

# USING SEMANTICS TO PROBE PARADIGM STRUCTURE: THE CASE OF MULTIPLE EVENT MARKING IN SERI

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**ABSTRACT:** The present study examines verbal morphology in Seri. Seri verbs have dedicated verb stems marking multiple events for singular and plural subjects respectively. However, the morphology marking the stem-forms is not transparent: neither subject number nor multiple events are associated with consistent exponents. As the exponents on the verb stems do not provide any clues to the structure of the paradigm, the features structuring the paradigm have to be inferred from syntactic and semantic properties. Syntactic co-occurrence restrictions with singular and plural subjects clearly distinguish singular and plural subject stems. Within singular and plural subject stems, the further distinction between the neutral and the multiple event form (MULT-form) is based on semantic differences between the stems: MULT-forms are only felicitous in contexts with multiple events. As multiple event marking on verbs is not a homogeneous class, it does not trivially follow that singular subject and plural subject MULT-forms express the same type of event multiplicity. To establish the paradigm structure of Seri verbs we therefore need to examine whether the MULT-forms express the same semantic feature value across singular and plural subject stems. We first show that plural subject MULT-forms pass the same diagnostics that show that singular subject MULT-forms mark event plurality. As a second step we compare the meaning of singular and plural subject MULT-forms. In the initial elicitations younger speakers uniformly interpreted the singular and plural subject MULT-forms as iterative with events distributed in time; in contrast, older speakers interpreted singular subject MULT-forms as iterative but allowed simultaneous events distributed over a participant plurality for plural subject MULT-forms. Elicitation with different materials showed that the initial difference in truth-conditional judgements reflects a difference in the preferred contexts assumed by the older and younger speakers, not a difference between the semantic range of singular subject and plural subject MULT-marking as such. We therefore conclude that the semantic evidence supports an analysis of singular subject MULT-forms and plural subject MULT-forms as expressing a single type of event plurality marking.

**KEYWORDS:** verbal morphology, paradigm structure, pluractionality, distributive dependencies, semantic data collection methodology

# 1. INTRODUCTION<sup>1</sup>

Seri is an isolate spoken in northwest Mexico, in two villages on the Sonoran coast: *Haxöl Iihom*/El Desemboque and *Socaaix*/Punta Chueca by approximately 900 speakers (Ethnologue 2007 estimate). Seri verb stems typically have four forms as in Table 1 (Marlett 2016: 444).

	Form A	Form B	Form C	Form D
'run'	-panzx	-panozxim	-pancojc	-pancoxlca

TABLE 1. STEM FORMS OF *cpanzx* 'RUN'

One distinction between the stems expresses subject number (Marlett 2016: 411, 431–437): forms A and B mark the subject as singular whereas forms C and D mark it as plural (Table 2).

'run'		I ran	we ran
SG	Form A	ihp-yo-panzx	* ha-yo-panzx
	Form B	ihp-yo-panozxim	* ha-yo-panozxim
PL	Form C	* ihp-yo-pancojc	ha-yo-pancojc
	Form D	* ihp-yo-pancoxlca	ha-yo-pancoxlca
		1SG-RLS.YO-RUN	1PL-RLS.YO-RUN

TABLE 2. SUBJECT NUMBER (CPO 2018, EX. 2)

Within each subject number value, there is a second distinction (Marlett 2016: 443–448). Cabredo Hofherr, Pasquereau & O’Meara (2018) (abbreviated CPO 2018

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Abbreviations: AW away, COORD coordinator, DEF definite, DEM demonstrative, ERG ergative, FOC focus, INDEF indefinite, IO indirect object, IPFV imperfective, MULT multiple, NMLZ nominalization, OBL oblique, PFV perfective, PL plural, PLUR pluractional, POSS possessive, PST past, REFL reflexive, RLS.MI realis marked by prefix *mi-*, RLS.YO realis marked by prefix *yo-*, SBJ subject, SG singular, UNSPEC.TIME unspecified time, WP witnessed past. The abbreviation SC stands for "Speaker(s)'s comments". The symbols  $\_$  are used to delimit a phrase in Seri corresponding to a simple word in the English gloss.

in what follows) argue that the distinction is between a neutral form and a form marking event multiplicity (or *pluractionality*, glossed *MULT*). Forms B and D are *MULT*-forms which are only felicitous in a context where multiple events can be individuated. For instance, (3) with the singular subject (*SG SBJ*) *MULT*-form of ‘run’, *yopanozxim*, is false in Context A but true in Context B where changes in the direction of running individuate different sub-events of a complex running event.

