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Two types of pluractionality in Seri *

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1. Introduction

The majority of Seri¹ verbs have a paradigm consisting of four morphologically non-predictable verb forms (Moser 1961, Marlett 2016, Baerman 2016). Previous work on Seri has arrived at an analysis of the Seri verb paradigm as in (1).² Moser (1961), Marlett (2016) have argued that the Seri paradigm combines two orthogonal features. The first feature distinguishing the stems is subject number: two forms encode singular subject number and two forms encode plural subject number (abbreviated SgSubj and PlSubj). The second feature is related to the expression of multiple events. In Cabredo Hofherr, Pasquereau, and O’Meara (2018), we have argued that the second feature distinguishes two values, a pluractional form, glossed MULT—requiring that the context provide multiple events satisfying the denotation of the verb, and a NEUTRAL form which is underspecified for pluractionality, i.e. which is compatible with both singular and multiple events.

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¹Seri is spoken in the state of Sonora (northwest Mexico), in two villages on the coast of the Gulf of California: *Haxöl Iihom*/El Desemboque de los seris and *Socaaix*/Punta Chueca. It is a language isolate (Marlett 2007), spoken by approximately 900 speakers (Ethnologue 2007 estimate). We mainly worked with six speakers in the village of *Haxöl Iihom*/El Desemboque. The data presented here were collected over six fieldtrips to the village of El Desemboque: by Carolyn O’Meara in Jan/Feb 2017 and Nov/Dec 2017, and by Jeremy Pasquereau in Nov/Dec 2017, April 2018, Nov 2018, April 2019, and Nov 2019. Data from these fieldtrips is indicated with a reference to one of our data files. Data from other sources are cited.

²Out of 1538 verbs from the Moser & Marlett 2010 dictionary, 545 verbs only have two stems distinguishing Subject number, while 993 verbs mark Subject number as well as event plurality.

(1)	'run'		Pluractionality	
			NEUTRAL	MULT
Sbj. number	SGSUBJ	cpanzx	cpanozxim	
	PLSUBJ	cpancojc	cpancoxlca	

As Moser (1961:3) points out and as our own fieldwork has confirmed, a subset of Seri verbs like *cöqueemt* have five forms, with an additional form in the singular subject stem paradigm; *cöqueemla* in (2).³ The additional form is a SgSubj form: like the Neutral and Multiple SgSubj stems it only appears with singular subject inflection (3a) and it is not compatible with plural subjects (3b).⁴

(2)	'open'	SGSUBJ	<i>cöqueemt, cöqueemtim, cöqueemla</i>
		PLSUBJ	<i>cöcatoomloj, cöcatoomlolca</i>

- (3) a. Hahootj coi cohyeemt⁵/cohyeemtim/cohyeemla.
 door.PL DEF.PL 3IO:1SG:RLS.YO:CAUS.open.NEUTR/ MULT/DIST
 'I opened the doors.' (neutral/MULT/DIST)
- b. Hahootj coi *cöhyeemt/*cöhyeemtim/*cöhyeemla.
 door.PL DEF.PL 3IO:1PL:RLS.YO:CAUS.open.NEUTR/MULT/DIST
 Intended: 'We opened the doors.' (neutral/MULT/DIST)

As documented in Baerman (2016), Marlett (2016), verbal morphology in Seri displays a large amount of allomorphy and a striking degree of paradigmatic variety. Consequently, morphological exponents are not reliable indicators of the featural makeup of the stems. In what follows, we will therefore use semantic diagnostics to arrive at an analysis of the verbal stems. We show that - like the MULT-form - the "extra form" in five-form-paradigms is also a pluractional form requiring multiple events. We call this additional pluractional form the DISTRIBUTIONAL SgSubj form of the verb (abbreviated DIST).⁶ We provide evidence that SgSubj MULT- and DIST-forms mark different types of event pluralities: SgSubj MULT-forms impose subevents associated with different times, while the SgSubj DIST-forms impose subevents associated with different themes. Assuming that the DIST-form is a pluractional form distinct from MULT would lead us to expect to find a parallel distinction in the PISubj paradigm. This is not what we find however. Because the verbal morphology of Seri does not transparently associate feature values with exponents, it is a question for further research how the distributional form fits in with the PISubj portion of the paradigm. In this paper, we focus on the SgSubj paradigm in (4).

³In the Moser & Marlett 2010 dictionary, 31 verbs are listed as having 5 forms with three SgSubj stems.

⁴Abbreviations follow Leipzig glossing rules with the following additions INDEF = indefinite, IO = indirect object, MULT = multiple, RLS = realis.

