second syllable (cf. (31b)); the

other two types are rare, one is the C_1a~ schema and the second one is the ~C_2C_2a- (Vanhove 2017: 74–75).

Vanhove (2017: 75) notes that there is only one occurrence of the last strategy in her corpus with a quadrisyllabic verb in which the second consonant is geminated, that is, *halla~llafoːj* swear~PLAC.

(30) Beja (Afro-Asiatic, Cushitic)[23]

a. *oːt* *ti=nbiɖeːj=t=ib* *naː=t*
PX.SG.F.ACC DEF.F=yawn\INT.N.AC=INDF.F=LOC.SG thing=INDF.F
a-gam
1SG-ignore\MID.PFV
'I did not know why it yawned' (BEJ_MV_NARR_05_eritrea_377)

b. *hoːj* *i-moː-ga~gaːm-n=hoːb*
3ABL 3-RECP-PLAC~ignore\PFV-PL=when
'When they were all considering each other as ignorant about it'
(BEJ_MV_NARR_31_QUARREL_023)

(31) Beja (Afro-Asiatic, Cushitic)

a. *oːn*
PX.SG.M.ACC
oː=tak *sakana-am-an=hoːb*
DEF.SG.M.ACC=man ask_for_news-MID-PFV.1SG=when
'when I ask about this man,' (BEJ_MV_NARR_04_djinn_111)

b. *sakka~kana-sam-eːn* *eːn*
ask_for_news~PLAC-RECP-IPFV.PL say\PFV.3PL
'the dog that he has, talk together, they said'
(BEJ_MV_NARR_24_LEZARD_110)

The other strategy consists in the total reduplication of the verb stem, both for mono- and disyllabic verbs (cf. (32b) and (33b)).

(32) Beja (Afro-Asiatic, Cushitic)

a. *toːt* *ti=takat* *ti=waw-ti=t*
PX.SG.F.ACC DEF.F=woman DEF.F=cry-AOR.3SG.F=INDF.F
rh-i=hoːb
see-AOR.3SG.M=when
'when he saw this woman who was crying,'
(BEJ_MV_NARR_14_sijadok_155)

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23. The verb *ti=nbiɖeːj=t=ib* DEF.F=yawn\INT.N.AC=INDF.F=LOC.SG is marked for Intensive, but the verb that is under investigation in (30) is *a-gam* 1SG-ignore\MID.PFV.

b. *tuː=ndi* *ʔakir-aː=t*
DEF.SG.F.NOM=mother be_strong-CVB.MNR=INDF.F
waːw~waːw-eːtiːt
PLAC~cry-CVB.ANT
'the mother having wept a lot' (BEJ_MV_NARR_13_grave_076)

(33) Beja (Afro-Asiatic, Cushitic)
a. *a-nʔa* *a-tir=t* *a-ʃibib=hoːb*
1SG-be_down\PFV 1SG-lean\PFV=CNJ 1SG-look\PFV=when
'when I leaned down and looked' (BEJ_MV_NARR_01_shelter_105)
b. *giḍʔa=t* *ʃibib~ʃibib-s-eːn=hoːb*
shoe=INDF.F look~PLAC-CAUS-IPFV.3PL=when
'when they look around for the shoes,'
(BEJ_MV_NARR_17_shoemaker_285)

4.2.1.2 *The functional domain of Beja pluractionals*

From a functional point of view, the situation is more homogeneous than the one shown in the previous section.

In fact, both the occurrences of Intensive and Pluractional show a similar distribution over the functional values that the verbs can take.

Intensive. The verbs (V1) that can be derived through the internal modification of the stem can encode several functions, out of which the most encoded is mainly the iterative.

(34) Beja (Afro-Asiatic, Cushitic)
eː-ʧibʔi *eːn* *oːn*
3SG.M-hit\INT.IPFV say\PFV.3PL PX.SG.M.ACC
'he hits him repeatedly, they said, this (man)'
(BEJ_MV_NARR_07_cold_59)

(35) Beja (Afro-Asiatic, Cushitic)
oː=kaːm *ni-ʃabb=eːt* *areː-na=aj*
DEF.SG.M.ACC=camel 1PL-look\INT.PFV=REL.F like-PFV.1PL=CSL
'"[…] (I settled them down very well". They told me: "We've come to you) because we would have liked to examine the camel", (he said)'
(BEJ_MV_NARR_03_camel_100)

There are situations in which a form can have both an iterative reading and some other related functions depending on the context and the type of verb. These readings create the following double-function: iterativity/participant plurality (cf. (36)), iterativity/frequentativity (cf. (37)), iterativity/event-internal plurality (cf. (38)), and iterativity/continuativity (cf. (39)).

(36) Beja (Afro-Asiatic, Cushitic): iterativity/participant plurality
a-daːjid
1SG-gird\INT.PFV
'I tightened them well' (BEJ_MV_NARR_03_camel_179)

(37) Beja (Afro-Asiatic, Cushitic): iterativity/frequentativity
ʃʔi i=raːw=i
before DEF.M=other=POSS.1SG.NOM
ʈabʔ-aː=b=u=it
hit\INT-CVB.MNR=INDF.M.ACC=COP.3SG=CSL
'because the other (my companion) had hit it before.'
(BEJ_MV_NARR_15_leopard_091)

(38) Beja (Afro-Asiatic, Cushitic): iterativity/event-internal plurality
uː=tak hoːj eː-fijid eːn
DEF.SG.M.NOM=man 3ABL 3SG.M-laugh\INT.IPFV say\PFV.3PL
'The man laughs at that, they said,' (BEJ_MV_NARR_24_LEZARD_066)

(39) Beja (Afro-Asiatic, Cushitic): iterativity/continuativity
handi-i whiː eː-jiːm=hoːb
tree-GEN.SG under 3SG.M-spend_the_day\INT.IPFV=when
'when he spends the day under a tree,'
(BEJ_MV_NARR_24_LEZARD_104)

However, it is important to say that the verbs *fijid* 'laugh' in (38) and *jiːm* 'spend the day' in (39) do not display an unmarked form, that is, their basic form is the pluractional one. Obviously, this makes their interpretation weaker than the occurrence of the actual Intensive derivation. Probably, this lexicalization of the pluractional marker is due to their pluractional-like lexical semantics (event-internal plurality and continuativity, respectively). In other words, both the verbs have a semantics that makes them prone to a pluractional reading almost always.

The Intensive can encode some other functions. Specifically, the ones that I found in the texts and that are recurrent are the followings: (i) frequentativity/habituality (cf. (40)), (ii) participant plurality (cf. (41)), (iii) successive events (cf. (42)), and (iv) spatial distributivity (cf. (43)).

(40) Beja (Afro-Asiatic, Cushitic): frequentativity/habituality
mali-a oːn oː=ʤina
two-ORD PX.SG.M.ACC DEF.SG.M.ACC=baby
wi=si-raːkʷoː-m-iːni=b
REL.M=CAUS-be_afraid\INT-MID-IPFV.3SG.M=INDF.M.ACC
'Then the baby who has nightmares' (BEJ_MV_NARR_33_MEAT_09)

(41) Beja (Afro-Asiatic, Cushitic): participant plurality
ti=takat *digiː-ti*
DEF.F=woman turn_back-CVB.CSL
hoːsoː *geːd-ti=jeːb=ka*
3SG.ABL throw\INT-AOR.3SG.F=REL.M=DISTR
'the woman was throwing stones at it away from her.'
(BEJ_MV_NARR_05_eritrea_130)

(42) Beja (Afro-Asiatic, Cushitic): successive events
j=hankwil-a=jaː *dhaːj* *jhak-i=t*
DEF.M=youth-PL=POSS.3PL.NOM DIR get_up-AOR.3SG.M=CNJ
i=ɖeːfa *dhaːj* *i-naːgil-na*
DEF.M=door DIR 3-open\INT.PFV-PL
'His young messenger people got up towards him and opened the door for him' (BEJ_MV_NARR_14_sijadok_292–293)

(43) Beja (Afro-Asiatic, Cushitic): spatial distributivity and iterativity
ʔiʃ-ti *ganaːj=hi=wa*
let-CVB.CSL gazelle=POSS.3SG.ACC=CNJ
ta~toːl-i=hoːb
PLAC~hunt\INT-AOR.3SG.M=when
'While he kept on trapping his gazelle everywhere leaving them (the dead sons) alone' (BEJ_MV_NARR_18_Adam_devil_298)

In (43), we can observe an interesting fact. The verb is marked contemporarily for both the pluractional strategies of Beja, Pluractional and Intensive. This double marking gives a compositional reading, i.e., iterativity and spatial distributivity functions are expressed at the same time, and it is almost impossible to say which marker encodes which function.

Similarly to the case of Akawaio, the functions that pluractional markers can encode in Beja do not have the same number of occurrences. Table 4 shows the frequency of the Intensive occurrences for each function or cluster of functions.

The picture that emerges from the data seems to be unambiguous. The occurrences showing an iterative reading are about the half of the whole number of occurrences. In addition, if we take into account the occurrences that can also have an iterative meaning this number increases drastically reaching the 77,4% of the total percentage.

It is also interesting that the most frequent function after iterativity is frequentativity/habituality, and not, for instance, simple frequentativity (not attested) that, at least theoretically, should be much closer to the meaning of iterativity than the double function frequentativity/habituality. However, it does exist an expla-

Table 4. Frequency of the occurrences of the functions encoded by Intensive in Beja

Function(s)	N° of occurrences	Percentage
Iterative	95	52,2
Iterative/Participant plurality	20	11,0
Iterative/Frequentative	15	8,2
Iterative/Event-internal plurality	5	2,7
Iterative/Continuative	5	2,7
Iterative/Spatial distributive	1	0,6
Spatial distributive	1	0,6
Participant plurality/Spatial distributive	1	0,6
Participant Plurality	9	4,9
Frequentative/Habitual	14	7,7
Successive events	2	1,1
Dubious cases	14	7,7
Total	182	100

nation of this fact: in the texts, there is an important frequency (13 out of 14) of nouns referring to jobs or quality. These nicknames are conceptualized in Beja as frequentative/habitual instances. These nouns are: *ʔoːt-anaː* 'curser', *ʃaːbbi* 'sentinel', and *habbaːri* 'smart'. Morphologically, they are verbal nouns, that is, their base of derivation is the Intensive form of the verb to which is then applied the nominalization.

I show an example for each verbal noun in (44)–(46).

(44) Beja (Afro-Asiatic, Cushitic)
ʔoːt-anaː=t *iː-d-n=eːt* *hoːj*
curse\INT-N.AGN=INDF.F 3-say\AOR-PL=REL.F 3ABL
tiː-fi
3SG.F-be_there\AOR.SBJ
'there was the one who was called Curser,' (BEJ_MV_NARR_12_witch_033)

(45) Beja (Afro-Asiatic, Cushitic)
ʃaːbbi=t-i *ʃibib-i* *ti-ni=hoːb*
look\INT.N.AGN=INDF.F-VOC look-IMP.SG.F 3SG.F-say\PFV=when
'When she said: "Sentinel, look well!"', (BEJ_MV_NARR_12_witch_093)

(46) Beja (Afro-Asiatic, Cushitic)
habbaːri=t *waliːk-eːn=hoːb*
be_smart\INT.N.AC=INDF.F shout-IPFV.3PL=when
'When they call Smart,' (BEJ_MV_NARR_21_SMART_43)

Thus, the lexical meaning of such nouns is given by a construction that can be interpreted as *the person who always/often curses/looks/is smart*. Consequently, the several occurrences of frequentativity/habituality can now be explained. In addition, the kind of text in which they appear, i.e. a (long) tale, makes them more frequent than probably they would appear in other textual genres.

This situation must be considered in order to avoid a proliferation of occurrences that do not actually have such importance in Beja. We have only one clear occurrence of the frequentative/habitual function, that is illustrated in (40). The other thirteen occurrences are all represented by nicknames. Consequently, this frequency makes such function comparable to other minor functions.

Pluractional. The functions encoded by the Pluractional marker (V1 and V2) are almost the same of the ones encoded by Intensive forms.

Also in this case, the most recurrent function is iterativity. Nevertheless, compared to the Intensive, the Pluractional markers show a less broad range of possible readings. The functions that these forms can encode are: (i) iterativity (cf. (47)), (ii) iterativity/frequentativity (cf. (48)), (iii) iterativity/spatial distributivity (cf. (49)), (iv) iterativity/event-internal plurality (cf. (50)), (v) participant plurality (cf. (51)), (vi) frequentativity/habituality (cf. (52)), generic imperfectivity (cf. (53)), and (vii) intensity (cf. 54)).

(47) Beja (Afro-Asiatic, Cushitic): iterativity
oː=tak *nakka~kam-eː*
DEF.SG.M.ACC=man look_round~PLAC-CVB.SMLT
'while he was glancing at the man several times'
(BEJ_NARR_MV_30_PEAR1_29)

(48) Beja (Afro-Asiatic, Cushitic): iterativity/frequentativity
uː=ʤina *ga~gam-iːni=ejt*
DEF.SG.M.NOM=baby PLAC~shout-IPFV.3SG.M=CSL
'because the baby shouts' (BEJ_MV_NARR_33_MEAT_13)

(49) Beja (Afro-Asiatic, Cushitic): iterativity/spatial distributivity
giʡʔa=t *ʃibib~ʃibib-s-eːn=hoːb*
shoe=INDF.F look~PLAC-CAUS-IPFV.3PL=when
'when they look around for the shoes'
(BEJ_MV_NARR_17_shoemaker_285)

(50) Beja (Afro-Asiatic, Cushitic): iterativity/event-internal plurality
uː=biri *ʈa~ʈakʷ-i*
DEF.SG.M.NOM=rain PLAC~drip-AOR.3SG.M
'the rain was dripping and […]' (BEJ_MV_NARR_01_shelter_097)

(51) Beja (Afro-Asiatic, Cushitic): participant plurality
am-mar~ri-jaː=t *ʔamma* *rhi-ji=hoːb*
RECP-find~PLAC-CVB.MNR=INDF.F people see-AOR.1SG=when
'when I saw people gathered' (BEJ_MV_NARR_08_drunkard_184)

(52) Beja (Afro-Asiatic, Cushitic): frequentativity/habituality
faʤil uː=dheːj dhaːj jʔ-eːna=t=ka
morning DEF.SG.M.NOM=people DIR come-IPFV.3PL=CNJ=DISTR
zaː~zuːr-eːn
PLAC~visit-IPFV.3PL
'In the morning, every time people go to his place, to visit him,'
(BEJ_MV_NARR_08_drunkard_149)

(53) Beja (Afro-Asiatic, Cushitic): generic imperfectivity
ki=n-am-da~dʔar ʃaːwi
NEG.IPFV=1PL-RECP-PLAC~marry\PFV then
'(The woman talks to him and says: "You, if you don't tell me what you laughed at,) you and me won't be husband and wife anymore", (they said.)'
(BEJ_MV_NARR_24_LEZARD_076)

(54) Beja (Afro-Asiatic, Cushitic): intensity
haːj gab~gab-eːti iːniːn
COM PLAC~be_rich-CVB.CSL 3SG.M-take\IPFV
eː-d-na eːn
3-say\IPFV-PL say\PFV.3PL
'he becomes over wealthy with it, they say, they said'
(BEJ_MV_NARR_09_jewel_64)

Table 5 shows the relative frequency of the Pluractional occurrences for each (set of) function(s).

Table 5. Number of the occurrences of the functions encoded by Pluractional in Beja

Function(s)	No of occurrences	Percentage
Iterative	41	53,2
Iterative/Frequentative	7	9,1
Iterative/Spatial distributive	5	6,5
Iterative/Event-internal plurality	1	1,3
Participant plurality	7	9,1
Frequentative/Habitual	1	1,3
Generic imperfectivity	1	1,3
Intensive	2	2,6
Dubious cases	12	15,6
Total	77	**100**

Similarly to Intensive derivation, iterativity covers about fifty percent of the total occurrences. Moreover, if we also add the cases in which the form can have an iterative reading the percentage becomes 70,1% of the total. It is noteworthy

that in this case we also find two occurrences of intensity, and one of generic imperfectivity.

4.2.2 The semantic map of pluractionals in Beja

From the picture emerged in the previous sections, it is now possible to draw the semantic map of pluractional constructions in Beja (cf. Figure 12[24]).

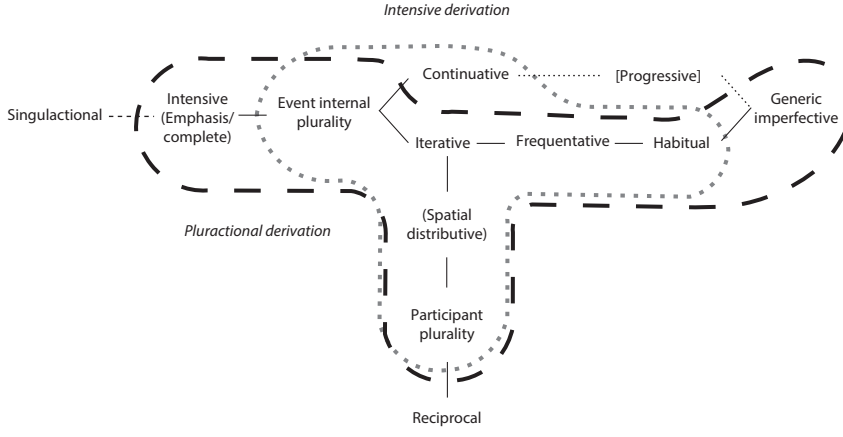

Figure 12. Semantic map of pluractional constructions in Beja

Contrary to the case of Akawaio, in Beja there is no necessity of drawing two different semantic maps. This is mainly due to the fact that while in Akawaio some sets of functions have a sensible different frequency in the corpus; in Beja, if we look at the most frequent functions we should consider only iterative, that actually shows a high frequency in the corpus. However, in this way, the semantic map would become less useful and, consequently, with less explicative force.

An important element comes out observing the semantic map in Figure 12: the two strategies of marking pluractionality in Beja practically cover the same functional area. The only difference lies in the wider functional domain of Pluractional than Intensive. The former is also extended to intensity and to the right part of the space (i.e., generic imperfectivity), while the latter is limited more to the central part of the space.

Despite this small difference, the (basically) functional identity of the two strategies confirms a cross-linguistic fact: the languages of the world generally tend to present more than one pluractional marker, but these markers do not have an individual specialization in the functional domain. In other words, in a specific language different pluractional markers tend to express all, or almost all, the

24. Intensive derivation covers the dotted area, while Pluractional derivation covers the dashed area.

functions that pluractional constructions express in that language. The presence of several pluractional devices can be probably explained taking into account their lexical distribution. In other words, a specific pluractional marker seems to be applicable only to a sub-part of the lexicon that is complementary to the sub-part of the other pluractional marker(s) that that language displays.

4.2.3 Pluractionality in Cushitic languages: An independent phenomenon

As for Akawaio, it can be interesting to observe what happens in the languages that belong to the same branch of Beja, that is, Cushitic languages. In particular, I will briefly present how pluractionality works in three languages: Gawwada (Cushitic, East Cushitic), Konso (Cushitic, East Cushitic), and Iraqw (Cushitic, South Cushitic). In fact, I believe that observing pluractional constructions of other Cushitic languages can also be helpful to better understand the situation of Beja and, in addition, can allow me to make some further considerations.

If we look, for example, at what happens in Gawwada (Cushitic, East Cushitic), we can see that in this language there are two different possible derivations that concern plurality of events. The first one serves to encode a single instance of situation (or diminutivity, cf. Tosco 2010: 395). Tosco (2010: 393) calls this verbal derivation Semelfactive[25] (cf. (55)) and it is marked through the gemination (reduplication) of the second consonant of the verb stem and, if it is present, of the third one, following this schema $C_1V(V)C_2(V)(V)(C_3) \rightarrow C_1V(V)C_2{\sim}C_2{\sim}(V)(V)(C_3{\sim}C_3)$ (Tosco 2010: 394).

(55) Gawwada (Cushitic, East Cushitic)

a.	*ʂuk*	'drink'	→	*ʂuk~ki*	'sip'
b.	*cox-a*	'milk'	→	*cox~xi*	'milk one udder only'
c.	*lepuy-*	'kick'	→	*lep~p~uy~y-*	'give a kicking'

(Tosco 2010: 394–395)

In Gawwada, it is as well possible to derive an Iterative form (cf. (56)) marked through the reduplication of the first syllable. This strategy follows this schema $C_1V(V)C_2\ (V)(V)(C_3) \rightarrow C_1V(V){\sim}C_1V(V)C_2(V)(V)({\sim}C_2)(C_3{\sim}C_3)$ (adapted from Tosco 2010: 394). This derivation has the function of encoding the plurality of events, but it also has an augmentative value.

(56) Gawwada (Cushitic, East Cushitic)

a.	*ʂuk-*	'drink'	→	*ʂu~ʂuk-*	'chug'
b.	*keeʂ*	'belch'	→	*kee~keeʂ*	'keep on belching'
c.	*lepuy*	'kick'	→	*le~lep~p~uy~y*	'keep on kicking'

(Tosco 2010: 395–396)

25. This is an instance of singulactionality (cf. Section 2.2.1.4).

We can find a very similar situation in Konso (Cushitic, East Cushitic). The basic verb (that can have both reading, singular or plural) can be derived for a Punctual or Pluractional (Orkaydo 2013: 151–155).

The first derivation encodes a singularity of action (cf. (57)), while the second one marks the classical pluractional functions (iterative, frequentative, etc.) (cf. (58)).

(57) Konso (Cushitic, East Cushitic)
nama-siʔ *inanta-siʔ* *i=ɠoʃ~ʃ-ay*
person-DEF.F/M girl-DEF.M/F 3=pinch.PLAC~SGAC-PFV.3M
'The person pinched the child once.' (adapted from Orkaydo 2013: 154)

(58) Konso (Cushitic, East Cushitic)
ɠimayta-siʔ *hellaa-siniʔ* *i=ɠoɠ~ɠoʃ-ay*
old.man-DEF.M/F children-DEF.P 3=PLAC~pinch.PLAC-PFV.3M
'The old man pinched the children many times.'
(adapted from Orkaydo 2013: 155)

Observing the examples, we can see that the strategies of marking these derivations in Konso reflect almost perfectly the strategies of Gawwada: i.e., gemination of the last consonant and the initial reduplication of the first syllable.

A particular situation in Konso is provided by the combination of both Punctual and Pluractional markers that gives a meaning of performing the action few times (cf. (59)).

(59) Konso (Cushitic, East Cushitic)
raaka-siʔ *inanta-siʔ* *i=ɠo~ɠoʃ~ʃi-t-i*
old_woman-DEF.M/F girl-DEF.M/F 3=PLAC~pinch.PLAC~SGAC-3F-PFV
'The old woman pinched the girl a few times.'
(adapted from Orkaydo 2013: 155)

In Konso, we can also find a set of verbs that are completely different (namely, two different lexical items), but that are connected semantically (lexical alternation). These pairs of verbs generally encode the number of participants that are involved in the situation (participant plurality).