- (1) *Moxima Juan quih yopanzx / yopanozxim.*  
 yesterday Juan DEF RLS.YO.RUN.SG.SBJ RLS.YO.RUN.SG.SBJ.MULT  
 ‘Yesterday Juan ran.’ [AFT5]  
**Context A:** Yesterday, when he saw a dog bite his mother, Juan ran to her.  
 (once, in a straight line).  
**Context B:** Yesterday, Juan spent the whole day running around the village,  
 playing with his friends.

The analysis in CPO (2018) assumes, following work from (Moser 1961: 1) to the standard description of Seri (Marlett 2016: 442), that multiple event forms are the expression of a single category cross-cutting subject number as in Table 3.

‘run’	Cat. 2: event multiplicity		
		NEUTRAL	MULT
Cat. 1: subject number	SG	-panzx	-panozxim
	PL	-pancojc	-pancoxca

TABLE 3. SAME-FEATURE HYPOTHESIS: SG SBJ MULT AND PL SBJ MULT-FORMS EXPRESS THE SAME EVENT MULTIPLICITY FEATURE MULT

However, the morphology of Seri is extremely complex, and *SG SBJ* and *PL SBJ MULT*-forms do not share a morphological exponent that could be identified as the exponent of event-plurality. As illustrated in Table 4, Seri verb stems display many different exponents with a range of allomorphs.

	Meaning	SG subject		PL subject	
		Form A	Form B	Form C	Form D
a.	‘intercept’	-zactim	-zacatim	-zacatoj	-zacatam
b.	‘lap up’	-oaala	-oaalatim	-oaalatam	-oaalatoj
c.	‘fall’	-poc	-poc <del>ti</del> m	-poclim	-pocalam
d.	‘unfasten’	-aafp	-aafipto <del>j</del>	-atoofipto <del>j</del>	-atoofipolca

TABLE 4. NO ONE-TO-ONE MAPPING BETWEEN SUFFIX FORM AND FUNCTION

In addition to the wide range of different exponents, the exponents are not associated with a constant meaning across different verbs (Marlett 2016; Baerman 2016). The suffix *-tam* and its allomorph *-am* are associated with Form C in Table 4-b and with Form D in Table 4-a/c while the suffix *-toj* is associated with Form C in Table 4-a, with Form D in Table 4-b and with Form B and C in Table 4-d. Thus the Seri verbal inflectional system shows pervasive many-to-many mappings between form and function.

Given the complex morphological realisation of the verb stems, the form of the exponents provides no clues to the structure of the verbal paradigm. Its structure is deduced from syntactic and semantic properties associated with the verb stems. Indeed, despite the lack of dedicated exponents, syntactic subject number agreement reveals a robust subject-number category across Seri verbs.

The main motivation to identify forms B and D as marking a common category is semantic, relying on the fact that both express event plurality, as we show in section 2. However, it is well-known that markers of event plurality display great variability cross-linguistically (Dressler 1968; Cusic 1981; Xrakovskij 1997). Therefore it does not trivially follow that two forms expressing event plurality express the same type of event plurality. A difference in meaning between SG SBJ MULT and PL SBJ MULT forms could have two sources: (i) it could be the result of a semantic interaction between a unique MULT feature with different values of subject number—as in (3), or (ii) it could be that SG SBJ MULT-forms and PL SBJ MULT-forms express two distinct types of event multiplicity. In this case the two MULT-forms would correspond to two distinct categories as in the paradigm in Table 5.

‘run’		NEUTRAL	MULT-1	MULT-2
Cat. 1: subject number	SG	-panzX	-panozxim	
	PL	-pancojc		-pancoxlca

TABLE 5. DIFFERENT-FEATURE HYPOTHESIS: SG SBJ MULT AND PL SBJ MULT-FORMS EXPRESS THE DIFFERENT EVENT MULTIPLICITY FEATURE MULT-1 AND MULT-2

In this paper, we examine the assumption that the SG SBJ and the PL SBJ MULT-forms should be analysed as marking a single feature value of event multiplicity underlying previous work on Seri verbal morphology (Marlett 2016; Baerman 2016; CPO 2018). As there are no morphological indications for the choice between structures (3) and (5) for the paradigm in Seri, we examine the semantic profiles of SG SBJ and PL SBJ MULT-forms in detail to establish if they should be analysed as expressing the same type of event multiplicity.