⁵The verb *cöqueemt* is the causative of intransitive *quimt* 'open'. Active clauses with this causative are ditransitive although only two nominals typically occur in them (Marlett 2016, 523).

⁶Moser (1961:3) calls this additional form the 'sequential', as he takes it to mark "action expended sequentially on plural objects". However, as we show in (10b), the additional form does not impose a context with a temporal sequence of events, so we do not adopt this term.

Two types of pluractionality in Seri

(4)	'open'		Pluractionality		
			NEUTRAL	MULT	DIST
	Sbj. number	SG	<i>cöqueemt</i>	<i>cöqueemtim</i>	<i>cöqueemla</i>

The existence of two types of pluractional semantics for SgSubj Seri verb stems documented here raises new questions about the Seri paradigm for future research. If there are two types of pluractional in Seri verbs, what is the analysis of 4-form verbs with a single pluractional form for each subject number? Does the pluractional SgSubj form of 4-form verbs pattern with MULT, with DIST, or does it cover the meaning of both of these? Is the type of pluractional form correlated with the lexical aspect of the lexeme? Do SgSubj and PlSubj pluractional forms of 4-stem verbs instantiate the same form of pluractionality?⁷

We proceed as follows. Section 2 shows that both SgSubj MULT- and DIST-forms of 5-form paradigms are pluractional forms. In section 3, we contrast SgSubj MULT- and DIST-forms on a number of parameters, showing that MULT- and DIST-forms are not licensed by the same pluralities of events. Section 4 provides an analysis of the meaning of the two pluractional forms. Section 5 concludes.

2. MULT and DIST are pluractionals

Both the SgSubj MULT-form, and the SgSubj DIST-form behave like pluractional markers: they require multiple events and they do not multiply singular indefinite objects (see Laca 2006, Cabredo Hofherr 2021 and references therein for discussion). As shown in (5) both forms are incompatible with scenarios of a single event of opening one door.

(5) Context: Juan opened the door to the house (once) and we all entered.

Juan quih hahoot hac #cöiyeemetim /
 Juan DEF door DEF.SG 3IO:3;3.RLS.YO:CAUS:open.MULT
 #cöiyeemla.
 3IO:3;3.RLS.YO:CAUS:open.DIST
 Intended: 'Juan opened the door.'

In a scenario in which Juan opened several doors one after the other, both forms are good:

(6) Context: Juan opened the doors to the house one by one and we all entered.

Juan quih hahootj coi cöiyeemetim /
 Juan DEF door.PL DEF.PL 3IO:3;3:RLS.YO:CAUS:open.MULT
 cöiyeemla.
 3IO:3;3:RLS.YO:CAUS:open.DIST

⁷Moser (1961:86) points out that there is considerable inter- and intra-speaker variation with respect to the pluractional forms. This observation has been confirmed by recent fieldwork. If Seri verbs can mark more than one type of pluractional – as the data discussed here show – this may provide at least part of an explanation for this variability.

‘Juan opened the doors.’

In the previous two examples the difference in acceptability is correlated with the number of the object (*door* in (5) vs. *doors* in (6)). Examples (7) and (8) show that MULT- and DIST-forms are compatible with singular objects as long as the context provides a plurality of events. Notice that MULT and DIST appearing with singular objects differ in their semantics: MULT appears with verbs of change of state and the singular object is interpreted as a sequence of incremental stages of the object undergoing the change of state (7), while DIST is associated with multiple events that are associated with entities that are in a part-whole relationship with the referent of the singular object (8).

(7) Context: Jeremias cleaned the table, little-by-little, taking breaks.

Jeremias quih ₁hehe iti icoohitim₁ quih
 Jeremias DEF wood [3POSS]on 3POSS:[PON]UNSP.SBJ:UNSP.OBJ:eat:MULT DEF
iyaasxim.

3;3:RLS.YO:CAUS:clean:MULT

‘Jeremias cleaned the table (little-by-little).’ [ELAB, EDSEI1MAY2019DRPM2, Questionnaire2FT4]

(8) Juan quih haaco cap **cöiyeemla.**

Juan DEF house DEF.SG 3IO:3;3:RLS.YO:CAUS:open.DIST

‘Juan opened (doors/windows of) the house.’ [Questionnaire2FT5]

Cabredo Hofherr, Pasquereau, and O’Meara (2018) show that MULT-forms of 4-stem-verbs pattern with other pluractional markers described in the literature in that they do not multiply singular indefinites (Laca 2006 and references therein). In keeping with this observation the sentence in (9a) with the MULT-form is false in the context requiring several different doors because it can only mean that Juan opened the *same* door several times. As (9b) shows, the SgSubj DIST-forms does not allow multiplication of the indefinite singular and an interpretation with a constant singular object is ungrammatical (see also (13a)/(13b) below for discussion). With a plural object, e.g. *hahootj pac* ‘door.PL INDEF.PL’, both MULT-forms and DIST-forms allow a distributive dependency between the plurality of events of opening and the plurality of doors (9c).