For example:

(60) Konso (Cushitic, East Cushitic)
a. *inanta-siʔ* *i=keer-t-i*
girl-DEF.M/F 3=run.SGAC-3F-PFV
'The girl ran.' (Orkaydo 2013: 152)
b. *hellaa-siniʔ* *i=hir-i-n*
children-DEF.P 3=run.PLAC-PFV-PL
'The children ran.' (Orkaydo 2013: 152)

(61) Konso (Cushitic, East Cushitic)

a. *nama-siʔ* *karmaa* *i=iʃʃ-ay*
man-DEF.M/F lion 3=kill.SGAC-PVF.3M
'The man killed a lion.' (Orkaydo 2013: 155)

b. *nama-siʔ* *karmaɗaa* *i=leyʃ-ay*
man-DEF.M/F lions 3=kill.PLAC-PVF.3M
'The man (has) killed lions.' (Orkaydo 2013: 155)

This similarity between Gawwada and Konso (in particular for the singulactional forms) is not bizarre. In fact, it can be simply explained by taking into consideration the presence of a Southwest Ethiopian language area as proposed by Sasse (1986). Tosco (2010) highlights in his paper the role that this language area can have:

> The Dullay varieties are part of a small language area described by Sasse (1986) and made up of Dullay, the Konsoid varieties of East Cushitic (Konso, Diraasha or Gidole, and others), the Highland East Cushitic language Burji, and Omotic Zayse. Absence of voice opposition among plain (pulmonic) plosives is probably the most salient phonological feature of this "Southwest Ethiopian language area". Among the morphosyntactic features of this language area, one of the most interesting is the presence of a "Semelfactive" verbal extension.
>
> (Tosco 2010: 394)

The situation of Iraqw (Cushitic, South Cushitic) is slightly different, since we can find only a single derivation, called Habitual in Mous (1992), that marks pluractional functions. In particular, the reduplication of the verb stem gives a "habitual, iterative, durative, or pluractional meaning (pluractional refers to plurality of the subject or the object)" (Mous 1992: 181).

For example:

(62) Iraqw (Cushitic, South Cushitic)
tokaro-yâ, *saree'a* *i* *bará* *xats-ta-ka-r-wa*
once_upon_a_time-EM buffalo 3SBJ in.CON valley-F-INDF-F-ABL
qa~qéer
HAB~graze
'Once upon a time, a buffalo was grazing in a certain valley'
(Mous 1992: 274)

(63) Iraqw (Cushitic, South Cushitic)

a. *a* *siiq-íit*
1/2SBJ cut-MID.1SG
'I am cutting' (Mous 1992: 181)

b. *peehháy* *u* *siiq~aaq-íit*
planks OBJ.M cut~HAB-MID.1SG
'I am sawing planks' (Mous 1992: 181)

What comes out from the data and the analysis given in these sections on Beja and Cushitic is quite straightforward. Cushitic languages seem to present a productive verbal derivation that can be called Pluractional and that can be considered an independent category. These properties can be pointed out by two facts. Firstly, pluractionality can co-exist with other grammatical categories without any kind of opposition. For example, there is not any problem in deriving on the same verb both a pluractional marker and an aspectual marker (cf. basically all the examples of Beja and Konso), but also with other verbal derivation such as the Causative and Reciprocal in examples (49) and (51) of Beja and the Middle in example (63) of Iraqw.

Then, it is also important to note the fact that these derivational devices can be applied roughly to all semantic types of verbs. Indeed, these markers can also be applied to some stative verbs such as 'be smart', 'be thirsty', 'be incapable', etc.; though these stative verbs belong only to those types that Croft (2012) calls "transitory states" and not the more typical "inherent or permanent states" (cf. Croft 2012: Chapter 2). However, this demonstrates that in Cushitic languages pluractionality is a device available for almost all the verbs and, thus, that it can be used in almost all the contexts.

In addition, in its functional domain, this grammatical category probably represents the most prototypical case of pluractional constructions in cross-linguistic perspective, that is, a set of constructions that encode mainly iterativity, frequentativity (though not prevalently), and participant plurality. In addition, these constructions can also mark situations that do not represent a core function of pluractionality, such as, event-internal plurality, intensity, and so on. These additional functions are mainly produced by the sum of the semantic value of pluractional markers with the specific actional value of the single verb.

In conclusion, it appears evident that pluractional constructions in Beja work in a specific way. In fact, I can say that in Beja there actually exists a grammatical category that can be properly called Pluractionality. This category can be expressed through two strategies of marking, ablaut of the verb stem and reduplication. These strategies represent what Vanhove (2017) calls respectively Intensive and Pluractional.

These verbal derivations essentially fill a specific gap in the grammar of Beja, that is, they have the goal of making evident whether a situation is conceived, from the point of view of the speaker, as multiple or performed several times. This independent status of pluractional constructions within the grammar of a language is not a common fact in a cross-linguistic perspective. It is more often the case that this phenomenon is expressed through devices that belong to other language-specific categories, such as aspect.

4.3 Pluractionals in Maa (Nilotic, Eastern Nilotic)

Maa (also known as Maasai or Masai) is a language that belongs to the Nilo-Saharan family, one of the four Greenbergian language families of the African continent (cf. Greenberg 1963). The Nilo-Saharan family is particularly challenging to define and not all the scholars agree on its internal classification. Nevertheless, it is quite widely accepted that there exists a Nilotic branch. Maa is a Nilotic language, and, specifically, an Eastern Nilotic one.

Maa is spoken in Kenya by about 500.000 people belonging to three different self-identified ethnic groups, i.e., Maasai, Samburu, and Camus people; it is also spoken in Tanzania by about 500.000 people, and also in this case they belong to three different sub-groups, namely, Arusa, Kisonko and IlParakuyo people (cf. Payne 2008[26]).

From a grammatical point of view, Maa is basically a VSO language, but also some other word orders are accepted (e.g. SVO, OVS, and VOS) mainly because of the information structure of the single clause (cf. Payne 2015 and the references cited therein). Two case patterns are found on Maa nominals and on certain nominal modifiers, both marked through a tone change. A nominative form is primarily used for transitive and intransitive subjects when they are post-verbal, and after the preposition *tɛ* to encode oblique functions (locative source, instrument, benefactive, and others) (see Payne 2011, 2012 for more details). The so-called accusative form (cf. Tucker & Mpaayei 1955: 175–187) is used as citation form, with direct and indirect objects to encode several oblique functions that are not formed with the preposition *tɛ* and some other functions. The number and gender systems of Maa are composed of singular-plural and feminine-masculine-place distinctions (cf. Payne 1998 and Shirtz & Payne 2013). The latter value of gender is extremely rare (cf. Tucker & Mpaayei 1955: 15). Tucker and Mpaayei (1955) just mention this value, and they note that probably only two words have place gender: *e-weji* (SG) / *e-weji-tin* (PL) 'place' and *kaji* 'Where? Which place?' (Tucker & Mpaayei 1955: 15), but it seems to be present also in some derived items, such as demonstratives (Doris Payne p.c.).

The language variety that is under investigation in this section is the Southern variety of Maa spoken in Kenya. I have analyzed thirty-seven texts which belong to very different textual genres: from traditional and cultural stories, to prayers, and also conversations. These texts contain about fourteen thousand and five hundred words (ca.14.500). They were provided to me by Prof. Doris L. Payne (University of Oregon) who collected and glossed them within a research project partially supported by NSF grants SBR-9616482 (1987–1999) and SBR-9809387 (1998–2004) and by U.S. Fulbright Foundation fellowships (1993–1994 and 2009–2010).

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26. Cf. <http://uoregon.edu/~maasai/>.

4.3.1 Strategies of marking and functions of Maa pluractionals

In Maa, we can recognize at least two different ways to mark pluractionality: lexical alternation, and reduplication of the verb stem.

However, it deserves mention another potential and probably incoming pluractional marker, that is, the directional (itive/traslocative) *-aá* AWAY/AND. In the following sections, the first two devices will be presented. A separate section will be dedicated to the interesting situation of the directional *-aá* AWAY/AND (cf. Section 4.3.3).

4.3.1.1 *Lexical alternation*

Probably, the alternation of singular and plural verbs is the most common strategy to encode pluractional functions in Maa.

As it was stated in the previous chapter, by lexical alternation I mean two completely different lexical items that show a semantic, and not paradigmatic, relationship. These two verbs encode an alternation between singular and plural situations.

In Maa, like many other languages of the world, lexical alternation distinguishes situations in which a single participant is involved from the ones in which several people participate in the plurality of the events. In other words, the plural verbs express the participant plurality type of pluractionality.

Though in the text analyzed it is the most common strategy to mark pluractionality in Maa, I have found only a single pair of verbs that alternate in order to express a number distinction. These are forms of the verb that means 'go': the singular verb is *lo(t)* go.SGAC, while the plural is *puo(n)* go.PLAC. In this sense, it is more appropriate to say that lexical alternation in Maa is the strategy with the highest number of instances in the texts I looked at (mainly due to the high frequency of the verb *go*). In (64) we have two examples of the singular *go*, while in (65) two of the plural *go*.

(64) Maa (Nilotic, Eastern Nilotic)

a. *tɛ-n[HL]-è-lo(t)* *kulîê* *áŋítie*
OBL-CN1-3-go.SGAC others.ACC houses.ACC
'when he goes to other homes.' (elengon2.010b)

b. *óre peê* *[L]-i̵-lo(t)* *ɔ-ra* *ɔl=mu̵rráni*
when TEMP-2-go.SGAC M.SG.REL.ACC-be M.SG=warrior.ACC
'when you go as a warrior' (enkiama.002a)

(65) Maa (Nilotic, Eastern Nilotic)

a. *n-è-po(n)-í* *áa$_1$-ya-ɨ̵(n)* *ɨ̵lɔ̂* *rinká*
CN1-3-go.PLAC-PL INF.PL-take-VEN that.M.SG.ACC club.ACC
'They went to bring that club,' (arinkoi.041a)

b. *n[HL]-è-lo(t)* *ɨn=apá* *jorín*
CN1-3-GO.SGAC F.PL=before war_parties.ACC
n_3-aá-puo(n)-ɨ́
REL.F-F.PL.REL.ACC-GO.PLAC-PL
'he goes to the raids they used to go on' (embul.103)

It is interesting to note that in Maa, the collective noun *kundi* 'group' (a loanword from Swahili) is grammatically singular and therefore it encodes a collective participant conceived as singular. Consequently, in the occasion in which there is a group of people or objects and the situation is performed simultaneously, the referent is conceived as a single entity and the singular stem will be used. See for example (66):

(66) Maa (Nilotic, Eastern Nilotic)
n[HL]-è-lo(t) *âɨ̂* *kundi* *ɛn=áɨ́* *kɔ́p* *apá*
CN1-3-GO.SGAC other.NOM group F.SG=other.F.ACC earth.ACC before
'Then one group goes to another land,' (bulunoto.091b)

This situation is particularly interesting because it clearly shows that the criteria proposed by Durie (1986) that I analyzed in Chapter 3 are not always opportunely applicable. Even though semantically the participants of the occasion in (66) are plural, the verb seems to follow the syntax and not necessarily the semantics of the contexts. At the same time, this does not automatically mean that lexical alternation is a case of syntactic agreement rather than semantic selection, but it does mean that we must be careful in adopting the criteria acritically and as universally valid, that is, we have to consider the semantic behavior of lexical alternation more as general tendecy rather than an absolute truth. Therefore, the criteria proposed by Durie (1986) must be understood more as good operational criteria rather than as absolute theoretical criteria.

In Maa, it is noteworthy as well the interesting situation of the verb meaning 'come'. In this language, this verb is derived applying the directional *-ʉ(n)* VEN/TOWARD to the root of the verb meaning 'go'. Thus, the singular verb for 'come' is the form *lot-u(n)* go.SGAC-VEN/come.SGAC, while the plural form is *puon-u(n)* go.PLAC-VEN/come.PLAC.

(67) Maa (Nilotic, Eastern Nilotic)
a. *n[HL]-è-lo(t)-ʉ́* *táatá* *a_2-tɔn* *a_2-yam-ɨshɔ(r)*
CN1-3-GO.SGAC-VEN now INF.SG-stay INF.SG-marry-ANTIP
'now he comes to marry.' (embul.106)
b. *n[HL]-è-puo(n)-ʉ́(n)-[Cˆ1][Vˆ1]-ɨ́$_3$* *áa$_1$-ɨrɔ*
CN1-3-GO.PLAC-VEN-NPF.2PL-PL INF.PL-talk
'They will come to tell him' (embul.126)

From a diachronic point of view, it is evident that the stems for 'come' could be considered as occurrences of the roots *lo(t)* go.SGAC and *puo(n)* go.PLAC to which is then apply a directional marker. Thus, in this case there is not a new semantic

alternation governed by a number distinction, but a specific case of the lexical alternation of the verb *go*.

Nonetheless, a particular situation involves these derived verbs in the Perfect/Subjunctive form. In fact, we assist to a sort of actual alternation. Table 6 summarizes the aspect/mood variants of the verbs *go* and *come*, that are then exemplified in (68)–(71).

Table 6. Verb stems of the verbs *go* and *come* in Maa (Doris Payne p.c.)

		Non-Perfect	Perfect/Subjunctive
Singular	*go*	*lo(t)* go.SGAC	*ṣhɔ́mɔ* go.SBJN.SGAC
	come	*lot-u(n)* come.SGAC(/go.SGAC-VEN)	*eu/euo* come.SBJN.SGAC
Plural	*go*	*puo(n)* go.PLAC	*ou* go.SBJN.PLAC
	come	*puon-u(n)* come.PLAC(/go.PLAC-VEN)	*etu/etuo* come.SBJN.PLAC

(68) Maa (Nilotic, Eastern Nilotic): *go* Non-perfect

a. *n-è-lo(t)* *ɔ=m-è-tV-ba-(k)*
CN1-3-go.SGAC until=SBJN.JUS-3-SBJN-reach-SBJN
'It went until it reached a time (when)'

b. *n[HL]-è-puo(n)* *nona*
CN1-3-go.PLAC those.NOM
kɛ́râ *n-áa$_2$-mɛn-ɨ$_3$*
children.NOM REL.F-F.PL.REL.NOM-belittle-PASS
'these children, who are despised, go'

(69) Maa (Nilotic, Eastern Nilotic): *come* Non-perfect

a. *n[HL]-ɨ$_1$-lo(t)-ʉ́(n)* *a$_2$-duŋ-akɨn* *ɛn=árná*
CN1-2-go.SGAC-VEN INF.SG-cut-DAT F.SG=name.ACC
'You come to give her a name (you get to the point of giving her a name)' (embul.055)

b. *n-è-puo(n)-ʉ́(n)* *ɨl=páyianí* *dúóó*
CN1-3-go.PLAC-VEN M.PL=elders.NOM previous
'men from the neighborhood will come' (embul.124)

(70) Maa (Nilotic, Eastern Nilotic): *go* Perfect/Subjunctive

a. *ɔ=m$_2$-è-shɔmɔ* *a$_2$-dɔl-áa* *ɨl=ɔɨŋɔ́k*
until=SBJN.JUS-3-go.SBJN.SGAC INF.SG-see-AND M.PL-bulls.ACC
tɛ-idîê
OBL-that_place.NOM
'until he has gone to see bulls far away' (enamuke1.0010)

b. *peê* *[L]-è-wuo* *ɔ́ɔ́* *in=tóiwúó*
purpose TEMP-3-go.SBJN.PLAC PSR.PL.ACC F.PL=parents.NOM
ényɛ
3SG.POSS.NOM
'so (that) going of his parents' (Payne p.c.)

(71) Maa (Nilotic, Eastern Nilotic): *come* Perfect/Subjunctive

a. *ɔ* *m-éū* *náa*$_2$
until SBJN.JUS-come.SGAC.SBJN FOC
è-rɨsh-ata$_1$ *ɛ́*$_2$ *mʊ́ráta*
3-separate-NMLZ.ACTI.SG F.SG.PSR age_group.ACC
'until the time for circumcision (lit: the separation of age groups) comes' (embul.058)

b. *[L]-è-tV-ŋuayie-á(k)-ɨ́*$_3$ *n[HL]-è-ɨnɔs-ɨ́*$_3$,
TEMP-3-PF-leave.PF-PF-PASS CN1-3-eat-PASS
o-m$_2$*-è-étu-ɨ́*$_3$ *kɛnyá*
until-SBJN.JUS-3-come.PLAC.SBJN-PL eventually
ɛn=mányátá
F.SG=warrior_kraal.ACC
'when he was left, they were eaten, until they arrive at the ceremonial home'

From what is shown in Table 6 and in the examples, it becomes evident that we cannot consider all these stems as cases of lexical alternation. As stated above, the verb *come* must be conceived as a derivation of the alternated verbs of *go*. This is because the situation of Non-perfect versus Perfect/Subjunctive stems is paradigmatically determined and, thus, it represents a case of suppletion and not of lexical alternation.

4.3.1.2 *Reduplication*[27]

The second available strategy for marking pluractionality in Maa consists in the reduplication of the verb stem.

In this case, it is important to make some preliminary considerations. In fact, even though probably reduplication used to be the authentic strategy to mark pluractionality in this language (like in many others), nowadays this device has a low frequency (at least in my corpus). Thus, though it is not possible to suggest that reduplication is no more productive since it can be productively applied basically to all the verbs, this strategy is no more frequent as it may have been in

27. In order to avoid possible misunderstandings, I do not gloss the Maa reduplicants providing their functions, but merely by indicating the lexical value of the verb.

a hypothetical former diachronic stage. It is possible to demonstrate this situation on the basis of some pieces of evidence and facts found analyzing the occurrences of reduplicated verb forms.

A first important consideration (probably the most important one) deals with its frequency in the corpus. In the texts analyzed, I found only fifty-three occurrences versus the almost four hundred occurrences of lexical alternation (adding together both singular and plural forms of the verb *go*).

In addition, twenty-five of these fifty-three occurrences (almost half) appear to be cases of lexicalized reduplicated forms. From a synchronic point of view, these cases cannot be considered instances of pluractional constructions as for the other ones. This is mainly due to the fact that their pluractional function is no more evident, i.e., in these cases the reduplication of the verb stem seems not to have a grammatical function any longer but rather more a lexical function. However, sometimes they show a sort of residual trait that can be associated with pluractionality.

A third argument is provided by Dimmendaal (2014). He notes that in some Nilotic languages, and specifically in Maa, a certain type of reduplication was reinterpreted as marker of nominal number, in particular as second person plural marker (cf. (72), see Dimmendaal 2014: 65–70).

(72) Maa (Nilotic, Eastern Nilotic)

	Singular		Plural	
1	*á-túm*	'I acquire'	*ki-tum*	'we acquire'
2	*í-túm*	'you acquire'	*í-túm-ú~túmu*	'you acquire'
3	*é-túm*	'(s)he acquires'	*é-túm*	'they acquire'

(Dimmendaal 2014: 68)

Finally, in the texts it is also possible to encounter some cases in which the verb is repeated (repetition and not reduplication) for textual/pragmatic purposes. Often, this repetition expresses a pluractional-like function (cf. 73).

(73) Maa (Nilotic, Eastern Nilotic)
n[HL]-è-puo(n) aké, n[HL]-è-puo(n) aké, n[HL]-è-puo(n) aké,
CN1-3-go.PLAC just, CN1-3-go.PLAC just, CN1-3-go.PLAC just
n[HL]-è-ɨnɛpʉ(n)-ɨ́$_3$ ɔl=kɛjʉ́ ɔ-ruk-a$_1$
CN1-3-find-PL M.SG=leg.ACC M.SG.REL.ACC-flow-MID.NPF
'They went, they went, they went, and they came to flowing stream of water'
(elephare.006-elephare.007)

All these circumstances suggest to consider reduplication as a marginal phenomenon in Maa.

However, the situation is not as straightforward as it seems. Indeed, if we look at the few occurrences of verbal recuplication that I found in the texts, we can

classify them as follows: 25 lexicalized reduplications, 23 pluractional readings, 4 pragmatic/textual repetition values, 1 nominal marker (2nd person plural). I found also twenty-three cases in which the reduplicated verb has an actual pluractional reading. This is the strongest piece of evidence that we have to consider this strategy as a pluractional device in Maa, though it is marginal and probably no longer vital as it presumably was. This is also the reason why I decided to present this device in the present section.

After having discussed a bit the grammatical status of reduplication in Maa, we can now move forward and describe how it works.

From a morphological point of view, pluractional reduplicated verbs follow a quite simple schema: the total reduplication of the verb root and the insertion of an epenthetic vowel between the reduplicants (cf. (74)), though this vowel is not always present (cf. (75)).

(74) Maa (Nilotic, Eastern Nilotic)
   a. *aá-duŋ-u~duŋ*
      INF.PL-cut-EP~cut
      'to cut'
   b. *n[HL]-ɛ-ŋam-ɨ~ŋam-ɨ*
      CN1-3-make_small_cut-EP~make_small_cut-PASS
      'then small cuts are made'
   c. *ɨ-nyɔrr-ɨ~nyɔrr-a*
      2-like-EP~like-MID.NPF
      'you agree'

(75) Maa (Nilotic, Eastern Nilotic)
   a. *ɨ$_1$-nya~nya*
      2-eat~eat
      'you all eat'
   b. *k[H]-ɛ-ɨlɛp~ɨlɛp*
      CN2-3-climb~climb
      'it climbs'

The pluractional functions that these forms can encode are quite precise. I found occurrences of verbal reduplication that express the following functions: (i) iterativity (cf. (76)), (ii) participant plurality (cf. (77)), (iii) iterativity/participant plurality (cf. (78)), (iv) frequentativity (cf. (79)), and (v) habituality (cf. (80)).

(76) Maa (Nilotic, Eastern Nilotic)
   k[H]=è-ŋurr-i$_2$~ŋurr *kʉlɔ̂* *tʉŋaná*
   CN2-3-cut_crudely-EP~cut_crudely these.M.ACC people.NOM
   ɛn=kɨ́rɔ́rɔ́tɔ́
   F.SG=conversation.ACC
   'these people keep on cutting the conversation' (camus2.127)

(77) Maa (Nilotic, Eastern Nilotic)
n[HL]-kɨ-duŋ-ɨ~duŋ
CN1-1PL-cut-EP~cut
'we shall cut it into pieces.' (arinkoi.011b)

(78) Maa (Nilotic, Eastern Nilotic)
n[HL]-ɛ̀-ɔr-ɨ~ɔr-ɨkɨn taá tʊ́kʊ̂l
CN1-3-divide-EP~divide-DAT FOC.EXCL completely
'And she absolutely divides everything among them.' (enkeeya2.027)

(79) Maa (Nilotic, Eastern Nilotic)
ɨ-ɨshɔ(r)=kɨ puán n_3-a_4-ɨyɛŋ~ɨyɛŋ-ʊnyɛ
2-give=1SG.OBJ life.ACC REL.F-F.SG.REL.ACC-breathe~breathe-VEN.MID
amʊ̂ k=a-ɨdɨm a-tV-anyʊ iyíé
because CN2=1SG-be_able INF.SG-SBJN-wait_for 2.SG.ACC
ɛnk=áí n-á-tV-jo-á(k)
F.SG-God.ACC REL.F-F.SG.REL.NOM-PF-say-PF
'"Give me life that comes steadily because I can wait, it is you God who has said it."' (enkai.015)

(80) Maa (Nilotic, Eastern Nilotic)
ɨ́-nya~nya táatá ɨ́ntāɨ́ ɨn=sɨ́nkɨrr
2-eat~eat now you.PL.NOM F.PL=fish.ACC
'Do you eat fish?' (Camus4.326)

The absence in Maa of occurrences with an event-internal plurality reading seems to be unsual since this is a quite common function of pluractional constructions in Eastern African languages. The situation becomes even more unusual if compared to the presence of occurrences of functions that are less widespread in the African continent, but also cross-linguistically, such as habituality. In truth, the apparent lack of event-internal plurality can be easily explained taking into account the lexicalized forms. In fact, these forms consist almost always of verbs that have a clear repetitive sense, i.e., a value that is strictly correlated with event-internal plurality. For instance, this is the case of verbs like *boil* and *shake* in (81a-b). However, it is more difficult to explain the semantics of the verb *fool around* (cf. (81c)).