This investigation relies on the elicitation of truth-value judgments (Matthewson 2004). If SG SBJ MULT and PL SBJ MULT correspond to the same value in a paradigm, we expect the meaning of MULT to be homogeneous across SG SBJ and PL SBJ. If on the other hand, SG SBJ and PL SBJ MULT-forms have different meanings, that are not explainable as a result of the interaction of MULT and subject number, this would be an argument in favour of a distinction between SG SBJ and PL SBJ MULT-forms as expressing different features.

We proceed as follows. In section 2, we show that, like SG SBJ MULT-forms, PL SBJ MULT-forms can only be used in contexts that provide event pluralities. We extend the arguments in CPO 2018 to PL SBJ MULT-forms showing that PL SBJ MULT-forms mark neither grammatical imperfective aspect nor object number, concluding that both types of MULT-forms are verbal plurality markers (pluractionals). Since markers of event plurality are known to differ widely, we compare the meaning of SG SBJ MULT-forms with PL SBJ MULT-forms in section 3. We show that what we might interpret as a difference in meaning of SG SBJ and PL SBJ MULT-forms with respect to the available distributive dependencies is an artefact arising from the underspecification of the stimuli used in the initial elicitation. Section 4 concludes.

## 2. SERI MULT-FORMS ARE PLURACTIONALS

CPO (2018) discuss the semantics of MULT-forms relying on the assumption that SG SBJ MULT and PL SBJ MULT-forms belong to the same paradigm. In particular, the tests in CPO are uniformly applied to SG SBJ MULT-forms and assumed by hypothesis to extend to PL SBJ MULT-forms. In order to probe the underlying assumption that SG SBJ and PL SBJ MULT-forms instantiate the same category, we have to consider SG SBJ MULT and PL SBJ MULT-forms separately. In what follows we apply the diagnostics used in CPO with SG SBJ MULT-forms to PL SBJ MULT-forms.

### *2.1 Singular and plural subject MULT-forms require plural events*

Both SG SBJ and PL SBJ MULT-forms require a context with several events: they are both judged false if the context has no more than one event as in examples (7) and (8). Thus in the contexts (7)-A/ (8)-A, the MULT-form – whether SG SBJ or PL SBJ – cannot be used truthfully. If the context involves multiple events, however, both forms are licensed: in the contexts (7)-B/ (8)-B this is achieved by iteration of the whole event; in the contexts (7)-C/(8)-C, this is achieved by changes in the direction of running that individuate (sub-)events of running.

- (2) *Moxima Juan quih yopanozxim.*  
yesterday Juan DEF RLS.YO.RUN.SG.SBJ.MULT  
‘Yesterday, Juan ran.’ [AFT5] SG SBJ MULT  
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
- (3) *Moxima xicaquiziil coi yopancoxla.*  
yesterday child.PL DEF.PL RLS.YO.RUN.PL.SBJ.MULT  
‘Yesterday, the children ran.’ [AFT5] PL SBJ MULT  
Context A: A group of children ran together in a 100m race against a group of adults once. FALSE  
Context B: A group of children ran together in a 100m race against a group of adults several times. TRUE  
Context C: A group of children did a treasure hunt (ran here and there). TRUE

That multiple events license the use of MULT forms is compatible with several analyses of MULT. In what follows, we examine two alternative hypotheses that have been entertained in the literature on Seri grammar.

## 2.2 Singular and plural subject MULT-forms are not imperfectives

In his comprehensive grammar of Seri, Marlett (2016: 442) analyses the multi-forms as indicating imperfective grammatical aspect with the A and C forms indicating perfective grammatical aspect. CPO base the argument that SG SBJ MULT-forms are not imperfectives on the observation that cross-linguistically imperfective forms have two main meanings: habitual and continuous (Comrie 1976: 24, Bybee et al. 1994: 151, Cover & Tonhauser 2015: 324). Both meanings are illustrated with Spanish examples in (4).

- (4) a. Habitual

*María iba a la iglesia todos los días. (Spanish)*

María go.IPFV.PST.3SG to the church all the days

‘María went to church every day.’

- b. Continuous

*Mientras que Juan corría a casa, se fue la*

while COMP Juan run.IPFV.PST.3SG home REFL go.PFV.PST.3SG the luz.

light

‘While Juan was running home, the light went out.’