(9) Context: In a game, Juan opened a different door every day last week.

a. Juan quih hahoot zo **#cöiyeemetim.**

Juan DEF **door** INDEF.SG 3IO:3;3:RLS.YO:CAUS.open.MULT

Not: ‘Juan opened a different door each time.’ Ok: Juan opened the same door each time.

b. Juan quih hahoot zo ***cöiyeemla.**

Juan DEF **door** INDEF.SG 3IO:3;3:RLS.YO:CAUS.open.DIST

Intended: ‘Juan opened a different door each time.’

Two types of pluractionality in Seri

- c. Juan quih hahootj pac **cöiyemetim** /
Juan DEF **door.PL INDEF.PL** 3IO:3;3:RLS.YO:CAUS.open.MULT
cöiyeeemla.
3IO:3;3:RLS.YO:CAUS.open.DIST
'Juan opened doors.'

The previous discussion shows that MULT and DIST SgSubj forms both pattern with pluractional markers. However, as is well-known, pluractional markers do not form a semantically homogeneous class cross-linguistically (Dressler 1968). In what follows, we show that MULT- and DIST-forms instantiate different types of pluractionals that contrast on a range of properties.

3. Contrasting MULT- and DIST-forms

While MULT- and DIST-forms both behave as pluractional markers, the two forms contrast in several respects. In what follows we compare the behaviour of the two forms regarding (i) event distribution and individuation, (ii) argument orientation, and (iii) the interaction between the event plurality and quantifiers.

3.1 Event distribution and event individuation

SgSubj MULT-forms and SgSubj DIST-forms differ with respect to the requirements they impose on the differentiation between events making up the event plurality.

Given a scenario like Picture A in (11), with different events of Juan carrying a suitcase taking place at different points in time with different suitcases involved in each event, both (10a) with a SgSubj MULT-form and (10b) with a SgSubj DIST-form can be used to describe the scene truthfully. However, in a scenario like Picture B in (11), with simultaneous subevents identified by different parts of the plural object, (10a) using the MULT-form is judged false and only the SgSubj DIST-form is judged true.

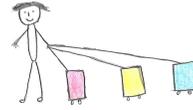
- (10) a. Juan quih xiica an iqueecalca coi hant iyootoxim.
Juan DEF suitcases DEF.PL land 3;3:RLS.YO:extend.MULT
'Juan carried the suitcases.' [Questionnaire2FT5]
- b. Juan quih xiica an iqueecalca coi hant iyootyax.
Juan DEF suitcases DEF.PL land 3;3:RLS.YO:extend.DIST
'Juan carried the suitcases.' [Questionnaire2FT5]

(11)



Picture A, ex.(10a) MULT: TRUE
ex.(10b) DIST: TRUE

SITUACIÓN: ESTA TARDE VI A JUAN ARRASTRANDO SUS MALETAS. TENÍA 3 MALETAS, ENTONCES USÓ UNAS CUERDAS. 1/2/3



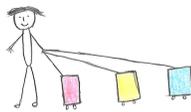
Picture B, ex.(10a) MULT: FALSE
ex.(10b) DIST: TRUE

In other words, MULT-forms require at least temporal distribution, whereas DIST-forms can be licensed without temporal distribution as long as there is distribution over participants. The availability of an interpretation involving distribution of simultaneous events over participants with the DIST-forms depends on the configuration of the theme.

Consider the following three scenarios of one person simultaneously pulling three suitcases at the same time. In Picture B, Juan pulls each suitcase with a separate rope, in Picture C the suitcases are in a cart and the cart is pulled by Juan, in Picture D the suitcases are connected to each other by a rope and Juan pulls a rope connected to the first suitcase. Example (10b) with a DIST-form is judged true by our consultants if the suitcases are themes of individual pulling events as in Pictures B and D (in B, there are three subevents of pulling one suitcase by Juan; in D there is one event of pulling a suitcase by Juan, one event of pulling a suitcase by the yellow suitcase, and one event of pulling a suitcase by the blue suitcase). If the suitcases are pulled once, collectively in a handcart as in Picture C, the DIST-form is judged false. The SgSubj MULT-form cannot be truthfully used in any of the scenarios with simultaneous subevents (Pictures B-D).