(81) Maa (Nilotic, Eastern Nilotic)
a. *ɛ́n-nyaaka(k)-ɨ́$_1$ ɛ́n-shɔmɔ*
PL.SBJN-do_again.PF-SBJN PL.SBJN-go.SBJN
ɛ́n-ya-akɨn-á(k)=kɨ kʊlé n[HL]-a_2-ɨtɔkɨtɔk
PL.SBJN-take-DAT-SBJN=1SG.OBJ milk.ACC CN1-INF.SG-boil
'"Go again and bring me fresh milk that is still boiling"' (arinkoi.016b)

b. *ɛ=lʉ́kʉ́nyá* *e-ikiríkír-íé(k)* *[L]-è-tV-gɨra-atɛ*
F.SG=head.ACC 3-shake-INST TEMP-3-PF-be_quiet-PL.PF.MID
n-áa-jo-ɨ́ *m_2-è-táa* *tɛ-n[HL]-è-tɔn-ɨ́*
REL.F-F.PL.REL.NOM-say-PASS SBJN.JUS-3-become OBL-CN1-3-sit-PL
'it is the head they shake when they have kept quiet so that when they sit' (errancoi.042)

c. *nɨnchɛ́* *ɨl=apá* *lakáaɨbarrá* *l_1-ɔ́ɔ́$_1$*
them.ACC M.PL=before that are white M.PSD-PSR.PL.ACC
ɨn$_1$=tirmân *amʉ̂* *k[H]=è-ɨ́málɨ́mal* *olêŋ*
F.PL=walking.sticks.ACC because CN2=3-fool_around very
'They are the ones called the mischievous ones with white crutches they are negligent in terms of taking care cattles' (inkiri.017)

In conclusion, we can quite easily presume that since these verbs have a lexical meaning that is semantically very close to event-internal plurality they started to appear almost always as reduplicated forms, and no longer as underived verbs. In other words, this situation might have led to conceive these reduplicated forms no longer as derived pluractional-marked verbs, but as basic verbs that express a specific type of actional value.

4.3.2 The semantic map of pluractionals in Maa

From the data presented in the previous sections, it is now possible build a semantic map that shows the functional domain of Maa pluractional constructions (cf. Figure 13[28]).

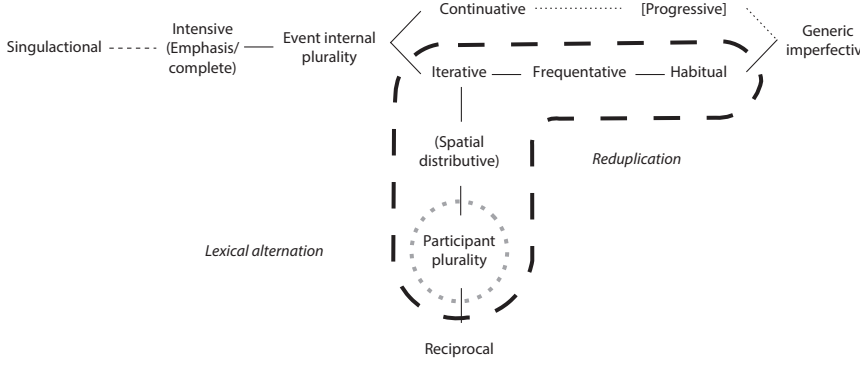

Figure 13. Semantic map of pluractional constructions in Maa

Several considerations can be drawn observing Figure 13.

28. Lexical alternation covers the dotted area, while reduplication the dashed area.

Firstly, we can say that Maa pluractional constructions cover a specific functional domain that essentially overlaps with the area in which the core functions are displayed. The only exception is offered by the presence of habituality that, however, does not have a high frequency in the texts analyzed (it was found only once).

This limited range of functions is not common for pluractional markers. Cross-linguistically, these constructions tend to show a considerable multifunctionality that extends further beyond the core functional domain. The relatively limited range of functions that these constructions have in Maa gives another piece of evidence on the vitality that this phenomenon has in this language, and, more specifically, reduplication. Summarizing again here some issues, if we consider two facts that concern the frequency of the two pluractional marking strategies of this language, it will become more evident that in Maa this phenomenon seems not to be so frequently used:

i. lexical alternation applies only to a single verb (pair), though it is the very high-frequency verb *go*. I found 396 occurrences of this verb and 238 of them were of the form go.SGAC while 158 of the form go.PLAC;
ii. then, as it was previously noted, in the texts only 23 occurrences of reduplication encode a pluractional function (cf. Table 7).

Table 7. Functions of reduplicated verbs in Maa

Functions		**No of occurrences**	**Percentage**
Pluractional	Iterative	9	17,0
	Participant plurality	10	18,9
	Iterative/Participant plurality	1	1,9
	Frequentative	2	3,8
	Habitual	1	1,9
	Total	**23**	**43,5**
Lexicalized		25	47,1
Textual		4	7,5
2nd Person plural		1	1,9
Total		**53**	**100**

Consequently, pluractional constructions in Maa have the following characteristics that seem to be in contrast with the cross-linguistic picture: (i) they cover a limited functional domain; (ii) the functions that they express are basically only the core ones (the most prototypical); and (iii) I found several reduplicated forms that can be conceived as lexicalized forms, that is, as actual new lexemes (i.e., underived).

In conclusion, the picture that comes out from this situation leads me to identify Maa pluractional devices not as truly vital instances of a dedicated grammatical category, but rather as instances of a residual phenomenon. This is even more evident if we compare the frequency of Maa pluractional markers with pluractional markers of other languages, such as Akawaio and Beja. Indeed, I found 181 actual pluractional forms (158 go.PLAC forms and 23 reduplicated forms) in Maa corpus (about 14.500 words), that means a frequency of about 1,2%. While in Akawaio and Beja, we have respectively a frequency of 2,2% (220 pluractional forms with the suffix *-pödï* + 22 not analyzed forms of *-pödï* out of about 10.800 words) and 2,3% (77 Pluractional forms + 182 Intensive forms out of about 11.000 words). Even though these numbers are not predictive at all, the difference is very indicative.

However, the situation that we have in Maa has probably led to the creation of a possible new pluractional marker. This topic is discussed in the next section.

4.3.3 The case of directional AWAY/VEN: An incoming pluractional marker?

In the corpus of Maa, I have found evidence of a possible functional shift of a pre-existing grammatical marker towards pluractional functions.

Like many other Nilotic languages, Maa presents two directional markers: the suffix *-áa* has an "andative [AWAY from a reference of point, SM]" (cf. Creissels et al. 2007: 148) function and is called AWAY in Payne (2013) (cf. (82b)); and the suffix *-ɨ́* has a "venitive [TOWARD a reference of point, SM]" (cf. Creissels et al 2007: 148) that Payne (2013) calls TOWARD (cf. (82c)).

(82) Maa (Nilotic, Eastern Nilotic)

a. *a-sɨ́j*
INF.SG-follow
'to follow' (Payne 2013: 260)

b. *a-sɨ́j-aá*
INF.SG-follow-AND
'to follow away' (Payne 2013: 260)

c. *a-sɨ́j-ɨ́*
INF.SG-follow-VEN
'to follow hither' (Payne 2013: 260)

In this section, I will briefly present the functional characteristics of the Maa AWAY/AND morpheme *-áa*.

Firstly, this morpheme shows a huge number of allomorphs. This wide range of possibilities is partly due to the vowel harmony system of Maa. The allomorphs are: *-áa*, *-óo*, *-ɔ́ɔ*, *-aya*, *-oyo*, *-ɔyɔ*, *-oor*, *-aar*, *-or*, *-ar*, *-ay*, *-oy*, *-a*, *-o*, *-ɔ*, and some other forms due to tonal changes.[29]

29. The allomorphs will not concern us here; for some more analysis, see Payne (2013: 261–265).

Payne (2013) describes at least six main functional areas that this marker covers: (i) occurrences that express a value connected with 'movement away', i.e., motion (away) and direction away (without translational movement) (cf. Payne 2013: 266–270); (ii) occurrences that express a value connected with the notion of plurality, i.e., plurality of the participants, multiplicity of action/situation (cf. Payne 2013: 270–274); (iii) occurrences that express a "continuous aspect" value (cf. Payne 2013: 274–276); (iv) occurrences that express a value with an "applicative-like effect (with agent-source verbs)" (cf. Payne 2013: 276–278); (v) occurrences that have a detransitivization function (cf. Payne 2013: 278–279); and (vi) some occurrences that have undergone a lexicalization process (cf. Payne 2013: 279–281). In what follows, I will provide some examples for each function:

(83) Maa (Nilotic, Eastern Nilotic): Movement Away

a. Motion (away)
en-tít$^{\downarrow}$ó *tákâl*
F.SG-girl.ACC completely
n-a-to-rik-óyi-ok-í
REL.F-F.SG.REL.ACC-PF-lead-AND-PF-PASS
'a girl that has been completely led away' [i.e. married; this traditionally involves leading the girl from her parents' home, even walking hundreds of kilometers to her new home] (Payne 2013: 267)

b. Direction away (without translational movement)
N-é-ɨɓʊŋ-ɨ *ɛnk-áɨná* *áa-yiat-aa.*
CN1-3-hold-PASS F.SG-arm.ACC INF.PL-stretch-AND
'The hand is held to pull them (=the fingers) to stretch them out'
(Payne 2013: 269)

(84) Maa (Nilotic, Eastern Nilotic): Plurality

a. Plurality of intransitive subjects
N-é-$^{\downarrow}$ákɨ́ *táatá* *té-íne* *wúéjî* *taá*
CN1-3-become now OBL-that_place.NOM place.NOM like_that
e-likín-$^{\downarrow}$í *ɨm-báa* *n-aá-paash-ár-i*
3-tell-PASS F.PL-issues.ACC REL.F-3F.PL.REL.ACC-detour-AND-MID
'So now in that place they will be told things that differ (lit. things that depart from each other)' (Payne 2013: 271)

b. Plurality of transitive subjects
n-é-tum-okí *taá* *ɨl-ɛ́wâ* *áa-ɨnɔs-aá*
CN1-3-get-DAT like_that M.PL-men.NOM INF.PL-eat-AND
ɨnyɔ́ɔ? *ɛn-dáa* *é-na* *dúóó* *ají*
what.ACC F.SG-food.ACC F.PSR-this.F.ACC relevant house.ACC
'and men will be able to eat what? Food from this house'
(Payne 2013: 272)

c. Plurality of objects

K-é-ɨ́tʉ-lʉlʉŋ-á↓á *aké* *nɨ́nyɛ* *in-tokitín* *é*
CN2-3-CAUS-whole-AND just 3SG.NOM F.PL-things.ACC F.PSR.PRT
ŋɔ́tɔ́nyé
mother.PSD.ACC

'He takes all the things of his mother.' (Payne 2013: 272)

d. Multiplicity of actions and situations

N-é-rany-akɨ́ *aké* *a-ɨkʉn-aá* *néíjia* *ánaa* *aké*
CN1-3-sing-DAT just INF.SG-do-AND like_that like again
'She sang to her like that every day' (Divorce.019)

(85) Maa (Nilotic, Eastern Nilotic): Continuous aspect

K-é-nár↓ɛ *naá* *k-é-ɨ́tʉ-bʉl-áa* *íl-Maasáɨ́*
CN2-3-be_fitting FOC CN2-3-CAUS-grow-AND M.PL-Maasai.PL.NOM
ɛn-apá *Leŋón* *ɛnyê*
F.SG-formerly generosity.ACC 3PL.POSS.ACC
apá-k↓é *n-a-át↓á.*
formerly-just REL.F-F.SG.REL.ACC-have

'It is fitting the Maasai keep making their former generosity flourish.'
(Payne 2013: 275)

(86) Maa (Nilotic, Eastern Nilotic): Applicative-like effect with agent-source verbs[30]

ɛ-gɨ́ra *ɔl-páyian* *a-dót* *ɛn-kʉrmá* *a-dot-ú*
3-PROG M.SG-man.NOM INF.SG-weed F.SG-field.ACC INF.SG-weed-VEN
en-díátí.
F.SG-weed.ACC

'The man is weeding the field uprooting the weeds.' (Payne 2013: 276)

(87) Maa (Nilotic, Eastern Nilotic): Detransitivization

a. *à-mán-ɨ́ta* *ol-órika.*
1SG-encircle-PROG M.SG-chair.ACC
'I am going around/encircling the chair' (Payne 2013: 278)

b. *à-mán-áa*
1SG-encircle-AND
'I'm going (around) for a walk.' (Payne 2013: 279)

30. Payne (2013) notes that: "In the text corpus used, no instances of AWAY occur on AGENT-SOURCE roots. […] [T]he first instance of *dot* takes the SOURCE 'field' as its grammatical object. The second instance of the root *dot* appears with the TOWARD directional *-u* and takes the unwanted theme 'weed' as the grammatical object." (Payne 2013: 276).

(88) Maa (Nilotic, Eastern Nilotic): Lexicalization
básí, *óre* *naá* *en-tóki* *n-ɨ́-tá-ŋámáy-ie*,
SO DISCN FOC F.SG-thing.ACC REL.F-2-PF-receive.AND-PF
tí-rrip-o *naá*
SBJN-guard-SBJN FOC
'so, what you have received, guard it then' (Payne 2013: 280)

It is important to note two factors that are pivotal: (i) in some cases, the functions presented by Payne (2013) are quite intricate to interpret (cf. the "Applicative-like effect with agent-source verbs" example), and she recognizes herself this issue (cf. specifically Payne 2013: 276–279); (ii) it is undeniable that this marker often retains a motion value also in the occurrences that do not specifically express a movement. However, it is unquestionable that the AWAY/AND marker is multifunctional and covers a very broad range of functions. In what follows, I will concentrate only on the plural functions that *-áa* can express.

Of the extended (non-motion away) functions of the *-áa* morpheme, plurality is the next-most common function. In fact, Payne (2013) notes that, though rarely, some of these additional functions tend to be marked by AWAY/AND without any reference to a motion value. This is particularly true for multiplicity of actions/situations.

For example, in (89) the presence of *-áa* conveys a situation in which an action is performed several times.

(89) Maa (Nilotic, Eastern Nilotic)
n[HL]-è-puo(n) *adé* *ɨ́l=mʊ́rrân* *l1-ɔ́$_1$*
CN1-3-go.PLAC later M.PL=warriors.NOM M.PSD-PSR.PL.ACC
ɨ́l=áíkípia *áa$_1$-puo(n)* *áa$_1$-ɨnɔs-áa*
M.PL=Laikipia_people.NOM INF.PL-go.PLAC INF.PL-tell-AND
'the Laikipia warriors went to report (tell out/repeatedly)' (emutata.036b)

The frequency of this kind of occurrence (i.e., in which the andative clearly expresses a pluractional function) is fairly rare in the texts. I found only eight such cases out of a total of ninety-five occurrences of *-áa*, less than ten percent (8,4%). In any case, it is also possible to find examples in which the AWAY/AND marker mainly encodes a situation that involves movement (or directionality), though plurality also happens to be present. In the texts analyzed, I found seven occurrences of this type (7,4%) (cf. 90).

(90) Maa (Nilotic, Eastern Nilotic): Direction away
n[HL]-è-jo *á$_3$-ɨŋɔr-áā*
CN1-3-try INF.SG.SBJN-look-AND
'he tried to look around' (elephare.031c)

This is the case in particular of the verb *surround/encircle*. When *-áa* is applied, this verb acquires the meaning of 'keep moving around' (cf. (91), but also (87)).

(91) Maa (Nilotic, Eastern Nilotic): Motion (away)
n[HL]-è-man-áa taá tɛ ɔl=cháni
CN1-3-surround-AND FOC.EXCL OBL M.SG=tree.NOM
'He [the warrior advising the hero] kept moving (from one end to the other addressing the audience) in the meeting.' (arinkoi.056a)

Therefore, there exist situations in which the directional *-áa* AWAY/AND in Maa encodes (also) some pluractional functions.

However, we cannot say that this morpheme is a truly pluractional marker. In fact, it is important to note that its main function remains encoding a sort of motion away from a deictic center. Nevertheless, it is not possible to just dismiss the pluractional readings as idiosyncratic situations, despite their low frequency. Indeed, it is plausible to theorize that AWAY/AND is changing or extending its functional domain also to situations that encode a plurality of situations (and participants). Fifteen occurrences of pluractional meaning out of ninety-five tokens cannot be considered chance situations.

The question that now arises is why an andative marker should shift its functional domain toward pluractionality. A possible explanation consists in assuming that this functional extension started from situations like the ones exemplified in (90) and (91) where the motion value is additionally accompanied by a sort of plural reading. Specifically, the presence of motion verbs could have led to a metaphorical extension of the situation previously through space (e.g. *going on a long path*) into time (e.g. *doing something several times in several locations*), then to a continuative[31] reading (*doing something for a long time*) and finally also to functions more precisely pluractional, i.e., iterativity and frequentativity (*do an action several times while on the way*). The final step of this probable ongoing functional shift of AWAY/AND consists in the extension to functions that involve also a plurality of the participants (*do an action several times over several participants/an action done by several participants*), that is, toward the vertical parameter (distributiveness) of the conceptual space.

This possible explanation of the functional change of the Maa morpheme *-áa* is especially supported by the fact that this marker appears mainly in situations in which: (i) the motion is connected with a plurality of situations or an extension of the action during time; (ii) a plurality of the participants is involved; (iii) it can specifically encode a plurality of situations or participants (less frequent).

31. Payne (2013) uses the term continuous to refer to the function that in the present work is called continuative (cf. Chapter 2).

A second piece of evidence is provided by the fact that this functional shift seems to be started from motion verbs. As the case of Akawaio and, particularly, of Beja have shown, it seems to exist a relationship (or, at least, a co-occurrence) between motion verbs and plurality of situations. Though this connection seems obvious at first glance, it is not very common in the languages of the world (except for some geographical areas).

4.3.4 Pluractionality in Maa

The situation of pluractional constructions in Maa is particularly intriguing. It has highlighted at least two issues that can also be helpful in cross-linguistic studies.

Firstly, the case of the verb *go* is particularly useful to distinguish the two concepts of suppletion versus lexical alternation, as defined by Mithun (1988) (cf. Chapter 3). This verb exhibits both a paradigmatic alternation of forms encoding Non-subjunctive and Subjunctive stems (suppletion), and an alternation of forms encoding an action performed by a singularity versus a plurality of the participants (lexical alternation). It is also useful to demonstrate that the criteria proposed by Durie (1986) are not always applicable and that the main difference between the two phenomena of syntactic agreement and semantic selection remains functional (at least cross-linguistically).

Secondly, the andative marker *-áa* AWAY/AND provides some strong evidence for a possible source of pluractional constructions. In the cross-linguistic analysis presented in the previous chapters, possible correlation between pluractionality and motion did not arise. Nevertheless, it is undeniable that motion verbs tend to be those that more often are affected by this phenomenon and that in some languages (Maa, but also in some South American languages such as Yagua – Peba-Yagua, cf. Payne 1985: 260-261 – and Apurinã – Arawakan, Southern Maipuran, cf. Facundes 2000: 309 – within my sample, but also some languages outside the language sample such as Kashibo-Kakataibo – Pano-Tacanan, Panoan, cf. Zariquiey Biondi 2011: 395–400) certain pluractional constructions (e.g. the Maa lexical alternation, and the case of andative *-áa*) are strictly related to the concept of motion and directionality. This happens because usually atelic verbs (such as motion ones) are semantically good candidates to be pluralized. In other words, the actional value of these verbs makes them more easily subject to plura(ctiona)-lization compared to other types of verb (e.g. *go around* vs. *graduate*).

In conclusion, we can say that pluractionality in Maa is a dynamic phenomenon that perhaps used to be marked through some devices that nowadays are not highly frequent. At the same time, it seems that a new strategy for marking such situations is rising: the andative marker *-áa* AWAY/AND may be shifting its functional domain toward pluractional functions. Nevertheless, this development

(or better functional shift) is in a preliminary stage and, now, we cannot predict in which direction it will go.

4.4 What do these case studies tell us?

From the case studies presented in the previous sections, some important issues come out.

First of all, both the cross-linguistic investigation, i.e. the functional analysis and the morpho-syntactic description that were proposed in Chapter 2 and 3, were confirmed by the data of these case studies. This is certainly the most important result of the present chapter.

Then, it was shown that the situation of particular languages tends to be more complex and composite than one can expect. A consequence of this aspect consists in the necessity of improving our understanding of pluractionality through more language-specific investigations: the more data and the more descriptions we have at our disposal, the broader the comprehension of these constructions will be complete.

Then, it was demonstrated once again that pluractional constructions represent a heterogeneous phenomenon both from a morpho-syntactic and a functional point of view. In fact, even though there are some similarities among the languages of the world according to this phenomenon, it is undeniable that the variation is high. This aspect is particularly evident from the pluractional constructions found in the languages considered above.

At the same time, the data shown in this chapter have also raised a series of questions. First, it is essentially unclear how pluractionality can be conceived from a theoretical point of view. So far, the problem of the grammatical status of pluractional constructions was basically not discussed. It was evident that pluractionality shows several similarities and overlapping situations with other linguistic categories, such as grammatical aspect, lexical aspect or actionality, and also with nominal number. Nonetheless, it is not clear whether this phenomenon can be described as an expression of such linguistic categories, or whether it represents something different. This issue leads to some other theoretical questions that will be discussed at length in the next chapter.

CHAPTER 5

Pluractional constructions in cross-linguistic perspective

This chapter discusses some issues related to pluractional constructions in cross-linguistic perspective.

In the previous chapters, I described and explored the main characteristics and peculiarities that pluractional constructions show in the languages of the world. One of the most evident outcomes is that cross-linguistically pluractionality shows a broad diversity. Though this heterogeneity is not rare in typological investigations, in our case it makes hard gathering all these constructions under a single common label, that is, recognizing them as occurrences of a single phenomenon, namely, pluractionality.

This situation generates some problems in the grammatical classification of these constructions. In fact, some different proposals on the categorization of pluractionality within the theory of grammar can be found in the literature. Often, these proposals are incompatible.

The present chapter investigates these issues trying to find a possible solution and explanation. First, I will summarize the reasons why pluractional constructions can be said cross-linguistically heterogeneous. Then, I will propose a new grammatical conceptualization of pluractionality.

5.1 Pluractionality as a heterogeneous phenomenon

The previous chapters have shown quite straightforwardly that pluractionality comprehends a large set of different constructions. This is particularly evident at the functional level, but in a certain way also the formal level exemplifies this broad diversity.

Chapter 2 has shown that pluractional constructions express a broad set of functions. These functions were classified in two groups, that is, core and additional functions. While the number of functions of the former group is quite restricted (namely, four functions: iterativity, frequentativity, spatial distributivity, and participant plurality), the latter group comprehends several values. Indeed,

the additional group was further sub-divided into different semantic clusters: non-prototypical plurality (event-internal plurality, continuativity, habituality, and generic imperfectivity), grade (intensity, completeness, and emphasis), and reciprocity.

Chapter 3 has singled out that the pluractional marking strategies seem to be limited only to three devices: affixation, reduplication, and lexical alternation. Nevertheless, the case studies offered in Chapter 4 have revealed that some other strategies can be used as well and in particular that such strategies can co-exist in the same language often covering basically the same functional space (cf. for example Section 4.2 on Beja). This co-presence of different strategies with more or less the same functions seems to suggest that we are dealing with constructions that are somewhat different but that have a strong functional resemblance.

Another interesting issue that clearly signals the great variety of pluractionality consists in the availability of such constructions within the lexicon. In some passages of previous chapters, I have briefly highlighted that pluractional markers cannot be applied to all the verbs of a language. For instance, this is mainly the case for the verbs that alternate according to the number of situations and participants, namely, lexical alternation. The languages of the world that exhibit this phenomenon have from one (more often a couple) to ten (cf. Chapter 3, in particular Section 3.3), up to eighteen pairs (cf. Veselinova 2005: 327). This means that lexical alternation affects only a small set of the verbs of a language, and the number of verbs affected is sensibly different from language to language. In any case, often the verbs that alternate tend to be the most frequent ones (e.g. *go*, *die*, *kill*, etc.).