CPO show that the Seri MULT-forms do not have these typical imperfective readings. First, MULT-forms do not mark habituality. In the contexts in (5) and (6) which describe habitual events, we would expect a form marking habituality to be possible. However, the Seri sentence with the SG SBJ MULT-form *contiyatim* was judged false and only the A form *contiya* was judged true. Similarly, with a plural subject, only the C form *contiyat* of the verb was judged true by our consultants, the PL SBJ MULT-form *contiyatolca* was judged false.

- (5) Context: Maria died last year. All her life, she went to church once every day. SG SBJ MULT

*Maria quih hant ifi* *coox cah* *x*,  
 Maria DEF land 3POSS[OBL.NMLZ].be.morning every DEF.FOC UNSPEC.TIME  
*iglesia cap contiya/* *#contiyatim.*  
 church DEF 3IO.AW.RLS.YO.go.SG.SBJ 3IO.AW.RLS.YO.go.SG.SBJ.MULT

‘Every morning, Maria went to church.’ (CPO 2018: 6, ex. 12)

- (6) Context: Maria and Irma died last year. All their life they went to church once every day. PL SBJ MULT

*Maria xah Irma xah hant ifi* *coox*  
 Maria COORD Irma COORD land 3POSS[OBL.NMLZ].be.morning every  
*cah x* *iglesia cap contiyat/*  
 DEF.FOC UNSPEC.TIME church DEF 3IO.AW.RLS.YO.go.PL.SBJ  
*#contiyatolca.*  
 3IO.AW.RLS.YO.go.PL.SBJ.MULT

‘Every morning, Maria and Irma went to church.’ [Questionnaire2FT4]

In the examples (5)/(6) the iteration expressed by the SG SBJ/PL SBJ MULT-form characterizes the event that occurs habitually: the habit described is one of going to church repeatedly on the relevant occasions (that are set up by the time adverbial *every morning* in the context given for the examples).

Secondly, CPO observe that MULT-forms do not allow durative readings.<sup>2</sup> In the context in (7), although the time of the running is extended and includes the time of the electricity going out, the sentence with the SG SBJ MULT-form of the verb meaning ‘run’ is judged to be false. The same judgements are replicated in a parallel context involving the PL SBJ MULT-form (8).

- (7) Context: Yesterday my brother ran in a race from point A to B. While he was running, the power went out. SG SBJ MULT

<sup>2</sup> This example also shows that the MULT-forms do not mark that the time of the event includes the topic time, a Reichenbachian time-relational definition of imperfective aspect, see Cover & Tonhauser (2015: 323).

*Hoyacj quih cöïpanzx /*  
 1POSS.brother DEF 3IO.3POSS.OBL.NMLZ.TUN.SG.SBJ  
*#cöïpanozxim iti, hamac canoj<sub>j</sub> quih*  
 3IO.3POSS.OBL.NMLZ.TUN.SG.SBJ.MULT 3POSS.on light DEF  
*iicot cöyoocim.*  
 3POSS.between 3IO.RLS.YO.cut.SG.SBJ

‘While my brother was running, the electricity went out.’ (CPO 2018: 6, ex. 13)

- (8) Context: Yesterday my brothers ran in a race from point A to B. While they were running, the power went out. PL SBJ MULT

*Hoyácalcam quih cöïpancojc /*  
 1POSS.brother.PL DEF.FLX 3IO.3POSS.OBL.NMLZ.TUN.PL.SBJ  
*#cöïpancoxica iti, hamac canoj<sub>j</sub> quih*  
 3IO.3POSS.OBL.NMLZ.TUN.PL.SBJ.MULT 3POSS.on light DEF  
*iicot cöyoocim.*  
 3POSS.between 3IO.RLS.YO.cut.SG.SBJ

‘While my brothers were running, the electricity went out.’ [Questionnaire2FT4]

Based on the SG SBJ-forms CPO conclude that MULT-forms do not encode imperfective aspect, since SG SBJ MULT-forms do not have the two core-meanings associated with imperfectives cross-linguistically. The data discussed in this section shows that this conclusion extends to PL SBJ MULT-forms.

### 2.3 Singular and plural subject MULT-forms are not object agreement

CPO show that MULT-forms do not impose number restrictions on their object. MULT-forms are compatible with singular or plural objects as long as the context provides a plurality of events: e.g. in (9), the MULT-form with the singular object *sahmees hipquij* ‘this orange’ is true if I ate the orange segment-by-segment. This observation also carries over to PL SBJ MULT-forms (10).