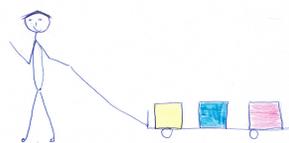
(12)

SITUACIÓN: ESTA TARDE VI A JUAN ARRASTRANDO SUS MALETAS. TENÍA 3 MALETAS, ENTONCES USÓ UNAS CUERDAS. 1/2/3



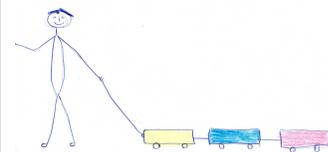
Picture B
ex.(10a) MULT: FALSE
ex.(10b) DIST: TRUE

SITUACIÓN: ESTA TARDE VI A JUAN ARRASTRANDO SUS MALETAS. TENÍA TRES MALETAS, ENTONCES USÓ UNA CARROTA PARA LLEVARLAS A SU CASA.



Picture C
ex.(10a) MULT: FALSE
ex.(10b) DIST: FALSE

SITUACIÓN: ESTA TARDE VI A JUAN ARRASTRANDO SUS MALETAS. TENÍA TRES MALETAS, ENTONCES USÓ UNAS CUERDAS PARA AMARLAS UNA DETRÁS DE LA OTRA.



Picture D
ex.(10a) MULT: FALSE
ex.(10b) DIST: TRUE

Two types of pluractionality in Seri

The preceding discussion shows that SgSubj MULT-forms are more restrictive than DIST-forms with respect to requirement of temporal distribution for the identification of subevents. Conversely, SgSubj DIST-forms are more restrictive than SgSubj MULT-forms with respect to a requirement that subevents be distributed over a plural participant.

Consider the examples in (13a/b). The example in (13a) combining a SgSubj MULT-form with a definite singular object is felicitous in the given context because several successive events of opening the same door can be identified. The parallel example (13b) with a SgSubj DIST-form and a singular object is not acceptable as the events of opening cannot be distributed to parts of the door.

- (13) a. Context: Juan opened the (same) door repeatedly.
Juan quih hahoot hac **cöiyeemetim.**
Juan def door DEF.SG 3IO.RLS.YO.CAUS.open.MULT
'Juan opened the door multiple times.'
- b. Juan quih hahoot hac ***cöiyeemla.**
Juan DEF door DEF.SG 3IO:3;3:RLS.YO:CAUS:open.DIST
Not: 'Juan opened the same door multiple times.'

When a singular argument can be interpreted as involving relevant sub-parts, e.g. a house involving doors and windows that can be opened, the judgements are inverted: the SgSubj DIST-form allows an interpretation of subevents over parts of the singular theme (14b), while SgSubj MULT-form does not allow access to parts of the singular theme (14a).

- (14) Context: First he opened a door then a window then another window.
- a. Juan quih haaco cap **#cöiyeemetim.**
Juan DET house DET.SG 3IO.3;3:RLS.YO.CAUS.open.MULT
- b. Juan quih haaco cap **cöiyeemla.**
Juan DET house DET.SG 3IO.3;3:RLS.YO.CAUS.open.DIST
'Juan opened (doors/windows in) the house.' [Questionnaire2FT5, PostFT5] (=8)

However, with verbs of incremental change like *coyaaitim* 'build', SgSubj MULT can associate subevents of building with incrementally ordered parts of a house.

- (15) Mike quih haaco z **iyaaitim.**
Mike DEF house INDEF.SG 3;3:RLS.YO:make.MULT
'Mike built a house (little-by-little).' [EDSEI26ABR2018DRPM]

In conclusion, both SgSubj MULT-forms and DIST-forms require a contextually provided plurality of events. Whereas SgSubj MULT-forms require the subevents of the plurality to be differentiated by their temporal traces, SgSubj DIST-forms do not have such a temporal requirement. In the absence of temporal distribution, it is not sufficient to have a plural object to use the SgSubj DIST-form (see Picture C with a collective object). For the

Two types of pluractionality in Seri

- (17) Object or PP
- a. *Kika quih poosj quih hehe quih tazo iiqui
Kika DEF rope DEF wood DEF one [3POSS]towards
iyahizlca.
3;3:RLS.YO:attach.DIST
Int. ‘Kika tied the rope to one pole.’
- b. Kika quih poosj quih hehet pac iiqui
Kika DEF rope DEF **wood.PL INDEF.PL** [3POSS]towards
iyahizlca.
3;3:RLS.YO:attach.DIST
‘Kika tied the rope to **poles.**’
- c. Kika quih poosilca quih hehe quih tazo iiqui
Kika DEF **rope.PL DEF** wood DEF one [3POSS]towards
iyahizlca.
3;3:RLS.YO:attach.DIST
‘Kika tied **the ropes** to one pole.’ [EDSEI30NOV2017DRPM]

As illustrated in (18)/(6), SgSubj MULT-forms also allow distribution of the plurality of events over the plurality of individuals denoted by the object (hens in (18)), as long as the context also involves temporal distribution.