This situation is not limited only to lexical alternation, but it also applies to the other marking strategies, though in a different way. It is often the case that in specific languages pluractional markers are constrained for some verb classes. Often, these constraints are due to the incompatibility between the lexical semantics of the verbs and the grammatical semantics of the pluractional morpheme. For example, in several languages stative verbs cannot be pluractionalized (this is the case of Beja, though not all stative verbs): the lexical meaning tends to be incompatible with the grammatical function of pluractional markers. Often, stative situations cannot be pluractionalized, mainly inherent and permanent states such as *weigh* or *be extinct (of animals)*. Nevertheless, there are also languages in which these constraints do not exist: for example, in Koalib (Heibanic, West-Central Heibanic) all the verbs can be reduplicated to encode a pluractional function without any kind of constraint (Nicolas Quint p.c.).

Though this issue is extremely interesting, it is not completely unexpected. At the morphological level, in the languages of the world derivational devices (such as pluractional markers) show often this kind of constraints and it is exactly one of the main differences between inflection and derivation.

All the issues just mentioned and analyzed in greater detail in the previous chapters draw a picture that shows how large can be the variety of pluractional constructions in the languages of the world. Furthermore, there are at least two additional topics that deserve to be discussed. In the next sections, I will examine both of them.

5.1.1 Strategies of marking

Chapter 3 has illustrated the strategies that the languages of the world more frequently adopt to express pluractional functions. These strategies are basically three: (i) affixation, (ii) reduplication, and (iii) lexical alternation. However, this relatively small number of devices does not mean that they are the only ways available to encode pluractionality. On the contrary, it is often the case that in a group of related languages or in the same language several strategies co-exist at the same time.

For example, there are six Chadic languages in the sample adopted in this work. They are: Hausa, Lele, Masa, Mupun, Pero, and Wandala. Each of them shows a set of very different marking strategies.

Hausa (Afro-Asiatic, Chadic) expresses pluractionality through the partial (initial or internal)[32] reduplication (cf. respectively (1) and (2)) of the verb stem:

(1) Hausa (Afro-Asiatic, Chadic)
Yuusùf yaa sàs~sàyi lìttàttàfai
Yusuf 3SG.M.PFV PLAC~buy books
'Yusuf bought many (different) books' (Součková 2011: 94)

(2) Hausa (Afro-Asiatic, Chadic)
a. *tafàsaa* 'boil'
tafarf̃àsaa 'boil'
b. *rikìtaa* 'confuse'
rikiɾ̃kìtaa 'confuse'
c. *hàifaa* 'give birth'
hàyày̰yafàa 'engender, proliferate'
hàhhaifàa 'give birth many times or to many children'
(Součková 2011: 91, emphasis in the original)

In Lele (Afro-Asiatic, Chadic), two devices are used to convey a plurality of situations: the suffixation of *-wì* (cf. (3)), the devoicing of the initial consonant (cf. (4)), or both strategies combined (cf. (5)).

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32. The internal reduplication is quite rare and it often underlines the internal or inherently plurality of the situation (cf. Example (2a) and (2b)). This explains why the translation does not reveal any functional difference.

(3) Lele (Afro-Asiatic, Chadic)
a. *Cànìgé wàl kùlbá*
Canige kill cow
'Canige slaughtered a cow' (Frajzyngier 2001: 126)
b. *Cànìgé wàl-wì kùlb-é*
Canige kill-PL cow-PL
'Canige slaughtered cows' (Frajzyngier 2001: 126)

(4) Lele (Afro-Asiatic, Chadic)
a. *dìgrì dí gùmá*
kill 3M rat
'he killed a rat' (Frajzyngier 2001: 124)
b. *tigrí dí gòm-é*
kill.PLAC 3M rat-PL
'he killed rats' (Frajzyngier 2001: 125)

(5) Lele (Afro-Asiatic, Chadic)
a. *ŋ bàá*
1SG fall
'I fell' (Frajzyngier 2001: 125)
b. *ŋ pad-wí hírè*
1SG fall-PLAC often
'I fell often' (Frajzyngier 2001: 125)

Conversely, Mupun (Afro-Asiatic, Chadic) has a large set of suffixes (*-a*, *-r*, *-e*, *-ep*, *-wat*, *-k*) (cf. (6)) and the lexical alternation device (cf. (7)).

(6) Mupun (Afro-Asiatic, Chadic)
a. *pīin* 'crack' → *piān* 'crack many'
pūt 'go' → *púát* 'go out'
(Frajzyngier 1993: 56)
b. *gáp* 'cut' → *grəp* 'cut pieces'
séet 'buy/sell' → *srép* 'buy/sell many things'
(Frajzyngier 1993: 56)
c. *tù* 'kill' → *tùé* 'kill many'
sù 'run away' → *sùé* 'run away (pl.)'
(Frajzyngier 1993: 56)
d. *mùut* 'die' → *mùrép* 'die (pl.)'
pét 'call' → *prép* 'call (pl.)'
(Frajzyngier 1993: 57)
e. *siāŋ* 'abort' → *sìwát* 'abort (pl.)'
war siaŋ/siwat aak
3F.SG cease/cease.PL pregnancy
'She underwent an abortion/had many abortions'
(Frajzyngier 1993: 57)

f. *yà* 'catch' → *yák* 'catch (pl.)'
lòom 'be lost' → *líhɔ̀m* 'be lost (pl.)'

(Frajzyngier 1993: 58)

(7) Mupun (Afro-Asiatic, Chadic)

SINGULAR		PLURAL	
cīt	→	*nás*	'beat'
dēn	→	*lé*	'put'
tá	→	*dóŋ*	'fall down'

(Frajzyngier 1993: 58)

On the other hand, Pero (Afro-Asiatic, Chadic) shows several strategies connected to reduplication and gemination of a part of the stem, but also some suffixes. All these marking strategies express participant plurality that is the only pluractional function that this language encodes.

(8) Pero (Afro-Asiatic, Chadic)

a. Insertion of a geminate glide + Vowel.
cí → *cíyy-V* 'eat'
ké → *kéyy-V* 'cut'

(Frajzyngier 1989: 75)

b. Gemination of the last consonant.
lóp → *lópp* 'beat'
déep → *dépp* 'discuss'

(Frajzyngier 1989: 75)

c. Double gemination of the last consonant ($C_1VC_2C_2C_2$).
wáat → *wáttt* 'come'
póoj → *pójjj* 'push'

(Frajzyngier 1989: 76)

d. Partial reduplication of the first syllable ($C_1VC_2 > C_1VC_1C_1C_2$).
bín- → *bíppn-* 'wash'
tán- → *táttn-* 'run'

(Frajzyngier 1989: 76)

e. Insertion of a glottal stop between the first and the second syllable.
píir → *pí.ír* 'make fire'
túul → *tú.úl* 'scatter'

(Frajzyngier 1989: 77)

f. Suffix *-t/-j*.
púnd → *púnd-t-* 'cook'
kpádɗ → *kpáɗɗ-t-* 'finish'
ámb → *ámb-j-* 'climb'
céɓɓ → *céɓɓ-j-* 'plant'

(Frajzyngier 1989: 78)

In Wandala (Afro-Asiatic, Chadic), all the main three strategies can be found: affixation of *-a-* (cf. (9)), (partial) reduplication (cf. (10)), and lexical alternation (cf. (11)).

(9) Wandala (Afro-Asiatic, Chadic)

a. *à vl-ù nàwè*
3SG sell-VEN sheep
'he sold a sheep' (Frayzjngier 2012: 160)

b. *à v<à>l-ù náwà*
3SG sell<PLAC>-VEN sheep.PL
'he sold sheep (pl)' (Frayzjngier 2012: 160)

(10) Wandala (Afro-Asiatic, Chadic)
tà fà~fà-nà tɔ́ zəŋw-àhà á wàya
3PL PLAC~put-3SG T donkey-PL PRED yesterday
'They were putting it on donkeys yesterday' (Frayzjngier 2012: 164)

(11) Wandala (Afro-Asiatic, Chadic)

a. *dùksá à bà bla*
thing 3SG FOC put
'the thing is put' (Frayzjngier 2012: 164)

b. *dùks-áhà tá bà pwá*
thing-PL 3PL FOC put.PLAC
'the things are put/spread' (Frayzjngier 2012: 164)

Finally, Masa seems not to have a dedicated morphological strategy to express such a type of functions (cf. Melis 1999).

Thus, the situation of Chadic languages of my sample can be summarized in Table 8.

Table 8. Pluractional marking strategies in Chadic languages.

Languages	Strategies of marking			
	Affixation	**Reduplication**	**Lexical alternation**	**Others**
Hausa	==	partial (initial/ internal)	==	==
Lele	*-wì*	==	==	devoicing of initial consonant
Masa	NO PLURACTIONALITY			
Mupun	*-a, -r, -e, -ep, -wat, -k*	==	yes	==
Pero	*-j/-t*	(double) gemination, partial	==	insertion of glottal stop, insertion of a geminated glide
Wandala	*-a-*	partial	yes	==

What undoubtedly comes out from the situation of Chadic languages is that also in strictly related languages, and in the same language too, several different strategies can co-exist to express pluractional functions. This is a piece of evidence of the fact that probably we are dealing with very different types of constructions.

In addition, this kind of situation is not limited only to the Chadic branch, but it is cross-linguistically widespread. The variety of possibilities exhibited by the languages of the world is remarkable.

5.1.2 Diachronic data and sources

A topic that I did not investigate in the previous chapters is the diachronic origin of pluractional markers. There is basically one reason for this lack: pluractionality is one of the most unrecognized and, consequently, understudied linguistic phenomena. This situation has led to the scarce existence of any kind of data concerning pluractional constructions. And, obviously, a lack of synchronic data leads consequently to an almost complete absence of diachronic data. In addition to this, it is often the case that we do not have any (or scarce) data on several languages of the world.

Diachronic data are extremely important for historical linguistics; they allow to describe the sources and the paths of evolution of specific constructions. At the same time, this kind of data has become pivotal also for typological linguistics. Indeed, several scholars have recently proposed to adopt an approach to linguistic explanation that takes into consideration also the diachronic path of a specific construction (a source oriented typology vs. a synchronically oriented typology, cf. Cristofaro 2012, 2015 and Barðdal & Gildea 2015 among others). This is because the history of a construction can tell us a lot about its synchronic status. Sometimes, synchronic explanations do not find support in diachrony (cf. Cristofaro 2012). In other words, it is possible to achieve more accurate typological explanations only through both a synchronic and a diachronic investigation.

Unfortunately, we do not have enough historical data for pluractional constructions to allow us to sufficiently refine our findings. My considerations are basically all grounded on a cross-linguistic comparison carried out through a synchronic exploration.

However, this does not mean that I could not find any kind of diachronic data. The few data found can be useful for my purposes as well. Specifically, pluractional sources provide strong evidence for the investigation on the categorial status of such constructions in cross-linguistic perspective.

I basically found four different pluractional sources. They are: demonstratives, verbs of feelings, locative or positional verbs, and motion verbs.

In the next sections, each source found will be briefly illustrated.

5.1.2.1 *Demonstratives*

Frajzyngier (1997) has extensively analyzed and demonstrated that the nominal and verbal number markers of Chadic languages have originated from demonstratives.

As already noted in the previous section, the number systems (both nominal and verbal) of Chadic languages are particularly complex. The most frequent marking strategies on nouns and verbs are affixation and reduplication, but sometimes also lexical alternation and some other minor strategies can be found as well. Frajzyngier (1997) focuses only on the discussion of the paths of grammaticalization of the affixes.

He notes that in several Chadic languages (fifteen out of thirty-five languages of his sample) the nominal number markers are identical to demonstratives (with this term he means to cover a large set of functions, such as deictic, anaphoric, determiner), and some other affixes show an interesting similarity. Though it is not within the scope of this section to demonstrate such statement, I will briefly provide some examples used by Frajzyngier (1997) in his discussion.

In Hona (Afro-Asiatic, Chadic) the plural marker *-yá* is identical to (a part of) the proximate demonstrative, both in the singular and in the plural form:

(12) Hona (Afro-Asiatic, Chadic)
a. *kwàlàmbá* → *kwàlàmbá-yà* 'bottle(s)'
b. *kwàlàmbá-dí-yà* 'this bottle'
kwàlàmbá-y-ní-yà 'these bottles' (Frajzyngier 1997: 204)

A similar situation is found in Podoko (Afro-Asiatic, Chadic) where the nominal plural markers (*-ki* and *-kaki*) have a formative *-k-* that is also found in the anaphoric marker (cf. (13b)) and in the remote (or distal) demonstratives (cf. (13c)).

(13) Podoko (Afro-Asiatic, Chadic)
a. *nawá* → *nawá-ki* 'goat(s)'
ɗəya → *ɗəya-kaki* 'bird(s)' (Jarvis 1989: 54)

b. *ndərə ká mənά*
peanut ANAPH his
'his peanuts' (mentioned earlier) (Jarvis 1989: 54)

c. PROXIMATE REMOTE
ʸma-nə *ʸma-ká*
'ce…-ci' 'ce…-là'
ʸ ma-nə-nga *ʸma-ká-nga*
'celui-ci' 'celui-là' (Jarvis 1989: 58)

These identities or similarities make us suppose that they can actually have a common origin, and specifically that probably nominal markers came from demonstratives (for the complete demonstration see Frajzyngier 1997).

Frajzyngier (1997) also notes that often pluractional affixes of Chadic languages are similar to nominal number markers, and, thus, to demonstratives (deictic, anaphoric, definite, etc. markers).

He provides some examples:

(14) Wandala (Afro-Asiatic, Chadic)
a. *əhlá lápíkà*
cow sick
'a sick cow' (Frajzyngier 1997: 218)

b. *əhlá-hà lápíkà(-hà)*
cow-PL sick(-PL)
'sick cows' (Frajzyngier 1997: 218)

(15) Wandala (Afro-Asiatic, Chadic)
a. *càcá nàfá*
cut tree
'He cut a tree.' (Frajzyngier 1997: 218)

b. *à-ccé-h nàfá-hà*
3-cut-PLAC tree-PL
'He will cut trees.' (Frajzyngier 1997: 218)

(16) Mafa (Afro-Asiatic, Chadic)

PRONOUNS		MODIFIERS
nana/nanay	'ceci, ce…ci (this here)'	*wuna/wunay*
nata/natay	'celà (là bas) (that there)'	*sátá/sátáy*
		wuta/wutay

(Barreteau & le Bléis 1990: 52)

(17) Mafa (Afro-Asiatic, Chadic)
a. *də́ sə́n*
'He spends the night.' (Tourneux 1995: 174)

b. *də́ sə́náy*
'He spends the night habitually.' (Tourneux 1995: 174)

From the situation shown by his data, Frajzyngier (1997) proposes some possible chains of grammaticalization:

i. DEMONSTRATIVE → OBJECT ANAPHOR → PLURAL OBJECT
ii. DEMONSTRATIVE → OBJECT ANAPHOR → CATAPHORIC MARKER OF DETERMINED OBJECT → PLURAL OBJECT
iii. DEMONSTRATIVE → OBJECT ANAPHOR → CATAPHORIC MARKER OF DETERMINED OBJECT → MARKER CODING DEFINITENESS OF THE OBJECT → PLURAL OBJECT
iv. DEMONSTRATIVE → OBJECT ANAPHOR → PLURAL SUBJECT OF THE INTRANSITIVE VERB
v. DEMONSTRATIVE → OBJECT ANAPHOR → PLURAL SUBJECT OF TRANSITIVE
vi. DEMONSTRATIVE → OBJECT ANAPHOR → PLURAL SUBJECT OF TRANSITIVE → PLURALITY OF EVENTS

From these paths, it seems that the formation of pluractional affixes in Chadic languages started from demonstratives and gave result to several different possibilities. Even though apparently these chains seem to be unifiable in a single chain of grammaticalization, Frajzyngier (1997) suggests to maintain them separated since there are no clear pieces of evidence of a common evolution.

However, some considerations can be pointed out. We can see that demonstratives probably got to plurality of events through two different possibilities: the first is through the anaphoric or cataphoric step and the second is through the step of participant plurality. This second possibility can be summarized in three different steps: transitive object > intransitive subject > transitive subject. While the evolution from transitive object and intransitive subject seems to lie in the similarity of the semantic roles that these arguments tend to express (i.e., patient, though intransitive subject not as often as transitive object), the possible development from intransitive subject to transitive subject seems to lie more in their syntactic position, i.e., they are both placed in the subject position (Chadic languages are nominative-accusative).

Though this proposal is very attractive, the proofs and evidence provided by Frajzyngier (1997) are not as strong as they should be to demonstrate such chains beyond any doubts. His discussion is based only on the phonological identity and the similarity of demonstratives with nominal number and pluractional markers. In addition, this kind of piece of evidence is made less strong by the fact that the phonetic strings that compose these markers are very limited, i.e., they are represented by a single or a couple of phonetic elements. This phonetic peculiarity makes them potentially emerged from a very broad range of different phonetic strings. Obviously, this does not necessarily mean that Frajzyngier's (1997) proposals are

incorrect, but we just must be aware that they are not undoubtedly demonstrated. Consequently, we can consider them only as hypotheses, more or less strong.

In any case, for my purposes, it is important as well that the sources of pluractional markers in Chadic languages may be the demonstratives. This is because this possibility, compared to other possible sources (cf. the next sections), shows us the large variety that these constructions also have at the diachronic level.

5.1.2.2 *Verbs of feeling: Love/like*

In the languages of the world, it is possible to find pluractional markers that seem to have evolved from verbs of feeling. For instance, this is the case of Eton (Atlantic-Congo, Volta-Congo).

In this language, pluractionality is expressed using the semi-auxiliary verb *dìŋ* (van de Velde 2008: 332). A typical pluractional construction in Eton requires the presence of at least three verbs: (i) a proper auxiliary that represents the actual inflected form; (ii) the infinitive form of the quasi-auxiliary *dìŋ* that will give the iterative or frequentative reading; and, finally, (iii) the infinitive form of the verb that will express the lexical semantics.

(18) Eton (Atlantic-Congo, Volta-Congo)
à-ŋgá-bé *L-dìŋ-Lgì* *L-tìl* *H* *bɔ̀* *kálâdà*
I-RM.PST-IPFV INF-HAB-G INF-write LT PL letter
'He usually wrote letters.' (van de Velde 2008: 235)

(19) Eton (Atlantic-Congo, Volta-Congo)
à-mɛ́ *L-dìŋ-gì* *L-kɔ́zì*
I-YIMPF INF-HAB-G INF-cough
'He coughed often.' (van de Velde 2008: 332)

The verb *dìŋ* can also be used as an independent verb. Its lexical meaning is 'like/love'.

For example:

(20) Eton (Atlantic-Congo, Volta-Congo)
à-Ltɛ́ *L-bùl* *H* *L-dìŋ* *H* *k͡pɛ̀m*
I-PRS INF-do_most LT INF-love LT [9]cassava_leaves
'She likes cassava leaves a lot.' (van de Velde 2008: 340)

(21) Eton (Atlantic-Congo, Volta-Congo)
də̀ *ù-Ltɛ́* *L-dìŋ* *H* *ndɔ́gà*
Q 2SG-PRS INF-like LT [10]mango
'Do you like mangoes?' (van de Velde 2008: 326)

The double function of this verb, the grammatical and lexical ones, can be explained through the non-complete grammaticalization process which *dìŋ* has undergone. And, this double reading can also lead to ambiguous interpretations.

For example, the sentence in (22) can have a double reading depending on the context.

(22) Eton (Atlantic-Congo, Volta-Congo)
à-ŋgá-bé *L-dìŋ-Lgì* *mà* *L-kùz* *H* *bì-págì*
I-RM.PST-IPFV INF-like/HAB-G 1SG.NPPR INF-buy LT 8-present
'He liked to buy me presents.' or 'He often bought me presents.'
(van de Velde 2008: 356)

The reason behind this functional shift can be apparently identified as a possible diachronic semantic path. Indeed, we can suppose that the evolution of the lexical verb *like* to a quasi-auxiliary that expresses pluractional functions has originated in the following semantic context: "I like to do [SITUATION] and consequently I do it often". In other words, if I like to do something (like walking, playing an instrument, dancing, singing, and so on), it is highly probable that I will try to perform the same situation as often as possible. Thus, perhaps there is a connection between doing something several times and loving the same situation. This semantic path seems to be the most reasonable and it seems to me that there are no other convincing explanations to justify such a shift.

5.1.2.3 *Locative or positional verbs: Sit/stay*

Another possible source of pluractional markers found in the languages of my sample can be locative or positional verbs.

By locative or positional verbs, I mean verbs that express static position or location rather than motion or direction. For example, verbs like *stay*, *be (in/at)*, *sit*, *dwell*, etc.

In some languages of the world, this type of verbs can grammaticalize and become pluractional markers.

For instance, in Lango (Nilotic, Western Nilotic) the verb *bèdò* 'sit/stay' can be used as an auxiliary to express pluractional functions, mainly iterativity and frequentativity.

(23) Lango (Nilotic, Western Nilotic)
à-bédò *lwòŋ-ŋò* *lócəà*
1SG.SBJ-stay.PFV call-INF man
'I kept on calling the man' (Noonan 1992: 140)

(24) Lango (Nilotic, Western Nilotic)
àpwô *gínní* *kwàc* *ònwòŋò* *òbèdò* *òwótê*[33]
H. with L. 3SBJ-find-PFV 3SBJ-stay-PFV friends
'Hare and Leopard were friends' (Noonan 1992: 163)

33. In this example, the author of the grammar does not provide a morpheme-by-morpheme segmentation of the text of the example, but he does in the glosses.

A similar situation can also be found in Khwe (Khoe-Kwadi, Khoe). In this language, the morpheme *-t(i)-* expresses pluractional functions.

(25) Khwe (Khoe-Kwadi, Khoe)
tí à bɛ-ɛ-xú-t-a-tè!
1SG OBJ be_too_heavy-II-COMPL-FREQ-I-PRS
'It is often too heavy for me!' (Kilian-Hatz 2008: 146)

(26) Khwe (Khoe-Kwadi, Khoe)
á càá-hè tí kx'áà-ca hĩí nò càá à tì
DEM water-3SG.F 1SG drink-VOL do when water OBJ 1SG
à kwɛ́ɛ-ka-ti-ta-tè.
OBJ refuse-CAUS-FREQ-FREQ-I-PRES
'When I want to drink water, (my friends) very often refuse me this water.'
(Kilian-Hatz 2008: 146)

Kilian-Hatz (2008) notes that the source of this morpheme is not completely clear. Nevertheless, she identifies some very interesting similarities that lead to consider the verb *stay* as the diachronic source of this marker.

> The origin of this suffix is unclear, but it is noteworthy to add that Khwe has an adverb, *tĩ* ('often'), which is placed clause initially, and two other adverbs, *-tĩ̀-tá* and *-tĩ̀-yá* ('often'), which are most likely frozen finite verb forms of the verb *tĩ̀ĩ̀* ('stay'). (Kilian-Hatz 2008: 146)

In this case, the evolution of the verb *stay* seems to have followed a slightly different path: from the lexical verb to the pluractional marker, through the adverbial step *often*.

Another example is provided by Bengali (Indo-European, Indo-Iranian). Also in this case, pluractional functions are expressed by an auxiliary verb, namely, *thaka* that also maintains its lexical meaning 'stay'.