- (9) *Moxima sahmees hipquij / hizcoi ih-yo-ohitim.*  
 yesterday orange DEM.SG DEM.PL 1SG-RLS.YO-eat.SG.SBJ.MULT  
 ‘Yesterday, I ate this orange/these oranges.’ (CPO 2018: 5, ex. 9) SG SBJ MULT

- (10) *Moxima sahmees hipquij / hizcoi ha-yo-ütolca.*  
 yesterday orange DEM.SG DEM.PL 1PL-RLS.YO-eat.PL.SBJ.MULT  
 ‘Yesterday, we ate this orange/these oranges.’ [EDSEI14OCT2018DRPM2] PL SBJ MULT

While for some verbs MULT-forms seem to encode object number, necessarily cross-referencing the plurality of the object (Marlett 2016: 443), plural object number is not associated with MULT-forms in general. Firstly, singular objects



can combine with MULT-forms of the verb (9/ (10) and inversely plural objects can occur with the A and C forms that do not mark MULT (11)/ (12).

- (11) *Moxima sahmees hipquij / hizcoi ih-yo-ohit.*  
 yesterday orange DEM.SG DEM.PL 1SG-RLS.YO-eat.**SG.SBJ**  
 ‘Yesterday, I ate this orange/these oranges.’ (CPO 2018: p. 5, ex 9) SG SBJ
- (12) *Moxima sahmees hipquij / hizcoi ha-yo-iitoj.*  
 yesterday orange DEM.SG DEM.PL 1PL-RLS.YO-eat.**PL.SBJ**  
 ‘Yesterday, we ate this orange/these oranges.’ [EDSEI14OCT2018DRPM2] PL SBJ

The previous sections have shown that the arguments given in CPO against alternative analyses of MULT-forms in terms of imperfective grammatical aspect or plural object number carry over to PL SBJ MULT-forms. In what follows we pursue an analysis of MULT-forms as encoding event plurality, examining the semantic profile of SG SBJ and PL SBJ MULT-forms with respect to a range of properties associated with pluractionals cross-linguistically.

### 3. COMPARING SINGULAR AND PLURAL SUBJECT MULT-FORMS

Markers of event plurality differ widely across and within languages (Dressler 1968; Cusic 1981; Cabredo Hofherr & Laca 2012). In what follows we compare SG SBJ and PL SBJ MULT with respect to several parameters that have been studied in the literature on pluractionals, covering combination with exact cardinality expressions (section 3.1), multiplication of singular indefinites (section 3.2), scope properties of the event plurality with respect to quantified subjects (section 3.3) and available distributive dependencies between the event plurality and plural arguments (section 3.4).

#### 3.1 *Exact cardinality expressions*

In the literature on pluractionals it is observed that many pluractionals do not allow cardinal modifiers to count instances of the complex event. The cardinal modifiers considered are cardinal adverbs (*three times*) and cardinal arguments (*three dogs*). When a cardinal adverb is added to a pluractional verb, the event plurality is typically interpreted below the cardinal as exemplified in (18) (Dressler 1968; Van Geenhoven 2004; Yu 2003; Laca 2006). With cardinal arguments particularly with small cardinals, pluractionals are also degraded (19) (Součková 2011; Cabredo Hofherr & Laca 2012).

- (13) a. *adama takhan yttaza chai melira* (Chechen)  
 Adam.ERG today ten.times tea drink.WP  
 ‘Adam drank tea ten times today.’
- b. \* *adama takhan yttaza chai millira*  
 Adam.ERG today ten.times tea drink.PLUR.WP  
 ‘Adam drank tea ten times today.’ (Yu 2003: 303, ex. 27a/b)
- (14) *Mutàanee d’atii /biyaĩ /biyu sun fĩ~fitoo* (Hausa)  
 people ?hundred / ??five / ?\*two 3PL.PFV RED-come.out  
 ‘A hundred/ five/ two people came out.’ (Součková 2011: 111, ex. 73b)

In Seri, both types of cardinality effects are found. The adverbial exact cardinality expression in (20) is considered odd with the multiple forms *ihexelim* ‘buy.SG.SBJ.MULT’ and *ihexejam* ‘buy.PL.SBJ.MULT’. The speakers’ comments show that in the interpretation available the cardinal does not count the number of events but the number of occasions that an event-multiplicity was instantiated.