- (18) Xees quij _xiica hant haa iico coccáh cmajiic_
fox DEF thing.PL OBL.NMLZ:be.dawn 3IO:SBJ.NMLZ:sing woman.PL⁹
pac **iyocotim.**
INDEF.PL 3;3:RLS.YO:kill:MULT
‘The fox killed hens one after the other.’ [Questionnaire4]

So far we do not have any examples that combine SgSubj MULT- and DIST-forms of transitive verbs that distribute over a plurality of participants inferred from a grammatically singular transitive subject. In the examples we tried to elicit with contexts involving potential collectives analogous to *the family*, *the group*, *the herd*, these collectives did not behave as grammatically singular nouns and required PlSubj forms for our consultants.

3.3 MULT and DIST and universally quantified subjects

Although example (16) shows that SgSubj MULT-forms can distribute over (parts of) their intransitive subject, the multiplicity of events required by the MULT-form cannot distribute over the plural domain introduced by a universally quantified subject. In (19) the multi-

⁹Lit. ‘female things that sing at dawn’. *Hant haa caco* is a verb meaning ‘be dawn’ (Moser and Marlett 2010).

ple events of dying cannot distribute over the plural domain of women introduced by the quantifier *cmajiic coi iij càap tazo cah* ‘each of the women’.

- (19) #**Cmajiic coi iij càap tazo cah hacx yomihtim.**
 woman.PL DEF.PL apart SBJ.NMLZ:stand one DEF.FOC apart RLS.YO:die.MULT
 Intended: ‘Each of the women died (one after the other).’

The universal quantifier *DP iij càap tazo cah* ‘each of the women’ can multiply a singular indefinite with the neutral SgSubj verb form *cöiyeemt*.

- (20) **Cmajiic coi iij càap tazo cah hahoot zo**
 woman.PL DEF.PL apart SBJ.NMLZ:stand one DEF.FOC door INDEF.SG
cöiyeemt.
 3IO:3;3:RLS.YO:CAUS.open
 ‘Each of the women opened a (different) door.’

Given that DIST can distribute over a plurality of doors contributed by the object of the DIST-marked verb (9c), and that the quantified subject can multiply the singular indefinite in (20), one might expect (21) to be acceptable, but the sentence is ill-formed.

- (21) ***Cmajiic coi iij càap tazo cah hahoot zo**
 woman.PL DEF.PL apart SBJ.NMLZ:stand one DEF.FOC door INDEF.SG
cöiyeemla.
 3IO:3;3:RLS.YO:CAUS.open.DIST
 Intended: ‘Each of the women opened a (different) door.’

Both MULT- and DIST-forms are ungrammatical with a distributively quantified subject and a singular object *hahoot zo* ‘door INDEF.SG’. This parallels the corresponding sentences with a singular definite subject instead of a quantified subject in (22) (= (9a))

- (22) Context: In a game, Juan opened a different door every day last week.
 Juan quih hahoot zo #**cöiyeemetim / *cöiyeemla.**
 Juan DEF **door.SG INDEF.SG** open.MULT open.DIST
 Intended: ‘Juan opened a different door each time.’ [repeated from (9a)]

The ill-formedness of both (19) and (21) therefore suggests that MULT- or DIST-forms must be interpreted in the scope of the subject quantifier.

3.4 Summary

The following Table summarises the contrasts between SgSubj MULT- and DIST-forms.

Two types of pluractionality in Seri

SUMMARY	SgSubj MULT	SgSubj DIST
(23) distribution required	time	(parts of) participant
distribution to m-parts of sg participant	no	yes
multiply indefinites	no	no
scope wrt subject ‘each of DP’	narrow	narrow

4. Analysis

As we have seen both SgSubj MULT and SgSubj DIST require multiple events. However the two forms differ in their additional requirements. While SgSubj MULT requires successive subevents, SgSubj DIST requires that subevents can be identified based on salient parts of a non-agent participant in the event. In particular, SgSubj DIST allows simultaneous subevents if they involve salient subparts of a (non-agent) participant.