For example:

(27) Bengali (Indo-European, Indo-Iranian)
tɔbe jībône æmôn ôdbhut ghɔṭôna majhemajhe
but life.LOC such strange event sometimes
ghôṭe thake.
happen.PP stay.3PRS.SBJ
'But sometimes such strange things keep happening in life.'
(Thompson 2012: 286)

(28) Bengali (Indo-European, Indo-Iranian)
se sɔb sômôỳ ei baje gan gaite thake.
she all time this stupid song sing.IPFV stay.3PRS.SBJ
'She keeps singing this stupid song all the time.' (Thompson 2012: 175)

Heine (1993: 45–48) notes that often locative/positional verbs can evolve in markers of plurality. They tend to become more easily continuative/continuous markers, but also iterative and frequentative ones. This diachronic evolution can be explained through the coherent connection of staying in a specific place for a long time (i.e., the positional value) and doing something in that place for a long time (i.e., continuativity). Then, the evolution from a situation performed for an extended period (continuativity) to a situation performed several times (iterativity/frequentativity) is attested. We have seen this connection also in the present work (cf. the pluractional conceptual space in Chapter 2).

5.1.2.4 *Motion verbs: Go*

The last diachronic source that I found in the languages of my sample is represented by motion verbs and, more specifically, the verb *go*.

In Rapanui (Austronesian, Malayo-Polynesian), pluractional functions are expressed by four different marking strategies. One of them is the auxiliary verb *oho* 'go' (the other strategies are: full reduplication, partial reduplication, and the suffix *-haŋa*).

For example:

(29) Rapanui (Austronesian, Malayo-Poliynesian)
e, koroiti~koroiti I kai I oho mai ai.
EXC slow~ADV PST eat PST go TOW PHO
'Well they went on eating it and slowly they got used to it.'
(Du Feu 1996: 162)

This auxiliary expectedly appears mainly in spatial situation, such as the one in (30):

(30) Rapanui (Austronesian, Malayo-Poliynesian)
he ha'aki he oho penei e …
ACTN announce ACTN go like this …
'They went around announcing that …' (Du Feu 1996: 162)

We find another case of a motion verb that gave rise to pluractional markers in Ute (Uto-Aztecan, Northern Uto-Aztecan). In this language, the suffix *-mi* can give frequentative and habitual readings to the verb.

(31) Ute (Uto-Aztecan, Northern Uto-Aztecan)
navutigi-mi súuva-tɨ-mɨ-aa-ni 'uni-kya-na,
imitate-HAB other-NOM-PL-OBJ-like do-PL-REL
'he used to imitate what others did,' (Givón 2011: 145)

Givón (2011) notes that

> The verbal source of the suffix *-mi*, the verb *miya-* 'walk about', 'go', is sufficiently transparent, given that one may still find it in text as the full form of the habitual aspect, especially when followed by another suffix. (Givón 2011: 132)

I have already noted in (39) in Section 3.4 that in Brahui (Dravidian, North Dravidian) there are two different auxiliaries to express pluractionality and both are motion verbs:

> A verbal participle in *-isa* combined with a finite form of the verb *hining* 'to go' or *banning* 'to come' is used to express a prolonged or regularly repeated action: e.g., *nī kōšišt karisa hin* 'Go on making your efforts', *ō dušmanān har vaxt narrisa kāik* 'He runs away from the enemy every time', *tīvaġā dē ōde pārisa bassunuṭ ki daun kappa* 'The whole day I was telling him not to do so'. (Andronov 2001: 105)

The semantic connection between motion verbs and pluractionality is quite clear. Indeed, motion usually conveys a situation which is extended through time and that also involves a trajectory that can be viewed as a spatial extension. The relationship between motion and pluractionality is not uncommon in the languages of the world. From the examples above, we can also say that we find it basically in all the geographic macro-areas (e.g. Asia: Brahui; Australia-Papunesia: Rapanui; Africa: Maa; North America: Ute) and that it is particularly widespread in South American languages (e.g. South America: Yagua, Apurinã, Kashibo-Kakataibo; cf. Section 4.3.4).

5.1.2.5 *Pluractional markers as sources for other constructions*

Finally, another interesting situation deserves mention. In some languages of the world, pluractional markers can be the source for other types of markers.

For example, in Chukchi (Chukotko-Kamchatkan, Chukotian) the Iterative suffix *-tku* that expresses some pluractional functions (i.e. iterativity, frequentativity, participant plurality, but also antipassivity) can be applied to nouns to give a collective noun (Dunn 1999: 261):

(32) Chukchi (Chukotko-Kamchatkan, Chukotian)
ənqorə ŋan tʔe-ce ɣiwi-kine-k=ʔm / ŋəra-ca ɣiwi-kine-k
then DEICT some-ADV year-REL-LOC=EM four-ADV year-RELT-LOC
/ emelke ləɣen=ʔm cawcəwa-tko-n
probably really=EM reindeer_herder-COLL-3SG.ABS
ɣənu-lʔ-ə-n itək-ewən n-ə-mk-ə-qin
remain-PTCP-EP-3SG.ABS SO-INTS ADJ-EP-many-3SG
ɣe-ɣnu-lin=ʔm
PF-remain-3SG=EM
'Then after several years, four years or so, the reindeer folk remaining, quite a few remained' (Dunn 1999: 156)

This is the case also of some North American languages in which verbal number markers gave rise to nominal number markers.

In the languages of Native North America, often pluractional markers tend to encode a function that is slightly different from the most prototypical of plurality of situations. They "distributes actions over time, space, or participants" (Mithun 1988: 228). In other words, they firstly express a distribution of situations that consequently also involves a plurality of situations.

For example, in Cayuga (Iroquoian, Northern Iroquoian) when the pluractional/spatial distributive marker is applied to verbs, the result is the one shown in the example below:

(33) Cayuga (Iroquoian, Northern Iroquoian)
ẹhsyę́:tho² 'you will plant'
*ẹhsyę́thwa**hs**ọ:²* 'you will plant a lot of different things'
(Mithun 1988: 228)

These markers can also be applied to other lexical categories, such as nominals. In this case, they retain a sort of distributive reading, but their semantic values can also be extended to other meanings that sometimes imply plurality of entities.

(34) Cayuga (Iroquoian, Northern Iroquoian)
a. *kanyo:²* 'wild animal'
*kanyo²**sh**ọ́:²ọh* 'game'
(Mithun 1988: 228)

b. *enọhsọnyá²stha²* 'one builds houses with it, tool'
*enọhsọnyá²stha²**sh**ọ́:²ọh* 'house building tools'
(Mithun 1988: 228)

c. *eksá:²ah* 'child, girl'
*kaeks²a**sh**ọ́:²ọh* 'children'
(Mithun 1988: 229)

d. *hakę́htsih* 'old man'
*kaekẹhtsíh**sh**ọ²* 'old people'
(Mithun 1988: 229)

This extension of the use of markers that express pluractional/distributive meanings to expression of plurality of entities (i.e., nominal number) can be explained through the semantic/functional connection between these notions (distribution and plurality). Mithun (1988: 232) notes that: "[d]istributive markers retain a distributive meaning, serving to emphasize the distribution or separateness of entities referred to nouns". In other words, the functional shift goes from the distribution of actions to the distribution over different individual entities because "human beings are often considered inherently individualistic and differentiated" (Mithun 1988: 228). Thus, the evolution of these markers toward a plurality of

entities seems to follow a specific path: DISTRIBUTION > INDIVIDUALITY > PLURALITY. The distribution over different participants highlights their individuality (i.e., the fact that they are separate entities), and, thus, their individuality makes them conceived as a group of single entities, that is, a plurality.

5.2 The categorial status of pluractional constructions

The descriptions offered in Chapters 2, 3 and 4, and the additional issues presented in the previous sections of this chapter have undoubtedly shown that cross-linguistically pluractional constructions are heterogeneous. At the typological level, this is not a unique characteristic. Often, the languages of the world show a broad diversity at any level of investigation. However, the situation of pluractional constructions seems to be more confusing than the one of other phenomena. This apparent confusion is a natural consequence of the scarce recognition that this phenomenon has had in typological studies so far. Since pluractionality is not a category that we inherited from the grammatical tradition of the ancient languages, we have more problems in properly defining it and, then, this makes pluractionality more prone to different interpretations. Obviously, this situation can create some problems in reaching a consistent grammatical categorization of such constructions. Indeed, in the literature we can find a relatively high number of proposals concerning their categorial classification.

In the introduction (Chapter 1), I noted that Dressler (1968) and Cusic (1981) describe this phenomenon as an instance of actionality (lexical aspect/Aktionsart). On the other hand, Corbett (2000) seems to suggest a double hypothesis: consider pluractionality as an independent phenomenon and/or as an instance of verbal aspect. He indicates three reasons why verbal number (i.e., pluractionality) must be considered in a monograph dedicated to number:

> Why then should event number be considered here at all if it may be a type of verbal aspect? First because it is worth noting the parallelism between number for the noun (number of entities) and aspect for the verb (number of events). Second, because the way in which number of this type is marked on the verb may also serve other purposes, which may be harder to distinguish from other types of number, in particular it may mark verbal number of the participant type […]. And third, because for certain language families there is a tradition of using the term 'plural verb' in such instances and so this usage should be discussed. (Corbett 2000: 247)

From this passage, we can see that the position of Corbett is not completely clear. The first consideration seems to state that verbal number is an actual value of

grammatical aspect that, however, shows some interesting parallelisms with nominal number which cannot be underestimated. In truth, this is right only for some languages of the world and, therefore, it cannot be easily generalized and extended to all situations. The third consideration is not fully satisfactory. The terminology adopted in specific tradition is very often misleading and it is strictly related to the convention of the particular linguistic traditions. Consequently, it cannot be used as a reliable element for a typological analysis. On the contrary, the second consideration is interesting. The very large functional domain that pluractional constructions express in the languages of the world covers a set of different values: some of them are actually considered aspectual values in the literature, (frequentativity, habituality, and generic imperfectivity, but also iterativity) but others, mainly the functions placed on the vertical area of my conceptual space (and more specifically participant plurality), are hardly described under the notion of verbal aspect.

The picture drawn by Corbett (2000) is not straightforward. He seems to state first that verbal number is an actual case of aspect with interesting parallelism with nominal number, then he notes (though not overtly) that however participant plurality makes this view hardly adoptable, but finally he states that: "[h]owever, 'event number' may reasonably be taken as a type of verbal aspect" (Corbett 2000: 247). Thus, the situation found in the literature is far from being clear.

The conceptualization of pluractional constructions in cross-linguistic perspective that I am going to propose is completely different.

In the previous chapters, I have noted that pluractionality shows a broad variety in the languages of the world at any level of analysis, at the functional, formal, and diachronic ones. Though this is a consideration that affects every cross-linguistic investigation, it seems that for pluractional constructions this fits particularly well. Such a diversity concerns almost all the characteristics and issues described so far. Consequently, I believe that a completely new conceptualization is needed.

Even though the proposals of scholars are not satisfactory, they do not seem to be totally wrong. Each of them actually captures some important properties of pluractionality, but at the same time they seem not to explain accurately the whole picture.

In this sense, the apparent confusion of Corbett (2000) highlights that the situation is composite and, from my point of view, it leads to a unique solution. Pluractional constructions are very different from language to language, that is, they have different grammatical realizations in different languages. This suggests to adopt a different method of classification. In other words, cross-linguistically we cannot describe pluractionality making reference to pre-established linguistic categories (such as grammatical aspect, or actionality) because pluractional constructions can be actualized through different categories in different languages.

Indeed, pluractionality can be: (i) an instance of grammatical aspect if in the specific language it expresses iterativity/frequentativity and some other more aspectual functions, and if the markers actually belongs to the aspectual system of the language (for example the Kiowa – Kiowa-Tanoan – suffixes *-ą̇/-hɔ̇*, cf. Watkins 1984: 178–179); (ii) an independent category in other languages, such as for example the situation of Beja described in Section 4.2; or (iii) an instance of actionality in some others, as suggested by Dressler (1968), Cusic (1981), and Xrakovskij (1997a).

This situation has led to the difficulties that scholars face when they try to describe pluractional constructions adopting a fixed and pre-established grammatical category.

In conclusion, we can say that we cannot categorize pluractional constructions *a priori*, but cross-linguistically we can recognize them only through the functional and the formal characteristics described in the previous chapters trying to avoid a simplistic and unique grammatical classification.

5.3 The language- and construction-specificity of pluractionality

The new way to look at pluractionality from a theoretical point of view proposed in the previous section finds an important support in the functional-typological approach to the study of language.

In the last two decades, a new theoretical model for the cross-linguistic conceptualization of linguistic phenomena has arisen in the literature. The dissatisfaction of some scholars (in particular Dryer 1997; Croft 2001, 2003; Haspelmath 2007; and Cristofaro 2009 among others) for some kinds of typological generalizations, considered to be made too easily (i.e., without strong cross-linguistic evidence), led to the origin of the Radical Construction Grammar approach (cf. Croft 2001).

This approach is radical in the sense that it breaks the traditional conceptualization of grammatical relations and categories. Croft (2001) focuses principally on the syntactic theory, but this approach can be extended to all the linguistic levels. In Croft's view, constructions are "primitive units of syntactic representation" (Croft 2001: 46) and "consist of pairings of form and meaning that are at least partially arbitrary […]. Thus constructions are fundamentally SYMBOLIC units" (Croft 2001: 18), "the internal structure of a construction is the morphostyntactic structure of the sentences that instantiate constructions" (Croft 2001: 20).

As already mentioned, the theory of language proposed by Croft (2001) has its own basis in the cross-linguistic comparison. In other words, only when comparing a high number of languages, can we say something that can be assumed to be universally valid.

Usually, linguists investigate phenomena in the languages of the world referring to them as linguistic categories. However, each cross-linguistic investigation reveals that the reality is more complex and varied than one can expect. The question that consequently arises is: are we actually comparing the same kind of constructions? The situation shown by pluractional constructions (and several other typological phenomena) clearly demonstrates that we are not necessarily dealing with the same kinds of constructions, namely, with a universally valid and unique category.

In linguistics, categories are generally defined as "a class of elements that display at least partially overlapping grammatical properties" (Cristofaro 2009: 441). It is undeniable that the members of a specific linguistic category share a set of common properties because, otherwise, talking about category would be completely inconsistent. However, these common properties do not make necessarily two constructions part of the same category. Indeed, very often constructions that are claimed to belong to the same linguistic category show also relevant differences (also inside the same language).

Haspelmath (2007) notes that:

> [I]t is important to realize that similarities do not imply identity: It is very hard to find categories that have fully identical properties in two languages, unless these languages are very closely related. […] [O]ne has to start with the awareness that each language may have totally new categories. (Haspelmath 2007: 126)

Often, linguists focus their attention more to the similarities giving no (or scarce) importance to the differences. The case of pluractionality has revealed that also constructions that are considered members of the same category can have different grammatical status in different languages. However, we have also seen that languages that are strictly related sometimes can show important differences regarding the same kind of constructions (cf. the case of Chadic languages in Section 5.1.1).

Therefore, we cannot consider linguistic categories universally valid because in most cases they do not have the same grammatical status and, in addition, their members do not show the same set of characteristics.

The validity of linguistic categories seems to be limited only at the intra-linguistic level, that is, for single languages.

In addition, this approach can be further extended to the most basic element of a language, namely, constructions.

> I propose that we discard the assumption that syntactic structures are made up of atomic primitives (language-universal or language-particular). CONSTRUCTIONS, NOT CATEGORIES AND RELATIONS, ARE THE BASIC, PRIMITIVE UNITS OF SYNTACTIC REPRESENTATION. The categories and relations found in

> constructions are derivative – just as the distributional method implies. This is Radical Construction Grammar. (Croft 2001: 45–46)

Thus, categories are surely valid only at construction or language level. In other words, cross-linguistically linguistic categories are better explained only as language- and construction-specific entities (Cristofaro 2009).

However, "this does not mean […] that grammatical relations [and categories, SM] will be entirely incommensurable across languages" (Cristofaro 2009: 469). We should conceive linguistic categories (such as aspect, number, gender, pluractionality, etc.) only as classificatory labels that are useful for linguists in order to group together a set of different constructions that at the same time share a specific semantic, pragmatic, or functional value (cf. the term "substance" in the quotation of Haspelmath 2007 below).

Haspelmath (2007) argues that:

> The most important consequence of the non-existence of pre-established categories for language typology is that cross-linguistic comparison cannot be category-based, but must be substance-based, because substance (unlike categories) is universal. In phonology, this means that comparison must be phonetically based; in morphosyntax, it means that comparison must be semantically based. (Haspelmath 2007: 124)

In other words, linguists, and more specifically typologists, must acknowledge that what they are comparing is something that is actually different. And using the same label for these different constructions is helpful only if we consider these labels as cover terms. These terms permit to group together heterogeneous entities for comparative purposes.

In this sense, we can now say that cross-linguistically, pluractionality must be understood as a classificatory label that groups together a set of different constructions sharing the common function of expressing a plurality of situations.

5.4 The definition of a comparative concept for pluractionality

In Chapter 1, I propose a working definition of pluractionality that basically covers the first definition given by Newman (1990).

After having shown the main characteristics that pluractional constructions have in the languages of the world, I can now propose a new more appropriate definition. This new definition is thought to be cross-linguistically valid. In other words, it roughly corresponds to what Haspelmath (2010) calls a "comparative concept".

> Comparative concepts are concepts created by comparative linguists for the specific purpose of crosslinguistic comparison. Unlike descriptive categories, they are not part of particular language systems and are not needed by descriptive linguists or speakers. They are not psychologically real, and they cannot be right or wrong. They can only be more or less well suited to the task of permitting crosslinguistic comparison. They are often labeled in the same way as descriptive categories, but they stand in a many-to-many relationship with them […]. Comparative concepts are universally applicable, and they are defined on the basis of other universally applicable concepts: universal conceptual-semantic concepts, general formal concepts, and other comparative concepts.
>
> (Haspelmath 2010: 665)

Thus, here I propose to define the comparative concept of pluractional constructions as follows:

> Pluractionality is defined by a morphological modification of the verb (or a pair of semantically related verbs) that primarily conveys a plurality of situations that involves a repetition through time, space and/or participants.

5.5 The relationship between pluractionality and other types of constructions

The situation of pluractional constructions is now clearer. We can understand why the categorial classification of pluractionality was not completely adequate to describe such a complex phenomenon.

However, pluractional constructions actually belong to some language-specific grammatical categories. For example, one of the most important and famous definition of grammatical aspect is the one proposed by Comrie (1976):

> As the general definition of aspect, we may take the formulation that 'aspects are different ways of viewing the internal temporal constituency of a situation'
>
> (Comrie 1976: 3)

If we consider this definition, then, it will be clear that some of the functions (both core and additional ones) displayed in the conceptual space proposed in Chapter 2 can be expressed through aspectual values in some languages (iterativity, frequentativity, habituality, generic imperfectivity, continuativity). Then, even though these functions can be described as verbal aspect according to Comrie's (1976) definition, it does not necessarily mean that they are expressed through formal aspectual values in every language. For instance, this is the case of pluractional constructions in Akawaio (Cariban, Venezuelan Cariban) in which the morpheme *-pödï* semantically covers functions that can be thought as aspectual;

but at the formal level of the language, the pluractional marker cannot be conceived as belonging to the aspectual system (that expresses values such as the progressive *-bök* that indeed can co-exist with the pluractional marker in the same verbal form, cf. Section 4.1).

In some other languages, pluractionality seems to constitute an independent category. For example, this is the case of Beja and several other Cushitic languages in which these constructions are quite productive and cover a specific and independent functional domain.

For some other languages, it is as well possible to theorize that pluractionality belongs to a wider category that we can call number that is trans-categorial since it affects different lexical categories (such as nouns and verbs) and expresses a distinction between singularity and plurality (of entities or situations).

In conclusion, this discussion can be applied to several different categories. The central issue, that must be remembered, is that we can discuss about the relationships between pluractional constructions and other types of constructions only by actualizing them in specific situations. In other words, only by referring to specific situations, is it possible to talk about grammatical categories. This is because in cross-linguistic perspective neither a valid category pluractionality, nor, more generally, grammatical categories do exist.

CHAPTER 6

Conclusions

The goals of the present work pointed out in the introduction consisted in providing a preliminary typological account of the phenomenon known as pluractionality in the languages of the world.

After having operationally defined pluractionality in the introduction (Chapter 1), in Chapter 2 I analyzed in detail the possible functions that pluractional constructions can encode in the languages of the world. Then, I tried to provide an innovative interpretation of the functional data adopting the semantic map model. In this way, we could map all the most recurrent functions (both core and additional) on a geometrical space (cf. Haspelmath 2003: 213). This method allowed us to investigate the semantic relationships that exist among these functions. Thus, I also proposed a possible explanation for the connections shown on the conceptual space. Additionally, I identified some interesting correlations that the space reveals.

In Chapter 3, I described the main morpho-syntactic characteristics of pluractional constructions. In the languages of the world, the most common marking strategies are: affixation, reduplication, and lexical alternation. However, it is possible to find several other strategies that are not as frequent as the three just mentioned. The most interesting factor is that the languages of the world display more than one device at the same time to express pluractional functions, and, even more, they show more than two strategies. Then, I discussed some issues associated with these strategies. Specifically, I explored some criteria that permit to distinguish an actual occurrence of grammatical reduplication from one of (textual) repetition. I discussed if it is possible to describe lexical alternation as an instance of suppletion, or if it is better to separate these two phenomena. Finally, I considered some pieces of evidence concerning why participant plurality (semantic selection) is actually a different phenomenon from nominal number (syntactic agreement).

In Chapter 4, I presented three case studies on different languages, namely, Akawaio (Cariban, Venezuelan Cariban), Beja (Afro-Asiatic, Cushitic), and Maa (Nilotic, Eastern Nilotic). These analyses revealed some interesting elements. First, I tested the outcomes of Chapters 2 and 3 based on the cross-linguistic comparison. Second, I noted that pluractional constructions behave in very different ways, and

that they can have different grammatical status in different languages. This is the most important result for the theoretical account proposed in Chapter 5. Indeed, I showed the potential problems and misunderstandings that can arise from such a complex situation. In the literature, we found several grammatical proposals that, however, seem to be unsatisfactory, or better, that do not capture and explain the whole picture of phenomena connected to pluractionality. Consequently, a completely new theoretical conceptualization on pluractional constructions was needed. Thus, I proposed a new way to look at pluractional constructions, i.e., at cross-linguistic level we must consider them as a set of different constructions that do not belong to a common grammatical category, but that share a functional, semantic, and/or pragmatic value, namely, the function of encoding a plurality of situations. This conceptualization leads to the fact that pluractional constructions have different grammatical status in different languages, that is, they can be realized by different language-specific categories in different languages.

This proposal finds a strong confirmation in the general typological literature, and more specifically in the Radical Construction Grammar proposed by Croft (2001) within the functional-typological perspective. This theory conceives grammatical categories and relations as language- and construction-specific rather than as universals. Finally, I proposed the definition of a comparative concept for pluractionality.

My work is the first large-scale typological analysis of pluractionality and, consequently, several new ideas were proposed. However, the research on this topic, that is at the same time both extremely interesting and under-described, cannot be considered concluded. There are several other aspects and issues that deserve to be investigated. For example, we need more fine-grained studies on specific languages in order to explore much more in detail how pluractionality works. Unfortunately, the data which I worked on were too limited to conduct a more precise work, and to discover some new issues that can contribute to both the particular and the general linguistic theory.

We need more specific and detailed works on pluractionality also to explore which kind of verbs can be pluractionalized, and, thus, to examine the relationships that exist between pluractional constructions and actionality. This aspect does not come out from my investigation mainly because of the scarce number of occurrences and types of verb found cross-linguistically.

Moreover, we need more diachronic studies. This kind of works can permit us to better understand and explain the issues tackled in this work. I am aware that, unfortunately, this kind of investigation is extremely difficult to achieve due to the limited number of diachronic data for a huge amount of languages, but I believe that it is possible to reach some better results if we can have at our disposal more diachronic studies.