- (15) Context: Last week, I went to Calle Doce 6 times (not more) with Juan and he bought oranges every time. SG SBJ MULT

*Icatoomec hino coofin tintica Juan quih sahmees pac*  
 week 1POSS.to SBJ.NMLZ.happen DEF Juan DEF orange INDEF.PL  
*ihexl / #ihexelim*  
 3POSS.OBL.NMLZ.buy.SG.SBJ 3POSS.OBL.NMLZ.buy.SG.SBJ.MULT  
*isnaap yoozoj<sub>2</sub>*  
 RLS.YO.6.times

‘Last week, Juan bought oranges 6 times (#many times).’ [SC on MULT-form: It’s weird. It sounds like he bought oranges six times various times.] (CPO 2018: ex. 19)

- (16) Context: Last week, I went to Calle Doce 6 times (not more) with my children and together the children bought a bag of oranges every time. PL SBJ MULT

*Icatoomec hino coofin tintica xicacaziil quih sahmees pac*  
 week 1POSS.to SBJ.NMLZ.happen DEF children DEF orange INDEF.PL  
*ihexej / #ihexejam*  
 3POSS.OBL.NMLZ.buy.PL.SBJ 3POSS.OBL.NMLZ.buy.PL.SBJ.MULT  
*isnaap yoozoj<sub>2</sub>*  
 RLS.YO.6.times

‘Last week, the children bought oranges 6 times.’ [EDSEI13MAY2019DRPM.ATHF.LKPH.GH]

In Seri, when a cardinal argument is combined with a once-only predicates as in (22a), the result is not felicitous, contrasting with a definite plural argument (22b).

- (17) a. \* *Haxaca quih capxa hacx yomihtolca.*  
 dog.PL DEF SBJ.NMLZ.three apart RLS.YO.die.PL.SBJ.MULT  
 Int. ‘Three dogs died (one after the other).’ [Questionnaire2FT3]
- b. *Haxaca quih hacx yomihtolca.*  
 dog.PL DEF apart RLS.YO.die.PL.SBJ.MULT  
 ‘The dogs died (one after the other).’ [EDSEI13MAY2019DRPM.ATHF.LKPH.GH]

This contrast suggests that definite plural arguments can enter a distributive dependency with the event plurality expressed by the MULT-forms, but cardinal arguments cannot. The only available interpretation for (22a) is absurd as each of the three dogs would have to be the subject of a multiple dying event. (For other examples of DP-type conditioning the distributive dependencies available with an event plurality, see Van Geenhoven (2004), Laca (2006) and Wood (2007: 213-5) for West Greenlandic, Spanish, and Chechen respectively.)

### 3.2 No multiplication of indefinite singulars

Van Geenhoven (2004) argues in detail that the event plurality contributed by the event plurality markers in West Greenlandic is not quantificational. This author shows that unlike the plurality contributed by frequency adverbs such as *often*, *frequently*, the plurality contributed by pluractionals does not multiply indefinite singular complements.

Like the verbal plurality markers examined by Van Geenhoven, the Seri MULT-forms do not multiply singular indefinites. In (18) the SG SBJ MULT-form of *-aai* ‘make, build’ does not multiply the indefinite singular object *haaco zo* ‘a house’. The speakers’ comment makes clear that the sentence is interpreted as a complex event of building the same house in several stages. In the same way the PL SBJ MULT-form of the same verb does not allow the referent of the indefinite to co-vary with the plural subject in example (19).

- (18) Context: When Juan came to the village, he built one house, not more, for him and his family. SG SBJ MULT

*Juan quih haaco z iyaaitim.*  
 Juan DEF house INDEF.SG 3;3.RLS.YO.make.SG.SBJ.MULT

‘Juan built a house.’ [SC: true, he did it in stages] [AFT5]

- (19) Context: When fishermen came to the village, each one built his own house. PL SBJ MULT

*Camcö coi haaco z iyaazilca.*  
 men DEF.PL house INDEF.SG 3;3.RLS.YO.make.PL.SBJ.MULT

Int. ‘The men built houses.’ [SC: it’s a lie, the situation says that each person built his house but the sentence says that they together built one house. It would be *Ctamcö coi haacöt pac iyaazilca* ‘lit. The men built houses’ (the plural NP *haacöt pac* ‘houses’ is marked as indefinite by the determiner *pac*.)] [Questionnaire2FT4]

In sum, neither SG SBJ nor PL SBJ MULT-forms multiply indefinites.