The meaning of the two pluractional SgSubj forms can be captured as in (24) for MULT and in (26) for DIST, adapting the formula proposed in Lasersohn (1995, 254).

$$(24) \quad \llbracket \text{SgSubj MULT} \rrbracket = \lambda V_{\langle s,t \rangle} \lambda e_s. e = \cup \{e' \mid V(e') \ \& \ e' < e \\ \& \ \exists e', e'': e' \neq e'' \ \& \ e' < e \ \& \ e'' < e \\ \& \ \forall e', e'': [e' < e \ \& \ e'' < e \ \& \ e' \neq e''] \longrightarrow [\neg \tau(e') \circ \tau(e'')]\}$$

with $\tau(e)$ defined as the temporal trace of the event (e)

The definition of the operator SgSubj-MULT states that the SgSubj MULT-form of a verb V applies truthfully to a complex event e if (i) the complex event e is the union of sub-events e' of e that satisfy the predicate denoted by the verb V , (ii) e is composed of at least two distinct subevents e' and e'' and (iii) the temporal traces of any two distinct subevents of e do not overlap.

Example (25) illustrates the application of the SgSubj-MULT operator.

- (25) Context: Yesterday María ate this orange segment-by-segment.
- a. María quih sahmees hipquij iyoohitim.
M. DEF orange DEM 3;3:RLS.YO:eat.MULT
'María ate this orange.'
 - b. Predicted truth-conditions
 $\exists e_s. e = \cup \{e' \mid \mathbf{eat}(e') \ \& \ e' < e \\ \& \ \exists e', e'': e' \neq e'' \ \& \ e' < e \ \& \ e'' < e \\ \& \ \forall e', e'': [e' < e \ \& \ e'' < e \ \& \ e' \neq e''] \longrightarrow [\neg \tau(e') \circ \tau(e'')]\}$
& *Theme(e)=**this.orange** & *Agent(e)=**María**

The truth conditions of SgSubj-MULT in (25b) require that there be a plural event e composed of at least two subevents that are eating events, the subevents of e do not overlap on the temporal dimension, and the cumulative theme of e is the referent of the DP *sahmees hipquij* ‘this orange’ and the cumulative agent of e is María. In the given context the sen-

tence is true because the plural event consisting of subevents of eating segments of the orange is salient.

The SgSubj DIST-form operator can be defined as in (26).

$$(26) \quad \llbracket \text{SgSubj DIST} \rrbracket = \lambda V_{\langle s,t \rangle} \lambda e_s. e = \cup \{ e' \mid V(e') \ \& \ e' < e \\ \& \ \exists e', e'': e' \neq e'' \ \& \ e' < e \ \& \ e'' < e \\ \& \ \forall e', e'': [e' < e \ \& \ e'' < e \ \& \ e' \neq e''] \longrightarrow [\neg \text{Theme}(e') \circ \text{Theme}(e'')] \}$$

The definition of the operator SgSubj-DIST states that the SgSubj DIST-form of a verb V applies truthfully to an event e if (i) the event e is the sum of events e' that are subevents of e that satisfy the predicate denoted by the verb V, (ii) e is composed of at least two distinct subevents and (iii) the themes of any two subevents of e do not overlap.

Example (27) illustrates the effect of the SgSubj-DIST operator.

- (27) a. Juan quih xiica an iqueecalca coi hant iyootyax.
 Juan DEF suitcases DEF.PL land 3;3:RLS.YO:extend.DIST
 'Juan carried the suitcases.'
- b. Predicted truth-conditions
 $\exists e_s. e = \cup \{ e' \mid \text{pull}(e') \\ \& \ \exists e', e'': [e' \neq e'' \ \& \ e' < e \ \& \ e'' < e] \\ \& \ \forall e', e'': [e' < e \ \& \ e'' < e \ \& \ e' \neq e''] \longrightarrow [\neg \text{Theme}(e') \circ \text{Theme}(e'')] \}$
 $\& \ * \text{Theme}(e) = \text{the.suitcases} \ \& \ * \text{Agent}(e) = \text{Juan}$

In the contexts given by Pictures A, B and D in (11/12) the sentence (27a) is true because the following plural events are salient:

- (28) a. Picture A: distribution of subevents over the theme argument with temporal distribution
 $e = \cup \{ e_i \mid i \in 1,2,3 \mid \text{pull}(e_i) \ \& \ \forall i,j \in 1,2,3 \ i \neq j \ [\text{Theme}(e_i) \neq \text{Theme}(e_j)] \ \& \ \text{Theme}(e_i) = \text{suitcase}_i \ \& \ \text{Agent}(e_i) = \text{Juan} \}$
- b. Picture B: simultaneous subevents of Juan pulling suitcases with distribution over the theme argument
 $e = \cup \{ e_i \mid i \in 1,2,3 \mid \text{pull}(e_i) \ \& \ \text{Theme}(e_i) = \text{suitcase}_i \ \& \ \forall i,j \in 1,2,3 \ i \neq j \ [\text{Theme}(e_i) \neq \text{Theme}(e_j)] \ \& \ \text{Agent}(e_i) = \text{Juan} \}$
- c. Picture D: simultaneous subevents of pulling, with distribution over the theme argument
 $e = \cup \{ e_i \mid i \in 1,2,3 \mid \text{pull}(e_i) \ \& \ \text{Theme}(e_i) = \text{suitcase}_i \ \& \ \forall i,j \in 1,2,3 \ i \neq j \ [\text{Theme}(e_i) \neq \text{Theme}(e_j)] \}$

The proposed semantics for the two pluractional operators adapts a formula proposed by Lasersohn (1995). Lasersohn's formula includes two additional requirements (i) a requirement for temporal gaps between subevents and (ii) a condition requiring a cardinality greater than 2 for the event plurality. These two conditions do not apply to SgSubj MULT- and SgSubj DIST-forms in Seri.

Two types of pluractionality in Seri

Unlike what has been observed for other pluractional markers (see Corbett 2000), contexts with two events are sufficient to license the SgSubj pluractional stem-forms.

- (29) Context: I hugged two children. I hugged the first one only once, and I hugged the second one once too. [Questionnaire2]
Xicaquiziil coi isoj **cohyapxazalim.**
children DEF.PL 3POSS.body 3IO:1SG:RLS.YO:cover.MULT
'I hugged the children.' (lit. I covered the children's body)

Secondly, neither the SgSubj MULT nor the SgSubj DIST-forms in Seri require temporal gaps between subevents. As shown in (12), SgSubj DIST-forms clearly allow different configurations of simultaneous subevents. Unlike SgSubj DIST-forms, SgSubj MULT-forms do not allow simultaneous events. However, MULT-forms do not require temporal gaps. Temporal gaps between subevents are only one way to make sequential subevents salient to license the use of SgSubj MULT-forms (30).

- (30) Juan quih hahoot hac **cöiyeemetim.**
Juan DEF door DEF.SG 3IO:3;3:RLS.YO:CAUS.open.MULT
'Juan opened the door repeatedly.'

Other ways to individuate parts of a larger event licensing SgSubj MULT-forms include changes in the direction of motion (31) and changes of intensity of a state (32).

- (31) Moxima Juan quih **yopanozxim.**
yesterday Juan DEF RLS.YO.run.SG.SBJ.MULT
'Yesterday, Juan ran.' SG SBJ MULT
(Cabredo Hofherr, Pasquereau, and O'Meara 2018, ex (16))
CONTEXT A: Juan ran a 100m race once. FALSE
CONTEXT B: Juan ran several 100m races. TRUE
CONTEXT C: Juan did a treasure hunt (ran here and there). TRUE

- (32) Context: Juan has been sick with cancer for a year.
Juan quih **yomoqueepetim.**
Juan DEF RLS.YO:be.sick:MULT
'Juan is sick.' SC: true if sometimes he has crises and feels worse than other times

5. Conclusion

We have shown that a subset of Seri verbs has two pluractional SgSubj forms that differ in their semantics. SgSubj MULT-forms require different run-times for the subevents of the event plurality. In contrast, SgSubj DIST-forms identify subevents by mapping them to parts of a non-agentive event participant. Strikingly, the temporal dimension is orthogonal to the licensing of SgSubj DIST-forms: on the one hand temporally distinct identical events

are not sufficient to license the SgSubj DIST-form, and on the other hand SgSubj DIST-forms allow construals with simultaneous subevents. This analysis provides a finer-grained characterisation of the semantics of different pluractional stems in Seri and raises a number of questions for further research.

Here we examined the SgSubj stems of the verbs with 5 forms. In the PISubj forms verbs with two SgSubj pluractional forms typically only display one pluractional form. Further work is needed to establish whether the PISubj pluractional forms pattern with the SgSubj MULT or the SgSubj DIST, or whether the PISubj pluractional form is ambiguous or underspecified between the two pluractional meanings found with the SgSubj forms.