Finally, there is another important research direction that crosses the boundaries of linguistics and that also concerns some other scientific fields. Specifically, the situation of pluractional constructions (and several other cross-linguistic phenomena) and their linguistic categorization deserves to be investigated in much greater detail from a cognitive, psychological, and neurological point of view. Several questions arise from the consequences of Radical Construction Grammar. It could be interesting to investigate if there are basic cognitive concepts that make some linguistic phenomena more necessary than others. It seems not to be casual that such kinds of phenomena are globally so widespread, but they are expressed in such different ways. In other words: why are pluractional constructions (and several other types of constructions) present almost everywhere but conceived so differently? Are they founded on any kind of cognitive/psychological/neurological bases? Can we talk about a general and more comprehensive cognitive concept that we can call quantification that comprises the linguistic expressions of both verbal and nominal number? On these matters, the role of linguistics is pivotal: we have to examine more deeply the cognitive and psychological status of linguistic phenomena (also crossing different levels) and of conceptual spaces, that is, we have to examine if they must be actually considered as a direct expression of the human mental representation of knowledge or just as a tool that is extremely useful to describe and explain linguistic phenomena, but that does not have other cognitive correlations.

APPENDIX I

Language sample

Appendix I consists in the list of the languages that compose the language sample analyzed in this work with the relative bibliographic reference(s). Since there is not an absolute agreement in the literature, I decided to adopt the classification proposed by Hammarström et al. (2018) in the Glottolog project. This is because it was important to have a consistent classification and Glottolog represents one of the most detailed open access catalogue of language classification. In addition, it allows to consult the full bibliography for each language in a simple and accessible way. At the same time, I decided to adopt the name of the language used in the bibliographic reference(s) giving in the brackets the relative Glottolog name.

Classification		**Languages**	**Reference**
Abkhaz-Adyge	Abkhaz-Abaza	Abkhaz (Abkhazian)	Hewitt (1979), Chirikba (2003)
Afro-Asiatic	Berber	Tamasheq	Heath (2005)
	Chadic	Hausa	Newman (2000), Jaggar (2001), Součková (2011)
		Lele	Frajzyngier (2001)
		Masa (Masana)	Melis (1999)
		Mupun (Mwaghavul)	Frajzyngier (1993)
		Pero	Frajzyngier (1989)
		Wandala	Frajzyngier (2012)
	Cushitic	Beja	Vanhove (2014, 2017)
		Harar Oromo (Eastern Oromo)	Owens (1985)
		Iraqw	Mous (1992)
	Semitic	Amharic	Leslau (1995)
		Arabic, Egyptian	Abdel-Massih, Abdel-Malek and Badawi (1981)
		Hebrew, Modern	Glinert (1989), Coffin and Bolozky (2005)

Classification		Languages	Reference
		Maltese	Vanhove (2001)
Ainu	Hokkaido-Kuril Ainu	(Hokkaido) Ainu	Refsing (1986), Shibatani (1990), Tamura (2000)
Algic		Yurok	Wood (2007)
	Algonquian	Maliseet-Passamaquoddy (Malecite-Passamaquoddy)	Sherwood (1986)
		Plains Cree	Wolfart (1969), Dahlstrom (1986), Cook (2008)
Angan	Nuclear Angan	Kapau (Hamtai)	Oates and Oates (1968)
Araucanian		Mapuche/ Mapudungun	Zúñiga (2006), Smeets (2008), Zúñiga and Díaz-Fernández (2014)
Arawakan	Northern Maipuran	Warekena (Baniva de Maroa)	Aikhenvald (1998)
	Southern Maipuran	Apurinã	Facundes (2000)
Arawan	Madi-Madiha	Jarawara (Madi)	Dixon (2004)
Athabaskan-Eyak-Tlingit		Tlingit	Naish (1979), Story (1979), Leer (1991)
	Athabaskan	Hupa	Golla (1970, 1996)
		Navajo/Navaho	Young and Morgan (1972), Young and Morgan (1987), Young and Morgan (1992), Young (2000)
		Sarcee (Sarsi)	Cook (1984)
		Slave (North Slavey)	Rice (1989)
Atlantic-Congo	North-Central Atlantic	Bijogo (Kangaki-Kagbaaga Kajoko Bidyogo)	Segerer (2002)
		Jóola Karon (Karon)	Sambou (2014)
		Wolof	Church (1981), Dialo (1981), Fal (1999), Diouf (2009)
	Volta-Congo	Dadjriwalé (Godié)	Godé (2008)
		Eton (Eton-Mengisa)	van de Velde (2008)
		Ewe	Rongier (1979), Ameka (1991), Pasch (1995), Duthie (1996)
		Ha	Harjula (2004)

Classification		Languages	Reference
		Igbo	Onumajuru (1985)
		Kisikongo (South-Central Kikongo)	Mfuwa (1995)
		Koromfe (Koromfé)	Renninson (1997)
		Lunda	Kawasha (2003)
		Makonde	Kraal (2005)
		Mambay (Mambai)	Anonby (2008, 2011)
		Mono	Kamanda Kola (2003)
		Sango	Diki-Kidiri (1977), Morrill (1997)
		Supyire (Supyire Senoufo)	Carlson (1994)
		Swahili	Ashton (1944), Myachina (1981)
		Yoruba	Bamgbose (1966), Nelson (2005)
Austro-Asiatic	Aslian	Semelai	Kruspe (1999, 2004)
	Khasi-Palaung	Khasi	Nagaraja (1985)
	Khmeric	Cambodian/Khmer (Central Khmer)	Haiman (2011)
	Khmuic	Khmu	Premsrirat (1987)
	Mundaic	Mundari	Cook (1965), Osada (1992)
	Vietic	Vietnamese	Thompson (1984–1985)
Austronesian		Paiwan	Chang (2006)
	Malayo-Polynesian	Boumaa Fijian (Fijian)	Dixon (1988)
		Chamorro	Topping (1973)
		Dehu/Drehu	Tryon (1967), Moyse-Faurie (1983)
		Kiribatese (Gilbertese)	Groves, Groves and Jacobs (1985)
		Indonesian	Sneddon, Adelaar, Djenar and Ewing (2010)
		Karo Batak (Batak Karo)	Woollams (1996)
		Kilivila/Kiriwina	Senft (1986), Lawton (1993)
		Maori	Bauer (1993)

Classification		Languages	Reference
		Mokilese	Harrison (1976)
		Paamese (Paama)	Crowley (1982)
		Rapanui/Rapa Nui	Du Feu (1996), Kieviet (2017)
		Sakalava (Antankarana Malagasy)	Thomas-Fattier (1982)
		Samoan	Mosel and Hovdhaugen (1992)
		Taba (East Makian)	Bowden (2001)
		Tagalog	Schachter and Otanes (1972)
		Tukang Besi (Tukang Besi North)	Donohue (1999)
Aymaran	Central-Southern Aymara	Aymara (Central Aymara)	Hardman (2001)
Barbacoan	Unclassified Barbacoan	Awa Pit (Awa-Cuaiquer)	Curnow (1997)
Border	Warisic	Imonda	Seiler (1985)
Bunaban		Bunuba (Bunaba)	Rumsey (2000)
		Gooniyandi	McGregor (1990)
Caddoan		Caddo	Melnar (1998, 2004)
	Northern Caddoan	Wichita	Rood (1976, 1996)
Cariban	Guianan	Carib (Galibi Carib)	Courtz (2008)
	Parukotoan	Hixkaryana	Derbyshire (1979)
	Venezuelan Cariban	Macushi	Abbott (1991)
		Panare	Payne and Payne (2013)
Central Sudanic	Lenduic	Ngiti	Kutsch Lojenga (1994)
	Sara-Bongo-Bagirmi	Mbay	Keegan (1997)
Chapacuran	Moreic-Waric	Wari'	Everett and Kern (1997)
Chibchan	Core-Chibchan	Bribri	Constenla Umaña and Margery Peña (1979)
		Ika (Arhuaco)	Frank (1985)
Chonan	Insular Chonan	Selknam (Selk'nam)	Najlis (1973)
Chukotko-Kamchatkan	Chukotian	Chukchi	Dunn (1999)
Cochimi-Yuman	Yuman	Maricopa	Gordon (1986)
		Mojave (Mohave)	Munro (1974)

Classification		Languages	Reference
Coosan		Coos (Hanis)	Frachtenberg (1922)
Dagan		Daga	Murane (1974)
Dogon	Plains Dogon	Jamsay (Jamsay Dogon)	Heath (2008)
Dravidian	North Dravidian	Brahui	Andronov (1980, 2001)
	South Dravidian	Kannada	Schiffman (1983)
Eskimo-Aleut	Eskimo	Central Alaskan Yupik	Miyaoka (2012)
		West Greenlandic (Kalaallisut)	Fortescue (1984)
East Bird's Head	Meax	Meyah	Gravelle (2011)
Furan		Fur	Jakobi (1990), Waag (2010)
Gumuz	Daats'iin-Southern Gumuz/Northern Gumuz	Gumuz, Northern/ Southern	Ahland (2012)
Gunwinyguan	Gunwinyguan Bak	Nunggubuyu (Wubuy)	Heath (1984)
Haida		Haida, Northern/ Southern	Enrico (2003)
Heibanic	West-Central Heibanic	Koalib (Koalib-Rere)	(Nicolas Quint p.c.)
Hmong-Mien	Hmongic	Hmong Njua	Kunyot (1984), Harriehausen (1990)
Huitotoan	Nuclear Witotoan	Huitoto (Minica Huitoto)	Minor, Minor and Levinsohn (1982)
Indo-European	Armenic	Armenian, Modern Eastern	Dum-Tragut (2009)
	Balto-Slavic	Latvian	Kalnača (2014)
		Russian	Wade (1992)
		Serbian(-Croatian-Bosnian)	Kordić (1997), Browne and Alt (2004), Hammond (2005)
	Celtic	Irish	Mac Congáil (2004)
	Germanic	German	Dodd, Eckhard-Black, Klapper and Whittle (2003)
		English	Dixon (2005)
	Greek	Greek, Modern	Mackridge (1987), Holton, Mackridge and Philippaki-Warburton (1997)
	Indo-Iranian	Bengali	Thompson (2012)

Classification		Languages	Reference
		Hindi	Kachru (2006)
		Pashto (Northern Pashto)	Tegey and Robson (1996), Babrakzai (1999)
		Persian (Western Farsi)	Mahootian (1997)
	Italic	French	Batchelor and Chebli-Saadi (2011)
		Spanish	Butt and Benjamin (1994)
Iroquoian	Northern Iroquoian	Oneida	Lounsbury (1953)
		Seneca	Chafe (2015)
Iwaidjan Proper		Maung (Mawng)	Capell and Hinch (1970)
Japonic	Japanesic	Japanese	Shibasaki (2005)
Kartvelian	Georgian-Zan	Georgian	Hewitt (1995)
Kadugli-Krongo	Central-Western Kadugli-Krongo	Krongo	Reh (1985)
Katla-Tima		Tima	Alamin (2012)
Kawesqar	North Central Alacufan	Qawasqar/Kawésqar	Clairis (1985), Aguilera (2001)
Keresan		Acoma (Western Keres)	Miller (1965), Lachler (2006)
Khoe-Kwadi	Khoe	Khwe (Kxoe)	Kilian-Hatz (2008)
Kiowa-Tanoan		Kiowa	Watkins (1984)
Koreanic		Korean	Sohn (1999)
Kxa		ǂHoan (Amkoe)	Collins (1998)
Lower Sepik-Ramu	Lower Sepik	Yimas	Foley (1991)
Maban	Mabang	Masalit	Edgar (1989)
Mande	Eastern Mande	Beng	Paperno (2014)
	Western Mande	Jalonke (Yalunka)	Lüpke (2005)
Mangarrayi-Maran		Mangarayi (Mangarrayi)	Merlan (1989)
	Maran	Mara (Marra)	Heath (1981)
Matacoan	Mataguayo II	Wichí (Wichí Lhmatés Nocten)	Terraza (2009)
Mayan	Core Mayan	Jacaltec (Popti')	Day (1973)
Miwok-Costanoan	Miwokan	Lake Miwok	Callaghan (1963)
Mixe-Zoque	Zoque	San Miguel Chimalapa Zoque (Chimalapa Zoque)	Johnson (2000)

Classification		Languages	Reference
Mongolic	Eastern Mongolic	Mongolian (Halh Mongolian)	Poppe (1954), Ujiyediin (1998)
Muskogean		Creek	Hardy (2005), Martin (2011)
	Alabaman-Koasati	Koasati	Kimball (1991)
	Western Muskogean	Chickasaw	Munro (2005)
Nakh-Daghestanian	Daghestanian	Hunzib	van den Berg (1995)
		Icari Dargwa (Southwestern Dargwa)	Sumbatova and Mutalov (2003)
		Lezgian	Haspelmath (1993)
	Nakh	Chechen	Wood (2007)
		Ingush	Nichols (2011)
Nilotic	Eastern Nilotic	Turkana	Dimmendaal (1983)
	Western Nilotic	Lango	Noonan (1992)
Nuclear-Macro-Je	Je	Canela-Krahô	Popjes and Popjes (1986)
Nuclear Torricelli	Kombio-Arapesh-Urat	Bukiyip	Conrad and Wogiga (1991)
Nuclear Trans New Guinea	Asmat-Awyu-Ok	Asmat (Central Asmat)	Voorhoeve (1965)
	Dani	Western Dani	Barclay (2008)
	Enga-Kewa-Huli	Kewa (East/West)/ Kewapi	Franklin (1971), Yarapea (2006)
	Greater Binanderean	Suena	Wilson (1974)
	Madang	Amele	Roberts (1987)
		Kobon	Davies (1981)
		Usan	Reesink (1987)
	Mek	Una	Louwerse (1988)
Otomanguean	Eastern Otomanguean	Chalcatongo Mixtec (San Miguel El Grande Mixtec)	Macaulay (1996)
	Western Otomanguean	Otomí (Mezquital Otomi)	Priego Montfort de Mostaghimi (1989)
Pama-Nyungan	Desert Nyungic	Pitjantjatjara	Bowe (1990)
	Karnic	Arabana/ Wangkangurru (Arabana/ Wangganguru)	Hercus (1994)

Classification		Languages	Reference
	Paman	Kugu Nganhcara (Kuku-Uwanh)	Smith and Johnson (2000)
	Southeastern Pama-Nyungan	Ngiyamba (Ngiyambaa)	Donaldson (1977)
	South-West Pama-Nyungan	Martuthunira	Dench (1994)
	Yimidhirr-Yalanji-Yidinic	Djabugay (Dyaabugay)	Patz (1991)
		Yidiɲ (Yidiñ)	Dixon (1977)
	Yuulngu	Djapu/Dhuwal	Morphy (1983), Heath (1980)
Pano-Tacanan	Panoan	Shipibo-Konibo (Shipibo-Conibo)	Valenzuela (1997, 2003)
	Tacanan	Araona	Pitman (1980), Emkow (2006)
Peba-Yagua		Yagua	Payne (1985), Payne and Payne (1990)
Pomoan	Russian River and Eastern	Eastern Pomo	McLendon (1975, 1996)
Quechuan	Quechua I	Huallaga Huánuco Quechua	Weber (1989)
Sahaptian		Nez Perce	Aoki (1970), Rude (1985)
Saharan	Eastern Saharan	Beria	Jakobi and Crass (2004)
	Western Saharan	Kanuri (Central Kanuri)	Hutchison (1981), Cyffer (1998)
Salishan		Bella Coola	Nater (1984), Davis and Saunders (1997)
	Central Salish	Skwxwú7mesh (Squamish)	Bar-el (2008)
	Interior Salish	Nxaʔamxcin/ Moses-Columbian (Columbia-Wenatchi)	Kinkade (1977), Willett (2003)
Sentanic	Nuclear Sentanic	Sentani	Cowan (1965)
Sepik	Sepik Hill	Alamblak	Bruce (1984)
Sino-Tibetan	Bodic	Ladakhi (Leh-Kenhat)	Koshal (1979)
	Brahmaputran	Garo	Burling (2004)
	Burmo-Qiangic	Burmese	Lay (1978), Soe (1999)
	Himalayish	Lepcha	Plaisier (2006)
	Karenic	Eastern Kayah Li (Eastern Kayah)	Solnit (1997)

Classification		Languages	Reference
	Kuki-Chin-Naga	Bawm (Bawm Chin)	Reichle (1981)
		Meithei (Manipuri)	Chelliah (1997)
	Sinitic	Cantonese (Yue Chinese)	Matthews and Yip (1994)
		Mandarin Chinese	Arcodia, Basciano and Melloni (2015), Li and Thompson (1981)
Siouan	Core Siouan	Lakhota (Lakota)	Williamson (1984)
Songhay	Northwest Songhay	Koyra Chiini (Koyra Chiini Songhay)	Heath (1999)
South Omotic		Dime	Mulugeta (2008)
Surmic	South Surmic	Murle	Arensen (1982)
Tai-Kadai	Kam-Tai	Thai	Iwasaki and Ingkaphirom (2005)
Ta-Ne-Omotic	Ometo	Wolaytta	Lamberti and Sottile (1997), Wakasa (2008)
Tangkic	Southern Tangkic	Kayardild	Evans (1995), Round (2009)
Tsimshian	Nishga-Gitxsan	Nisgha/Nass Tsimshian (Nisga'a)	Tarpent (1987), Boas (1902)
	Southern-Coastal Tsimshian	Coast Tsimshian (Southern-Coastal Tsimshian)	Dunn (1979)
Tucanoan	Eastern Tucanoan	Barasano (Barasana-Eduria)	Jones and Jones (1991)
Tungusic	Northern Tungusic	Evenki	Nedjalkov (1997)
Tupian	Maweti-Guarani	Kokama-Kokamilla (Cocama-Cocamilla)	Vallejos Yopán (2010)
		Guaraní (Paraguayan Guaraní)	Cerno (2011)
Turkic	Common Turkic	Turkish	Kornfilt (1997), Göksel and Kerslake (2005)
Uralic		Hungarian	Kenensei, Vago and Fenyvesi (1998)
	Finnic	Finnish	Sulkala and Karjalainen (1992)
	Samoyedic	Tundra Nenets	Nikolaeva (2014)
Uto-Aztecan	Northern Uto-Aztecan	Cahuilla	Seiler (1977)
		Comanche	Charney (1993)

Classification		Languages	Reference
		Hopi	Hill (1998)
		Ute (Ute-Southern Paiute)	Southern Ute Tribe (1980), Givón (2011)
	Southern Uto-Aztecan	Huichol	Comrie (1982)
		Northern Tepehuan	Bascom (1982)
		Sonora Yaqui (Yaqui)	Dedrick and Casad (1999)
Wakashan	Southern Wakashan	Southern Wakashan/ Nootkan (Nuu-chah-nulth)	Davidson (2002)
Western Daly	Maranunggu-Ame-Manda	Maranungku (Maranunggu)	Tryon (1970)
Worrorran		Ungarinjin (Ngarinyin)	Coate and Oates (1970), Rumsey (1978), Rumsey (1982)
Yangmanic		Wardaman	Merlan (1994)
Yanomamic		Sanuma (Sanumá)	Borgman (1990)
Yeniseian	Northern Yeniseian	Ket	Georg (2007)
Yukaghir	Kolymic	Kolyma Yukaghir (Southern Yukaghir)	Maslova (1999, 2003)
Isolate	Africa	Kunama	Böhm (1984), Thompson (1989), Bender (1996)
		Sandawe	Steeman (2012)
	Asia	Burushaski	Munshi (2006), Yoshioka (2012)
		Nivkh	Nedjalkov and Otaina (2013)
	Australia	Tiwi	Osborne (1974), Lee (1987)
	Europe	Basque	Hualde and Ortiz de Urbina (2003)
	North America	Coahuilteco	Troike (1996)
		Euchee (Yuchi)	Linn (2001)
		Karok	Bright (1957)
		Klamath (Klamath-Modoc)	Barker (1964)
		Kutenai	Morgan (1991)
		Tunica	Haas (1940)
		Zuni	Newman (1965, 1996)

Classification		Languages	Reference
	Papunesia	Kuot	Lindström (2002)
		Lavukaleve	Terrill (2003)
		Maybrat (Maybrat-Karon)	Dol (2007)
	South America	Cayuvava (Cayubaba)	Key (1967)
		Pirahã	Everett (1986, 1992)
		Trumai	Guirardello (1999), Guirardello-Damian (2014)
		Warao	Romero-Figeroa (1997)

APPENDIX II

Pluractional constructions of the languages of the sample

Appendix II lists all the constructions and the relative function(s) of the languages of my language sample that were analyzed in this work and on which I based my investigation.