Seri displays two patterns of distribution over grammatically singular arguments correlated with the two types of pluractionality: incremental interpretations of singular objects with MULT-forms as opposed to part-whole interpretations of singular subjects with DIST-forms. A first study of the contrasts between SgSubj and PISubj stems was reported in Pasquereau and Cabredo Hofherr (2020), where we observed different licensing conditions for SgSubj and PISubj pluractional forms. However, the available data did not probe different types of distribution over singulars, so the contrasts between SgSubj and PISubj forms could not be dissociated from the intrinsic difference in subject number between the two forms. Using the semantic contrast between two types of distribution over singulars, future work has to reexamine SgSubj and PISubj pluractional forms of 4-stem verbs widening the empirical base eliciting contexts with distribution over singular arguments.

The existence of two types of pluractionals marked in Seri also raises the possibility that 4-form-verbs with a single SgSubj pluractional form may have either a SgSubj MULT- or a SgSubj DIST-form. Pasquereau (2020) argues that this is indeed the case and that for numeral verbs in Seri the SgSubj pluractional form patterns with SgSubj DIST-forms.

References

- Baerman, Matthew. 2016. Seri verb classes: morphosyntactic motivation and morphological autonomy. *Language* 92:792–823.
- Cabredo Hofherr, Patricia. 2021. Verbal plurality cross-linguistically. In *Oxford Handbook of Grammatical Number*, ed. by P. Cabredo Hofherr and J. Doetjes. Oxford: Oxford University Press.
- Cabredo Hofherr, Patricia, Jérémy Pasquereau, and Carolyn O’Meara. 2018. Event plurality in Seri. *Proceedings of Semantics of Under-Represented Languages in the Americas 10, (SULA 10)* 1–16.
- Cusic, David Dowell. 1981. Verbal plurality and aspect. Doctoral dissertation, Stanford University.
- Dressler, Wolfgang. 1968. *Studien zur verbalen Pluralität*. Bühlau in Kommission.
- Durie, Mark. 1986. The grammaticization of number as a verbal category. *Proceedings of the Annual Meeting of the Berkeley Linguistics Society* 1:355–370.
- Laca, Brenda. 2006. Indefinites, quantifiers, and pluractionals. What scope effects tell us about event pluralities. In *Non-definiteness and plurality*, ed. by Svetlana Vogeleer and Liliane Tasmowski, 191–217. Amsterdam/ Philadelphia: John Benjamins.

Two types of pluractionality in Seri

- Lasersohn, Peter. 1995. *Plurality, conjunction and events*. Dordrecht: Kluwer.
- Marlett, Stephen A. 2002. Reanalysis of passive and negative prefixes in Seri. *Linguistic Discovery* 1:1–14.
- Marlett, Stephen A. 2007. Las relaciones entre las lenguas ‘hokanas’ en México: ¿ cuál es la evidencia? *Memorias del III Coloquio Internacional de Lingüística Mauricio Swadesh* 165–192. URL http://lengamer.org/admin/language_folders/seri/user_uploaded_files/links/File/Marlett-Hokan.pdf.
- Marlett, Stephen A. 2016. Cmiique Iitom: the Seri language. unpublished grammar (2016 draft). URL <http://arts-sciences.und.edu/summer-institute-oflinguistics/faculty/marlett-steve/marlett-seri-grammar-latest-draft.pdf>.
- Mithun, Marianne. 1988. Lexical categories and the evolution of number marking. In *Theoretical morphology*, ed. by M. Hammond and M. Noonan, 211–234. NY: Academic Press.
- Moser, Edward. 1961. Number in Seri verbs. Master’s thesis, University of Pennsylvania.
- Moser, Mary B., and Stephen A. Marlett. 2010. *Comcaac quih yaza quih hant ihiip hac: Diccionario seri-español-inglés*. Colección Bicentenario. Mexico City and Sonora: Plaza y Valdés editores and Universidad de Sonora, second edition. URL Online: <http://www.sil.org/resources/archives/42821>.
- Pasquereau, Jérémy. 2020. A unique operator for verbal pluractionality and numeral distributivity. Handout of a talk at *Sinn und Bedeutung* 2020.
- Pasquereau, Jérémy, and Patricia Cabredo Hofherr. 2020. Using semantics to probe paradigm structure: The case of multiple event marking in Seri. *Lingue e Linguaggio* 19:35–59.
- Wood, Esther. 2007. The semantic typology of pluractionality. Doctoral dissertation, University of California, Berkeley.

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