Language	Reference	Marking strategy	Function(s)
Abkhaz (Abkhazian)	(Hewitt 1979; Chirikba 2003)	No dedicated pluractional markers attested	
Acoma (Western Keres)	(Miller 1965: 59–65, 80–81, 129–130; Lachler 2006: 221, 223)	Lexical alternation/ suppletion	Participant plurality
		Reduplication (Partial)	Participant plurality
		Reduplication (Total)	Iterativity/frequentativity
		Suffixes *-səø, -G*^{w}	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
			Continuativity
Ainu	(Refsing 1986: 150–151)	Lexical alternation	Iterativity/frequentativity
			Participant plurality
			Respect
		Suffix *-p(a)*	Iterativity/frequentativity
			Participant plurality
			Respect
	(Tamura 2000: 200–203)	Reduplication	Iterativity/frequentativity
			Event-internal plurality
			Intensity
Alamblak	(Bruce 1984)	no dedicated pluractional markers attested	

Language	Reference	Marking strategy	Function(s)
Amele	(Roberts 1987: 247, 252–256)	Reduplication	Iterativity
			Frequentativity
		Suffix *-lo*	Frequentativity
			Habituality
Amharic	(Leslau 1995: 455–462)	Reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
			Intensity
			Event-internal plurality
			Completeness
			Infrequency
			Hurry
Apurinã	(Facundes 2000: 309–310, 313–314)	Suffix *-poko*	Spatial distributivity
		Suffix *-pirīka*	Participant plurality
Arabana/ Wangkangurru (Arabana/ Wangganguru)	(Hercus 1994: 135–136)	Reduplication	Spatial distributivity
			Participant plurality
Arabic, Egyptian	(Abdel-Massih, Abdel-Malek & Badawi 1981: 98–99)	Prefix *bi-* + Imperfect form of the verb	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
			Continuativity(/ progressivity)
Araona	(Pitman 1980; Emkow 2006)	No dedicated pluractional markers attested	
Armenian	(Dum-Tragut 2009)	No dedicated pluractional markers attested	
Asmat (Central Asmat)	(Voorhoeve 1965: 51–74)	Reduplication	Iterativity
			Frequentativity
			Participant plurality
			Event-internal plurality
		Suffix *-a*	Iterativity
			Frequentativity
			Event-internal plurality

Language	Reference	Marking strategy	Function(s)
Awa Pit (Awa-Cuaiquer)	(Curnow 1997)	No dedicated pluractional markers attested	
Aymara (Central Aymara)	(Hardman 2001)	No dedicated pluractional markers attested	
Barasano (Barasana-Eduria)	(Jones & Jones 1991: 24, 26, 45–46, 100–101)	Verb compound *roka* becomes *rea*	Participant plurality
			Spatial distributivity
		Lexical alternation	Participant plurality
		Suffix *-kudi*	Spatial distributivity
			Iterativity/frequentativity
Basque	(Hualde & Ortiz de Urbina 2003)	No dedicated pluractional markers attested	
Bawm (Bawm Chin)	(Reichle 1981)	No dedicated pluractional markers attested	
Beja	(Chapter 4)	Internal modification (Intensive)	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Continuativity
			Frequentativity
			Habituality
			Successive events
		Reduplication (Pluractional)	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Intensity
			Frequentativity
			Habituality
			Generic imperfectivity
Bella Coola	(Nater 1984; Davis & Saunders 1997)	No dedicated pluractional markers attested	
Beng	(Paperno 2014: 41)	Reduplication	Iterativity
			Participant plurality
Bengali	(Thompson 2012: 283–284)	Auxiliary *thaka* 'stay' + past participle	Iterativity
			Frequentativity
			Habituality

Language	Reference	Marking strategy	Function(s)
Beria	(Jakobi & Crass 2004: 85)	Lexical alternation	Participant plurality
Bijogo (Kangaki-Kagbaaga Kajoko Bidyogo)	(Segerer 2002)	No dedicated pluractional markers attested	
Bouma Fijian (Fijian)	(Dixon 1988: 48–49, 195–187, 198)	Reduplication	Iterativity
			Frequentativity
		Prefix *dau-*	Frequentativity
			Habituality
			Generic imperfectivity
Brahui	(Andronov 1980; 2001)	No dedicated pluractional markers attested	
Bribri	(Constenla Umaña & Margery Peña 1979)	No dedicated pluractional markers attested	
Bukiyip	(Conrad & Wogiga 1991)	No dedicated pluractional markers attested	
Bunuba (Bunaba)	(Rumsey 2000: 97–98)	Suffix *-wa/-ba*	Iterativity
			Spatial distributivity
			Event-internal plurality
Burmese	(Lay 1978: 46)	Reduplication (full)	Iterativity/frequentativity
Burushaski	(Yoshioka 2012: 116–121, 166–167)	Suffix *-ya*	Participant plurality
		Reduplication	Frequentativity
Caddo	(Melnar 1998: 103–105, 146–153)	Suffix *-hah/-šah*	Iterativity
			Frequentativity
			Habituality
		Suffix *-nunˀ*	Iterativity/frequentativity/ habituality
		Prefix *wás-*	Frequentativity
		Prefix *ˀawi-/ˀa-*	Participant plurality
		Prefix *haka-*	Participant plurality
		Prefix *na-*	Participant plurality
			Spatial distributivity
Cahuilla	(Seiler 1977: 88, 163–164, 169, 323–326)	Lexical alternation	Participant plurality
		Suffix *-ikaw*	Spatial distributivity
			Participant plurality
		Reduplication and suffix *-an*	Participant plurality/ iterativity

Language	Reference	Marking strategy	Function(s)
Cambodian/ Khmer (Central Khmer)	(Haiman 2011: 70–71, 90–92)	Prefix *pra-*	Participant plurality/ reciprocity/iterativity
		Reduplication	Iterativity
			Frequentativity
Canela-Krahô	(Popjes & Popjes 1986: 183)	Lexical alternation	Iterativity/frequentativity
		Reduplication	Iterativity/frequentativity
Cantonese (Yue Chinese)	(Matthews & Yip 1994: 44–45, 209–210)	Reduplication (AABB schema)	Iterativity/frequentativity
		Suffix *-hoi*	Frequentativity
			Habituality
Carib (Galibi Carib)	(Courtz 2008: 82, 181, 188)	Suffix *-poty*	Iterativity
			Spatial distributivity
			Frequentativity
			Habituality
Cayuvava (Cayubaba)	(Key 1967)	No dedicated pluractional markers attested	
Central Alaskan Yupik	(Miyaoka 2012: 912–913, 1236–1238)	VVt |*+1taaẏ-*| / |*±ɣa(a)ẏ-*| construction	Iterativity
			Frequentativity
			Participant plurality
			Event-internal plurality
		VVt |*+1ẏqi̇-*| / |*-1qaqi̇-*| construction	Participant plurality
		Lexical alternation	Participant plurality
Chalcatongo Mixtec (San Miguel El Grande Mixtec)	(Macaulay 1996)	No dedicated pluractional markers attested	
Chamorro	(Topping 1973: 186, 226, 232–236)	Prefix *man-*	Participant plurality (three or more *vs.* unmarked form for singular and dual)
Chechen	(Wood 2007: 195–252	Lexical alternation / suppletion / ablaut	Iterativity
			Frequentativity
			Participant plurality
			Event internal plurality
			Continuativity
			Habituality
Chickasaw	(Munro 2005: 128)	Lexical alternation	Participant plurality

Language	Reference	Marking strategy	Function(s)
Chukchi	(Dunn 1999: 216–218, 261–262)	Suffix *-tku*	Iterativity
			Frequentativity
			Participant plurality
			Antipassivity
Coahuilteco	(Troike 1996: 654–655)	Infixes *-ak-*, *-ka-*, *-ke-*, *-ok-*, *-wa-/-aw-*	Participant plurality
		Partial suppletion	Participant plurality
Coast Tsimshian (Southern-Coastal Tsimshian)	(Dunn 1979: 25–26)	Lexical alternation	Participant plurality
Comanche	(Charney 1993: 114–115, 135–136, 141–142, 149–151)	Lexical laternation	Participant plurality
		Suffixes *-ti=* (sgac), *-tikwih* (duac), *-tii=* (plac)	Participant plurality
		Suffix *-ʔe/-ʔi*	Iterativity
			Frequentativity
			Participant plurality
			Habituality
		Reduplication	Iterativity/event-internal plurality(/participant plurality)
Coos (Hanis)	(Frachtenberg 1922: 336–337, 341–343, 356–357, 377–381)	Suffix *-ēⁱwa(t)*)	Iterativity/frequentativity/ event-internal plurality/ continuativity
		Suffix *-nēⁱ/-nī*	Participant plurality
		Suffix *-äni*	Participant plurality
			Reciprocity
		Suffix *-āyam*	Participant plurality
		Lexical alternation	Participant plurality
		Reduplication (initial)	Iterativity/frequentativity/ habituality/event-internal plurality/continuativity/ intensity
		Reduplication (final)	Iterativity/spatial distributivity/participant plurality/reciprocity
Creek	(Hardy 2005: 216–217; Martin 2011: 197–213, 306)	Lexical alternation/ suppletion	Participant plurality

Language	Reference	Marking strategy	Function(s)
		Suffix *-ho(y)* (plural or dual if a triplural is present)	Participant plurality
		Suffix *-ic/-yc* (triplural)	Participant plurality
		Reduplication	Participant plurality
			Spatial distributivity
			Iterativity/frequentativity
		Substitution of the last consonant(s) with *-hl*	Participant plurality
			Spatial distributivity
			Iterativity/frequentativity
			Event internal plurality/ intensity
		Suffix *-ak*	Participant plurality
		Suffix *-ma:h*	Iterativity(/frequentativity)
Dadjriwalé (Godié)	(Godé 2008)	No dedicated pluractional markers attested	
Daga	(Murane 1974: 41, 72–74)	Lexical alternation	Participant plurality
		Reduplication	Iterativity/frequentativity
			Participant plurality
			Event-internal plurality
Dehu/Drehu	(Tryon 1967: 96; Moyse-Faurie 1983: 93, 134–136)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Intensity
		Preverb *laapa*	Iterativity/spatial distributivity
			Frequentativity/habituality
			Event-internal plurality/ continuativity
Dime	(Mulugeta 2008)	No dedicated pluractional markers attested	
Djabugay (Dyaabugay)	(Patz 1991: 282–283)	Reduplication	Iterativity
			Frequentativity
			Habituality
		Suffix *-da*	Participant plurality
Djapu/Dhuwal	(Morphy 1983: 78; Heath 1980: 3–4)	Reduplication	Iterativity
			Frequentativity
			Spatial distributivity

Language	Reference	Marking strategy	Function(s)
			Participant plurality
			Event-internal plurality
			Continuativity
Eastern Kayah Li (Eastern Kayah)	(Solnit 1997)	No dedicated pluractional markers attested	
Eastern Pomo (Pomoan, Russian River And Eastern)	(McLendon 1975: 70, 73–77, 81, 85–86; Mclendon 1996: 538–539)	Suffix *-yk*	Participant plurality
		Prefix *lV-*	Iterativity/frequentativity
			Participant plurality
			Event-internal plurality
		Prefix *lVlV-*	Participant plurality
			Spatial distributivity
		Reduplication	Iterativity
			Participant plurality
			Spatial distributivity
		Suffix *-ma*	Participant plurality
		Suffix *-yaki/-aki*	Participant plurality
		Suffix *-kìl*	Frequentativity
			Habituality
		Lexical alternation	Participant plurality
English	(Dixon 2005)	No dedicated pluractional markers attested	
Eton (Eton-Mengisa)	(van de Velde 2008: 332)	Quasi-auxiliary *dìŋ*	Iterativity
			Frequentativity
Euchee (Yuchi)	(Linn 2001: 79–80, 230–239, 260–263)	Reduplication	Iterativity
			Spatial distributivity
			Event-internal plurality
		Lexical alternation	Participant plurality
		Suffix *-ne*	Frequentativity
			Habituality
Evenki	(Nedjalkov 1997: 247, 249–250, 251–252, 255)	Suffix *-vAn/-vAt*	Iterativity
			Frequentativity
			Participant plurality
		Suffix *-ktA*	Spatial distributivity
			Iterativity
			Event-internal plurality
			Continuativity

Language	Reference	Marking strategy	Function(s)
		Suffix *-t(y)*	Spatial distributivity
			Participant plurality
		Suffix *-ngnA*	Frequentativity
			Habituality
		Suffix *-lbu*	Iterativity
			Frequentativity
			Event-internal plurality
		Stem-final narrow vowel (substitution: *-V* > *-u*)	Iterativity
			Frequentativity
			Event-internal plurality
Ewe	(Rongier 1979; Ameka 1991, Pasch 1995; Duthie 1996)	No dedicated pluractional markers attested	
Finnish	(Sulkala & Karjalainen 1992)	No dedicated pluractional markers attested	
French	(Batchelor & Chebli-Saadi 2011)	No dedicated pluractional markers attested	
Fur	(Jakobi 1990; Waag 2010)	No dedicated pluractional markers attested	
Garo	(Burling 2004)	No dedicated pluractional markers attested	
Georgian	(Hewitt 1995: 165)	Preverb *da-*	Iterativity/frequentativity
			Participant plurality
			Spatial distributivity
German	(Dodd, Eckhard-Black, Klapper & Whittle 2003)	No dedicated pluractional markers attested	
Kiribatese (Gilbertese)	(Groves, Groves & Jacobs 1985: 77, 102–103)	Reduplication	Iterativity
			Frequentativity
			Habituality/generic imperfectivity
Gooniyandi	(McGregor 1990: 239–240, 242, 243–245)	Reduplication	Iterativity
			Frequentativity
			Participant plurality
			Spatial distributivity
			Event-internal plurality
			Continuativity
			Intensity

Language	Reference	Marking strategy	Function(s)
		Suffix *-bi/-bili/-ji/-mi*	Iterativity
			Spatial distributivity
			Event-internal plurality
		Suffix *-waddi/-warni*	Iterativity
			Spatial distributivity
			Event-internal plurality
Greek (Modern)	(Mackridge 1987; Holton, Mackridge & Philippaki-Warburton 1997)	No dedicated pluractional markers attested	
Guaraní (Paraguayan Guaraní)	(Cerno 2011: 151)	Reduplication	Iterativity/frequentativity
			Event-internal plurality
Gumuz, Northern/ Southern	(Ahland 2012: 196–201)	*n-* (Pluractional, Verbal Plural)	Iterativity
			Frequentativity
			Participant plurality
			Spatial distributivity
			Event-internal plurality
Ha	(Harjula 2004)	No dedicated pluractional markers attested	
Haida, Northern/ Southern	(Enrico 2003)	No dedicated pluractional markers attested	
Harar Oromo (Eastern Oromo)	(Owens 1985: 84–84, 183–184, 245)	Reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Intensity
Hausa	(Newman 2000: 423–429; Jaggar 2001: 279–284; Součková 2011)	Reduplication	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Intensity
Hebrew, Modern	(Coffin & Bolozky 2005: 89)	Some *pi'el* verbs (CaCaC > CiCeC)	Iterativity
			Event-internal plurality
			Intensity

Language	Reference	Marking strategy	Function(s)
Hindi	(Kachru 2006: 154)	Auxiliary *kər*	Frequentativity
			Habituality
Hixkaryana	(Derbyshire 1979)	No dedicated pluractional markers attested	
Hmong Njua	(Harriehausen 1990: 47–48)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
			Intensity
Hopi	(Hill 1998: 877–878)	Suffix *-ya*, reduplication, replacement of *-k* with a *-m (+ -ti)*, lexical alternation	Participant plurality
		Replacement of *-ta* with *-tota*	Iterativity/frequentativity/ event-internal plurality
			Participant plurality/spatial distributivity
			Causativity
Huallaga Huánuco Quechua	(Weber 1989: 143–144, 150–151, 324)	Suffixes *-rka*, *-:ri*, *-pa:kU*, *-rpa*, *-kuna*	Participant plurality
		Suffix *-ykacha/-kacha*	Iterativity
			Spatial distributivity
		Suffix *-cha*	Iterativity/frequentativity
		Reduplication	Frequentativity
Huichol	(Comrie 1982: 112–114)	Lexical alternation	Participant plurality
Huitoto (Minica Huitoto)	(Minor, Minor & Levinsohn 1982)	No dedicated pluractional markers attested	
Hungarian	(Kenensei, Vago & Fenyvesi 1998: 303–304)	Suffixes *-gat/-get/-ogat/-eget(/-ong/-eng/-öng/-gál/-gél/-igál/-dos/-des/-dös)*	Iterativity
			Frequentativity
			Event-internal plurality
Hunzib	(van den Berg 1995: 81–83)	Suffix *-baa*	Iterativity
			Frequentativity
			Participant plurality
		Infixes *-á-/-ά-/-yá-/-wά-*	Iterativity
			Frequentativity
			Participant plurality

Language	Reference	Marking strategy	Function(s)
Hupa	(Golla 1970: 115–119)	Prefix *ti-*	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Completeness
		Prefix *ya-*	Participant plurality
		Prefix *na-*	Iterativity
			Spatial distributivity
Icari Dargwa (Southwestern Dargwa)	(Sumbatova & Mutalov 2003)	No dedicated pluractional markers attested	
Igbo	(Onumajuru 1985: 258–259)	Suffix *-kata*	Iterativity/frequentativity
Ika (Arhuaco)	(Frank 1985)	No dedicated pluractional markers attested	
Imonda	(Seiler 1985: 79–80, 82–86, 88–89)	Prefix *iaha-*	Iterativity
			Frequentativity
		Lexical alternation, prefix *ai-*, suffix *-uõl*, suffix *-fia*, suffix *-ual*, suffix *-abu*	Participant plurality
Indonesian	(Sneddon et al. 2010: 23, 98–100)	Reduplication	Iterativity
			Spatial distributivity
			Frequentativity
			Event-internal plurality
			Continuativity
			Intensity
		Suffix *-i*	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Intensity
			Completeness
Ingush	(Nichols 2011: 313–318, 354, 366, 378, 430)	Lexical alternation/ internal modification	Iterativity
			Frequentativity
			Participant plurality
			Habituality
			Generic imperfectivity

Language	Reference	Marking strategy	Function(s)
Iraqw	(Mous 1992: 180–185, 194, 299, 333, 343)	Reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Completeness
Irish	(Mac Congáil 2004)	No dedicated pluractional markers attested	
Jacaltec (Popti')	(Day 1973: 43, 45)	Suffix *-la*	Iterativity/event-internal plurality
		Reduplication (+ suffix *-on*)	Iterativity
			Frequentativity
			Event-internal plurality
Jalonke (Yalunka)	(Lüpke 2005: 126, 127, 304–312)	Prefix *ma-*	Iterativity
			Participant plurality
Jamsay (Jamsay Dogon)	(Heath 2008: 439–442)	Reduplication	Iterativity
			Event-internal plurality
Japanese	(Shibasaki 2005: 284–293)	Reduplication	Spatial distributivity
			Iterativity
Jarawara (Madi)	(Dixon 2004: 267–279)	Reduplication (partial final)	Participant plurality
			Spatial distributivity
		Reduplication (Initial partial) + the auxiliary *-ha*	Iterativity/frequentativity
			Participant plurality
			Habituality
Jóola Karon (Karon)	(Sambou 2014: 149–151, 170–171)	Suffix *-ool*	Iterativity
			Participant plurality
			Reciprocity
		Suffix *-al*	Iterativity/frequentativity
		Reduplication	Frequentativity
			Habituality
			Generic imperfectivity
Kannada	(Schiffman 1983)	No dedicated pluractional markers attested	
Kanuri (Central Kanuri)	(Hutchison 1981: 152–154)	Reduplication	Iterativity
			Participant plurality
			Spatial distributivity
			Event-internal plurality
			Continuativity

Language	Reference	Marking strategy	Function(s)
Kapau (Hamtai)	(Oates & Oates 1968)	No dedicated pluractional markers attested	
Karo Batak (Batak Karo)	(Woollams 1996: 50–52, 75–76)	Suffix *-i*	Iterativity/frequentativity
			Participant plurality
			Habituality
		Suffix *-en*	Spatial distributivity
			Participant plurality
		Prefix *-ci*	Iterativity
			Frequentativity
			Spatial distributivity
		Prefix *-ki*	Spatial distributivity
Karok	(Bright 1957: 88–93, 103–104, 109, 112–113)	Lexical alternation	Participant plurality
		Prefix *ip-*	Iterativity
			Participant plurality
			Event-internal plurality
			Repetitivity (to do something again)
		Reduplication	Iterativity
			Frequentativity
			Habituality
			Generic imperfectivity
		Suffix *-va*	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Continuativity
		Suffix *-θura*	Spatial distributivity
		Suffix *-o*	Frequentativity
			Habituality
		Suffix *-na*	Participant plurality
Kayardild	(Evans 1995: 289–290; Round 2009: 136–141)	Reduplication	Iterativity
			Frequentativity
			Participant plurality
			Event-internal plurality
Ket	(Georg 2007: 218–221, 246, 302–303)	Lexical alternation	Participant plurality

Language	Reference	Marking strategy	Function(s)
		Suffix *-tijin*	Iterativity
			Frequentativity
			Participant plurality
		Suffix substitution: *-deb* > *-ked*, *-t~a* > *-da*	Iterativity
			Frequentativity
			Participant plurality
			Event-internal plurality
Kewa (East/ West)/ Kewapi	(Franklin 1971; Yarapea 2006)	No dedicated pluractional markers attested	
Khasi	(Nagaraja 1985: 27)	Reduplication + suffix *-ši* (X-*ši*-X)	Iterativity
			Event-internal plurality
Khmu	(Premsrirat 1987: 27–28)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
Khwe (Kxoe)	(Kilian-Hatz 2008: 146–148, 161–162)	Suffix *-t*	Frequentativity
		Reduplication	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Intensity
			Continuativity
			Causativity
Kilivila/ Kiriwina	(Senft 1986: 29; Lawton 1993: 78–79)	Reduplication	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
Kiowa	(Watkins 1984: 153–154, 178–181)	Lexical alternation	Participant plurality
		Suffixes *-ą̇/-hɔ̇*	Iterativity/event-internal plurality/continuativity
		Suffix *-gû/-gõm*	Spatial distributivity/ iterativity/event-internal plurality
Kisikongo (South-Central Kikongo)	(Mfuwa 1995)	No dedicated pluractional markers attested	
Klamath (Klamath-Modoc)	(Barker 1964: 111–112, 119–121, 143, 158, 175–177)	Prefix *re/rre/re'-*	Iterativity

Language	Reference	Marking strategy	Function(s)
			Frequentativity
			Participant plurality
		Prefixes *rér-*, *ré˙r-*, infix *-˙-*	Iterativity
			Event-internal plurality
			Intensity
		Prefix *r-/rr-/rré-*	Iterativity
			Frequentativity
			Spatial distributivity
			Event-internal plurality
			Intensity
		Suffix *-damn*	Iterativity
			Frequentativity
			Habituality
		Lexical alternation	Participant plurality
Koalib (Koalib-Rere)	(Nicolas Quint p.c.)	Reduplication-like derivation	Iterativity
			Participant plurality
Koasati	(Kimball 1991: 135–140, 314–334)	Prefix *-ho/-oh*	Participant plurality
			Indefiniteness of the participant
		Prefix *-hoho/-ohoh*	Iterativity
			Frequentativity
			Event-internal plurality
		Auxiliary *a:tan(sg)/ í:san(pl)* 'keep on'	Iterativity
			Frequentativity
			Event-internal plurality
		Formative replacement (*-f-*, *-p-*, *-ł-*, *-s-*, *-y-*, *-t-*, *-:-*)	Iterativity/frequentativity/ participant plurality
		Lexical alternation	Participant plurality
		Reduplication	Iterativity/frequentativity/ event-internal plurality
		Infix *-s-*	Iterativity/frequentativity/ event-internal plurality/ participant plurality
		Suffix *-ci*	Participant plurality
			Spatial distributivity

Language	Reference	Marking strategy	Function(s)
		Irregular extension or deletions	Iterativity/frequentativity/ event-internal plurality/ participant plurality
Kobon	(Davies 1981: 171, 172–173)	Suffix *-mid*	Frequentativity
			Habituality
			Generic imperfectivity
		Reduplication or suffix *-ö* (often combined together)	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
			Continuativity
Kokama-Kokamilla (Cocama-Cocamilla)	(Vallejos Yopán 2010: 353–359, 360–362, 369–372)	Suffix *-ka*	Iterativity
			Frequentativity
			Participant plurality
		Suffix *-kaka*	Iterativity
			Frequentativity
			Participant plurality
			Reciprocity
			Middle
		Reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
			Reciprocity
			Event-internal plurality
			Continuativity
			Intensity
Kolyma Yukaghir (Southern Yukaghir)	(Maslova 1999: 253–260, 2003: 192–200)	Suffix *-uj(i)*	Iterativity
			Frequentativity
			Habituality
		Suffix *–(u)žu-*	Spatial distributivity
		Suffix *-či (-t'i/-s'i)*	Participant plurality
			Iterativity
			Event-internal plurality
			Continuativity

Language	Reference	Marking strategy	Function(s)
		Suffix *-jī*	Iterativity
			Event-internal plurality
		Suffix *-č*	Spatial distributivity
		Suffix *-(n)d'i*	Spatial distributivity
		Suffix *-nunnu*	Frequentativity
			Habituality
Korean	(Sohn 1999)	No dedicated pluractional markers attested	
Koromfe (Koromfé)	(Renninson 1997)	No dedicated pluractional markers attested	
Koyra Chiini (Koyra Chiini Songhay)	(Heath 1999: 141–142)	Reduplication	Iterativity
			Spatial distributivity
			Event-internal plurality
Krongo	(Reh 1985: 201–209)	Prefix *i-*, tonal change, reduplication, lexical alternation	Iterativity
			Frequentativity
			Participant plurality
			Habituality
Kugu Nganhcara (Kuku-Uwanh)	(Smith & Johnson 2000: 410–411, 461, 463, 464)	Reduplication	Iterativity
			Participant plurality
			Event-internal plurality
			Continuativity
Kunama	(Thompson 1989: 320–322)	Suffix *-n* and suffix *-l*	Participant plurality
Kuot	(Lindström 2002: 6–7)	Prefix *da-*	Iterativity/frequentativity
Kutenai	(Morgan 1991)	No dedicated pluractional markers attested	
Ladakhi (Leh-Kenhat)	(Koshal 1979)	No dedicated pluractional markers attested	
Lake Miwok	(Callaghan 1963: 60–62, 159–212)	Stem modification (change in the length of phonemes, reduction of the stem, etc.) + several suffixes (*-el*, *-ṭe*, *-a*, etc.)	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
			Habituality
			Event-internal plurality
Lakhota (Lakota)	(Williamson 1984)	No dedicated pluractional markers attested	
Lango	(Noonan 1992: 140, 145)	Auxiliary *bèdò* 'sit, stay'	Iterativity
			Frequentativity/habituality

Language	Reference	Marking strategy	Function(s)
Latvian	(Kalnača 2014: 105–109)	Suffixes *-ī*, *-ā*, *-ē*, *-o*, *-inā-*, *-aļā-*, *-avā-*, *-alē-*, *-elē-*, *-uļo-*; infixes *-st-*, *-d-*, *-ņ-*; ablaut	Iterativity
			Event-internal plurality
			Continuativity
Lavukaleve	(Terrill 2003: 35–36, 332–333, 345–346, 384–386)	Suffix *-na/-nun*	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
		Suffix *-la*	Iterativity
			Spatial distributivity
		Auxiliary *me*	Frequentativity
			Habituality
		Reduplication	Iterativity
			Spatial distributivity
			Event-internal plurality
Lele	(Frajzyngier 2001: 124–130)	Suffix *-wi*	Participant plurality
		Devoicing of initial consonant	Participant plurality
Lepcha	(Plaisier 2006)	No dedicated pluractional markers attested	
Lezgian	(Haspelmath 1993)	No dedicated pluractional markers attested	
Lunda	(Kawasha 2003: 177–178)	Reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Event-internal plurality
			Intensity
Macushi	(Abbott 1991: 118)	Suffix *-pîtî*	Iterativity
			Frequentativity
			Habituality
Makonde	(Kraal 2005: 47–48, 183–185, 204–205)	Reduplication	Iterativity
			Event-internal plurality
		Suffix *-ang*	Iterativity
			Frequentativity
			Habituality
			Participant plurality
			Event-internal plurality
			Intensity
			Completeness

Language	Reference	Marking strategy	Function(s)
Maliseet-Passamaquoddy (Malecite-Passamaquoddy)	(Sherwood 1986: 124)	Prefix *ahtəli-*	Frequentativity
Maltese	(Vanhove 2001: 70–73)	Auxiliary *ʔaˤad* (PFV)/ *jɔʔˤɔd* (IPFV) 's'asseoir, s'arrêter, rester, demeurer' [sit, stop, stay, remain]	Iterativity/frequentativity
Mambay (Mambai)	(Anonby 2008: 307–308, 309–310, 313–315)	Suffix *-ri*	Iterativity
			Event-internal plurality
			Intensity
		Suffix *-gi*	Iterativity
			Participant plurality
			Event-internal plurality
			Intensity
		Suffix *-zi*	Participant plurality
			Spatial distributivity
Mandarin Chinese	(Arcodia, Basciano & Melloni 2015)	Reduplication (full and AABB)	Iterativity
			Event-internal plurality
			Continuativity
Mangarayi (Mangarrayi)	(Merlan 1989: 213–216)	Reduplication	Iterativity
			Event-internal plurality
			Continuativity
			Intensity
Maori	(Bauer 1993: 444–445)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
Mapuche/ Mapudungun	(Smeets 2008: 251–254, 271–272, 305, 306; Zúñiga & Díaz-Fernández 2014: 17–37)	Suffix *-ke*	Frequentativity
			Habituality
			Generic imperfectivity
		Suffix *-ye*	Participant plurality
		Reduplication + suffix *-nge* 'be'	Iterativity
			Frequentativity
			Participant plurality
			Habituality
			Event-internal plurality

Language	Reference	Marking strategy	Function(s)
			Intensity
			Continuativity
		Reduplication + suffix *-ye* 'carry'	Iterativity
			Frequentativity
			Participant plurality
			Habituality
			Event-internal plurality
			Intensity
		Reduplication + suffix *-tu* 'take'	Iterativity
			Spatial distributivity
			Situation carried out not seriously/playfully/for fun/ not well
			Intensity(/event internal plurality)
		Reduplication	Participant plurality
			Iterativity
			Intensity(/event internal plurality)
			Inchoativity
Mara (Marra)	(Heath 1981: 23–27)	Reduplication	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
			Intensity
			Emphasis
Maranungku (Maranunggu)	(Tryon 1970)	No dedicated pluractional markers attested	
Maricopa	(Gordon 1986: 90–102)	Prefixes *uu-*, *t/sh-*, *a-*, *r-*, ablaut of the root vowel, suffixes *-sh*, *-v* (or a combination of these strategies)	Participant plurality
		Lexical alternation	Iterativity/frequentativity/ habituality
			Spatial distributivity
Martuthunira	(Dench 1994: 141–143)	Suffix *-marri/-yarri/-lwarri*	Participant plurality
			Reciprocity
Masa (Masana)	(Melis 1999)	No dedicated pluractional markers attested	
Masalit	(Edgar 1989)	Suffix *-Vs*	Iterativity

Language	Reference	Marking strategy	Function(s)
Maung (Mawng)	(Capell & Hinch 1970: 81–82)	Reduplication	Iterativity
			Frequentativity
			Habituality
Maybrat (Maybrat-Karon)	(Dol 2007: 57–58)	Reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Event-internal plurality
			Continuativity
			Intensity
			Completeness
Mbay	(Keegan 1997: 40–41)	Tonal change (to high-mid)	Iterativity
			Frequentativity
			Participant plurality
			Event-internal plurality
Meithei (Manipuri)	(Chelliah 1997: 216)	Suffix *-kən*	Frequentativity
			Habituality
			Generic imperfectivity
Meyah	(Gravelle 2011: 96–98)	Reduplication	Iterativity
			Event-internal plurality
			Continuativity
Mojave (Mohave)	(Munro 1974: 14–16, 225–232)	Infixation of prefixation of *-u:-*, suffixation of *-č/-t*, suffixation of *-v*, prefixation or infixation of *č-/t-*, qualitative ablaut of the root vowel	Participant plurality
			Iterativity/frequentativity/habituality/event-internal plurality/continuativity
Mokilese	(Harrison 1976)	No dedicated pluractional markers attested	
Mongolian (Halh Mongolian)	(Poppe 1954: 63, Ujiyediin 1998: 38–40, 42, 49)	Suffix *-la/-le* (*-lkila/-lkile*)	Iterativity
			Event-internal plurality
		Suffix *-či*	Iterativity
			Participant plurality
			Event-internal plurality
			Intensity
		Suffix *-čaɣa/-čege*	Participant plurality
Mono	(Kamanda Kola 2003)	No dedicated pluractional markers attested	

Language	Reference	Marking strategy	Function(s)
Mundari	(Cook 1965: 143–144, 145; Osada 1992: 92–93, 117–118)	Reduplication	Iterativity
			Frequentativity
		Suffix *-baṛa/-balay*	Spatial distributivity
		Suffix *-kate/-kuca*	Iterativity/frequentativity
Mupun (Mwaghavul)	(Frajzyngier 1993: 55–62)	Suffixes *-a*, *-r*, *-é*, *-ep*, *-wát?*, *-k*, lexical alternation	Participant plurality
			Iterativity
			Event-internal plurality
			Intensity
Murle	(Arensen 1982)	No dedicated pluractional markers attested	
Navajo/Navaho	(Young & Morgan 1972: 44, 102–104)	Prefix *ná-*	Iterativity
			Frequentativity
			Participant plurality
			Spatial distributivity
		Lexical alternation	Participant plurality
Nisgha/Nass Tsimshian (Nisga'a)	(Tarpent 1987: 760–782)	Reduplication	Iterativity/frequentativity/ habituality
			Participant plurality
			Spatial distributivity
Nxa?amxcin/ Moses-Columbian (Columbia-Wenatchi)	(Willett 2003: 203–213	Suffix *-ul*	Frequentativity
			Habituality
			Generic imperfectivity
		Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
		Suffix *-alwís*	Iterativity
			Spatial distributivity
			Event-internal plurality
Nez Perce	(Aoki 1970; Rude 1985)	No dedicated pluractional markers attested	
Ngiti	(Kutsch Lojenga 1994: 281–290)	Lexical alternation	Participant plurality
		Prefix *U-*	Iterativity
			Participant plurality
			Spatial distributivity
			Event-internal plurality
			Continuativity
Ngiyamba (Ngiyambaa)	(Donaldson 1977)	No dedicated pluractional markers attested	

Language	Reference	Marking strategy	Function(s)
Nivkh	(Nedjalkov & Otaina 2013: 275, 283, 362)	Reduplication	Iterativity/frequentativity
Northern Tepehuan	(Bascom 1982: 352–355)	Lexical alternation	Participant plurality
			Iterativity/frequentativity/habituality/event-internal plurality/continuativity
		Reduplication	Participant plurality
			Iterativity/frequentativity/habituality/event-internal plurality/continuativity
Nunggubuyu (Wubuy)	(Heath 1984: 341–343)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
Oneida	(Lounsbury 1953: 78–79)	Suffix *-hslu/-nyu/-hu/-tu/-u*	Iterativity/frequentativity
			Spatial distributivity
			Participant plurality
Otomí (Mezquital Otomi)	(Priego Montfort de Mostaghimi 1989)	No dedicated pluractional markers attested	
Paamese (Paama)	(Crowley 1982: 152–155)	Reduplication	Participant plurality
			Iterativity
			Frequentativity
			Habituality
			Generic imperfectivity
Paiwan	(Chang 2006: 53–55, 147)	Reduplication	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
			Continuativity
			Progressivity
			Simultaneity
		Combination of initial partial reduplication *Ca-* and locative suffix *-an*	Frequentativity
Panare	(Payne & Payne 2013: 185–186)	Suffix *-pëtï*	Iterativity
			Frequentativity
			Participant plurality

Language	Reference	Marking strategy	Function(s)
Pashto (Northern Pashto)	(Tegey & Robson 1996; Babrakzai 1999)	No dedicated pluractional markers attested	
Pero	(Frajzyngier 1989: 74–87)	Insertion of a geminate glide + Vowel, gemination of the last consonant, double gemination of the last consonant ($C_1VC_2C_2C_2$), partial reduplication of the first syllable (C_1VC_2 > $C_1VC_1C_1C_2$), insertion of a glottal stop between the first and the second syllable, suffix *-t/-j*	Participant plurality
Persian (Western Farsi)	(Mahootian 1997)	No dedicated pluractional markers attested	
Pirahã	(Everett 1986, 1992)	No dedicated pluractional markers attested	
Pitjantjatjara	(Bowe 1990)	No dedicated pluractional markers attested	
Plains Cree	(Wolfart 1969: 197, 200–201, 210)	Reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Event-internal plurality
			Intensity
			Continuativity
		Suffix *-iski*	Frequentativity
			Habituality
Qawasqar/ Kawésqar	(Clairis 1985; Aguilera 2001)	No dedicated pluractional markers attested	
Rapanui/Rapa Nui	(Du Feu 1996: 162, 166–167, 179–180, Kieviet 2017: 68–72)	Auxiliary verb *oho* ('go')	Iterativity
			Frequentativity
			Spatial distributivity
			Event-internal plurality
		Full reduplication	Iterativity
			Frequentativity
			Spatial distributivity
			Event-internal plurality
			Intensity
		Partial reduplication	Participant plurality

Language	Reference	Marking strategy	Function(s)
		Suffix *-haŋa*	Iterativity(/frequentativity)
Russian	(Wade 1992)	No dedicated pluractional markers attested	
Sakalava (Antankarana Malagasy)	(Thomas-Fattier 1982)	No dedicated pluractional markers attested	
Samoan	(Mosel & Hovdhaugen 1992: 180–181, 186–188, 227–231)	Prefix *fe-*	Iterativity
			Frequentativity
			Participant plurality
		Prefix *ta-*	Participant plurality
		Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Intensity
Sandawe	(Steeman 2012: 135–137, 138–140, 140–144, 179–188)	Lexical alternation	Participant plurality
		Reduplication	Spatial distributivity
		Suffix *-ìmé*	Iterativity(/frequentativity)
			Event-internal plurality
		Suffix *-wá/-ʔwá*	Participant plurality
			Iterativity(/frequentativity)
			Event-internal plurality
			Intensity
		Suffix *-wà*	Participant plurality
			(Iterativity/)frequentativity
Sango	(Morrill 1997: 105–108)	Suffix *-lV/-álà/-ngànà*; reduplication	Iterativity
			Frequentativity
			Participant plurality
Sanuma (Sanumá)	(Borgman 1990: 173–179, 182–183)	Suffix *-a*	Iterativity
			Event-internal plurality
			Continuativity
		Suffix *-ö*	Frequentativity
			Habituality
			Generic imperfectivity
		Suffix *-talo/-palo* (intransitive verbs)	Iterativity
			Participant plurality
			Event-internal plurality

Language	Reference	Marking strategy	Function(s)
		Suffix *-tala/-pala* (intransitive verbs)	Iterativity
			Participant plurality
			Event-internal plurality
San Miguel Chimalapa Zoque (Chimalapa Zoque)	(Johnson 2000: 350–352)	Reduplication + suffixes *-ney, -wəy*	Iterativity
			Frequentativity
			Participant plurality
Sarcee (Sarsi)	(Cook 1984: 219–221)	Prefix *ná-*	Iterativity
			Event-internal plurality
		Prefix *dà-*	Spatial distributivity
			Participant plurality
Selknam (Selk'nam)	(Najlis 1973)	No dedicated pluractional markers attested	
Semelai	(Kruspe 2004: 138–140)	Suffix *-iʔ*	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
Seneca	(Chafe 2015: 66–68, 78–79)	Suffix *-ö/-hö/-hnö/-hsö/-nyö/-shrö/-'hö*	Iterativity/frequentativity
			Spatial distributivity
			Participant plurality
		Suffix *-'s/-hs/-ö's/-öhs*	Spatial distributivity
			Participant plurality
Sentani	(Cowan 1965: 26)	Affix *-ko*	Participant plurality
			Reciprocity
Serbian(-Croatian-Bosnian)	(Kordić 1997; Browne & Alt 2004; Hammond 2005)	No dedicated pluractional markers attested	
Shipibo-Konibo (Shipibo-Conibo)	(Valenzuela 2003: 150, 151–152)	Lexical alternation	Participant plurality
		Reduplication	Iterativity
			Event-internal plurality
			Continuativity
			Intensity
Skwxwú7mesh (Squamish)	(Bar-el 2008: 31–54)	Reduplication	Iterativity
			Frequentativity
			Participant plurality
			Habituality

Language	Reference	Marking strategy	Function(s)
			Generic imperfectivity
			Event-internal plurality
			Continuativity
Slave (North Slavey)	(Rice 1989: 797–802, 790)	Prefix *k'ína-/kè*	Iterativity/spatial distributivity/event-internal plurality
		Prefix *na-*	Iterativity/frequentativity/habituality
		Prefix *yá-*	Iterativity/spatial distributivity/participant plurality/event-internal plurality
		Lexical alternation	Participant plurality
Sonora Yaqui (Yaqui)	(Dedrick & Casad 1999: 257–260, 263–264)	Lexical alternation	Participant plurality
		Reduplication (partial)	Participant plurality
			Iterativity/frequentativity/event-internal plurality
			Intensity
Spanish	(Butt & Benjamin 1994)	No dedicated pluractional markers attested	
Southern Wakashan/ Nootkan (Nuu-Chah-Nulth)	(Davidson 2002: 237–245)	Reduplication + suffix *-(y)a*	Iterativity
			Frequentativity
			Participant plurality
			Event-internal plurality
		Reduplication + suffix *-š/-č*	Iterativity
			Frequentativity
			Event-internal plurality
			Habituality
		Replacement of last *-ƛ with a -ɬ* or lengthening of the first two vowels	Iterativity
			Frequentativity
			Event-internal plurality
			Habituality
Suena	(Wilson 1974: 40, 163–164)	Suffixes *-noso, -iso*	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
			Continuativity
		Reduplication	Participant plurality

Language	Reference	Marking strategy	Function(s)
Supyire (Supyire Senoufo)	(Carlson 1994: 145–146, 327–328)	Suffix *-lV*	Iterativity
			Participant plurality
			Reciprocity
			Event-internal plurality
			Intensity
			Completeness
		Reduplication	Iterativity
			Participant plurality
Swahili	(Ashton 1944: 249, 256–257)	Suffix *-ki*	Iterativity/frequentativity/ event-internal plurality/ continuativity
		Prefix *hu-* (and its allomorphs)	Frequentativity
			Habituality
Taba (East Makian)	(Bowden 2001: 226–228)	Reduplication	Iterativity
			Frequentativity
			Participant plurality
Tagalog	(Schachter & Otanes 1972: 337–338)	Prefix *mag-*	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
		Prefix *mag-* + reduplication	Iterativity
			Frequentativity
Tamasheq	(Heath 2005)	No dedicated pluractional markers attested	
Thai	(Iwasaki & Ingkaphirom 2005)	No dedicated pluractional markers attested	
Tima	(Alamin 2012: 104–106)	Stem vowel change, vowel length, reduplication, lexical alternation, infix *-t̪-*	Iterativity
			Frequentativity
			Participant plurality
Tiwi	(Osborne 1974: 42, Lee 1987: 138–139, 174, 189)	Suffix *-ani*	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
		Suffix *-la*	Iterativity
			Frequentativity
			Habituality
Tlingit	(Story 1979: 97–98, 103)	Prefix *dʌGʌ-/dʌx-*	Participant plurality
			Spatial distributivity

Language	Reference	Marking strategy	Function(s)
		Suffix *-ǰ/-g/-X*	Frequentativity
			Habituality
Trumai	(Guirardello 1999: 104–105, Guirardello-Damian 2014: 221–223)	Reduplication	Iterativity/frequentativity
			Participant plurality
			Event-internal plurality
			Continuativity
			Intensity
Tukang Besi (Tukang Besi North)	(Donohue 1999: 272, 282, 283–284, 298–299)	Prefix *me-*	Frequentativity
			Habituality
		Prefix *-heka*	Iterativity
			Event-internal plurality
		Prefix *pada-*	Participant plurality
			Reciprocity
		Prefix *para-*	Frequentativity
			Habituality
		Reduplication	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
Tundra Nenets	(Nikolaeva 2014: 45)	Suffix *-or, -ur, -er*	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality
			Habituality
		Suffix *-ŋkə*	Iterativity
			Event-internal plurality
Tunica	(Haas 1940: 45)	Reduplication	Iterativity
			Frequentativity
			Habituality
Turkana	(Dimmendaal 1983: 104–107)	Reduplication	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
			Intensity
			Completeness

Language	Reference	Marking strategy	Function(s)
Turkish	(Kornfilt 1997; Göksel & Kerslake 2005)	No dedicated pluractional markers attested	
Una	(Louwerse 1988: 58–59)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
Ungarinyin (Ngarinyin)	(Rumsey 1978: 141–143)	Suffix *-(nji)ri*	Participant plurality (dual)
		Suffix *–(nji)na*	Participant plurality (paucal)
Usan	(Reesink 1987: 116–118)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
			Successive events
Ute (Southern Paiute)	(Givón 2011: 54–55, 131–134)	Suffix *-mi*	Frequentativity
			Habituality
		Suffix *-na*	Frequentativity
			Habituality
		Reduplication	Iterativity
			Spatial distributivity
		Suffix *-ka* (and its several allomorphs)	Participant plurality
Vietnamese	(Thompson 1984–1985: 152)	Reduplication	Iterativity/frequentativity/ event-internal plurality/ continuativity/habituality
Wandala	(Frajzyngier 2012: 159–165)	Infix *-a-*, reduplication	Iterativity
			Frequentativity
			Participant plurality
		Lexical alternation	Participant plurality
Warao	(Romero-Figeroa 1997: 99–100)	Suffix *-bu*	Iterativity
			Frequentativity
			Participant plurality
Wardaman	(Merlan 1994: 46–52, 191–193)	Suffix *-marla*	Iterativity
			Frequentativity
			Event-internal plurality
		Reduplication	Iterativity
			Event-internal plurality

Language	Reference	Marking strategy	Function(s)
Warekena (Baniva De Maroa)	(Aikhenvald 1998: 348–352)	Reduplication	Iterativity
			Participant plurality
			Event-internal plurality
Wari'	(Everett & Kern 1997: 316, 377–378)	Reduplication (full)	Iterativity/frequentativity
			Event-internal plurality
		Reduplication (partial)	Participant plurality
		Lexical alternation	Participant plurality
West Greenlandic (Kalaallisut)	(Fortescue 1984: 279–281, 283–284)	Suffix *-sar/-tar*	Frequentativity
			Habituality
			Generic imperfectivity
		Suffix *-qattaar*	Iterativity
			Frequentativity
Western Dani	(Barclay 2008: 202–205, 307–315)	Reduplication	Iterativity
			Frequentativity
			Participant plurality
			Event-internal plurality
			Continuativity
			Intensity
		Suffix *-kak/-gak*	Iterativity
			Frequentativity
			Habituality
			Event-internal plurality
Wichí (Wichí Lhamtés Nocten)	(Terraza 2009: 152–155, 155–156, 156–160, 169–170)	Suffix *-k^{y}e*	Participant plurality
			Spatial distributivity
		Suffix *-k^{w}e*	Participant plurality
		Suffix *-hen*	Participant plurality
		Suffix *-li*	Iterativity
			Event-internal plurality
		Suffix *-wito*	Iterativity
			Event-internal plurality
			Participant plurality
		Suffix *-pex*	Frequentativity

Language	Reference	Marking strategy	Function(s)
Wichita	(Rood 1976: 74–78)	Suffix *-iki*	Iterativity
			Spatial distributivity
			Event-internal plurality
		Suffix *-wa*	Iterativity
			Frequentativity
			Spatial distributivity
			Habituality
Wolaytta	(Lamberti & Sottile 1997: 138–139, Wakasa 2008: 1030–1031, 1060–1061)	Suffix *-(er)ett* (Wakasa 2008: 1030 notes that pluractional readings are less frequent)	Iterativity
			Frequentativity
			Participant plurality
			Reciprocity
			Passivity
		Reduplication	Iterativity
Wolof	(Church 1981; Dialo 1981, Fal 1999; Diouf 2009)	No dedicated pluractional markers attested	
Yagua	(Payne 1985: 260–261, 263)	Suffix *-jąą*	Iterativity (with movement)
			Frequentativity (with movement)
		Suffix *-jayąą*	Iterativity
			Frequentativity
			Habituality
		Suffix *-tíiy*	Iterativity
			Participant plurality
Yidiɲ (Yidiñ)	(Dixon 1977: 233–236)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Continuativity
			Intensity
Yimas	(Foley 1991: 318–319)	Reduplication	Iterativity
			Frequentativity
			Event-internal plurality
			Intensity
Yoruba	(Bamgbose 1966; Nelson 2005)	No dedicated pluractional markers attested	

Language	Reference	Marking strategy	Function(s)
Yurok	(Wood 2007: 141–194)	Infix *-eg-/-rg-*	Iterativity
			Frequentativity
			Spatial distributivity
			Habituality
			Generic imperfectivity
			Event-internal plurality
			Intensity
		Reduplication	Iterativity
			Spatial distributivity
			Participant plurality
			Event-internal plurality
Zuni	(Newman 1996: 495–497)	Lexical alternation	Participant plurality
		Suffixes *-čo/-ččo, -ela/-čela/-ttela, -šle*	Iterativity/frequentativity/ event-internal plurality
ǂHoan (Amkoe)	(Collins 1998)	Circumfix *kí-V-ǁqo*, circumfix *kí-V-tcu*, reduplication, lexical alternation, particle *-|ne*, some combination of these strategies	Iterativity
			Frequentativity
			Spatial distributivity
			Participant plurality

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Index

The aim of this book is to give the first large-scale typological investigation of pluractionality in the languages of the world. Pluractionality is defined as the morphological modification of the verb to express a plurality of situations that can additionally involve a plurality of participants and/or spaces. Based on a 246-language sample, the main characteristics of pluractionality are described and discussed throughout the book. Firstly, a description of the functions that pluractional markers cross-linguistically express is presented and the relationships occurring among them are explained through the semantic map model. Then, the marking strategies that languages display to express such functions are illustrated and some issues concerning the formal identification are briefly discussed as well. The typological generalizations are corroborated showing how pluractional markers work in three specific languages (Akawaio, Beja, Maa). In conclusion, the theoretical conceptualization of pluractionality is discussed referring to the Radical Construction Grammar approach.

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