### 3.3 Scope properties with respect to quantified subjects

Following up on the intuition in Van Geenhoven (2004) that the event plurality expressed by pluractionals is scopeless in that it does not take scope over indefinite singulars, we examined the scope properties of SG SBJ and PL SBJ MULT-forms with respect to quantifiers in subject position.

With quantified subjects, we obtained a contrast between SG SBJ and PL SBJ MULT-forms. In cases like (20), the MULT-form is reliably interpreted in the scope of the subject quantifier, yielding an absurd reading that each woman dies several times. In contrast in (21) the quantifier *tcooo* ‘all’ that occurs with a plural subject form yields an acceptable sentence.<sup>3</sup>

- (20) \**Cmajiic coi ij càap tazo cah hacx*  
 woman.PL DEF.PL apart SBJ.NMLZ:stand one DEF.FOC apart  
*yomihtim.*  
 RLS.YO.die.SG.SBJ.MULT

Int. ‘Each of the women died (one after the other).’ [EDSEI13MAY2019DRPM.ATHF.LKPH.GH]  
 SG SBJ MULT

- (21) %*Cmajiic coi tcooo hacx yomihtolca.*  
 woman.PL DEF.PL all apart RLS.YO.die.PL.SBJ.MULT

‘All the women died (one after the other).’ [Questionnaire2FT3] PL SBJ MULT

However SG SBJ and PL SBJ MULT-forms do not appear with the same quantifiers: the quantifier *ij càap tazo cah* ‘every’ necessarily occurs with a singular subject form while *tcooo* ‘all’ occurs with a plural subject form. The difference

<sup>3</sup> The sentence has a % symbol because it is not judged acceptable by every consultant every time. That is, like other data points, the acceptability of this sentence has been checked several times: in this case four times in collective sessions. In one session, all consultants found it acceptable, in the other three sessions, one consultant out of four (not the same consultant) found the sentence unacceptable because they understood it as meaning that each woman died several times according to their comments. We interpret this variation as reflecting speakers’ accommodation of different contexts, as it is observed cross-linguistically that the universal quantifier that appears with plural agreement allows both collective and distributive readings (Gil 1995).

	SG SBJ MULT	PL SBJ MULT
require plurality of events	✓	✓
do not multiply indefinite NP	✓	✓
cardinals do not count events of the event plurality	✓	✓

TABLE 6. SEMANTIC PROFILE OF SG SBJ AND PL SBJ MULT-FORMS

in interpretation between (24) and (25) is plausibly the consequence of a difference between the quantifiers, rather than a difference in the semantics of SG SBJ MULT and PL SBJ MULT: in many languages the universal quantifier appearing with singular agreement like *every* is distributive while the universal quantifier appearing with plural agreement like *all* is compatible with distributive and non-distributive scenarios (Gil 1995: 328). As it is not possible to construct minimal pairs for quantifiers and SG SBJ/ PL SBJ verb forms, the contrast between (20) and (21) cannot be used as an argument in favour of a difference between SG SBJ and PL SBJ MULT-forms.

### 3.4 *Distributive dependencies*

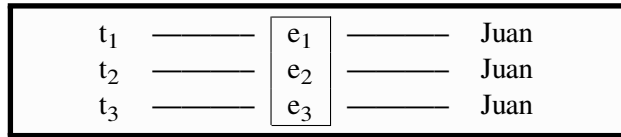
So far we have shown that SG SBJ and PL SBJ MULT-forms behave identically with respect to three properties typical of pluractional markers across languages summarized in Table 6.

As shown in the literature, pluractional markers across languages differ with respect to the distributive dependencies they allow between the event plurality and plural arguments (Laca 2006, see Cabredo Hofherr 2020 for discussion and references). In what follows we compare the distributive dependencies licensed with SG SBJ and PL SBJ MULT-forms.

As we have seen in section 3.2, the event plurality expressed by MULT-forms does not behave like a scope-taking element. As pointed out by Van Geenhoven (2004) certain scopeless markers of event plurality allow distributive dependencies between the event plurality and another plurality in the sentence. Events in general have a time, participants, and a location as in (3.4): so a dependency can hold between the plurality of events and a plurality of times, participants, or locations (see Lasersohn 1995).

(22) Last week, Juan went to Puerto Libertad.

With a singular subject the MULT-marked predicate *go to Puerto Libertad* can only receive an iterated reading as graphically represented in Figure 1.

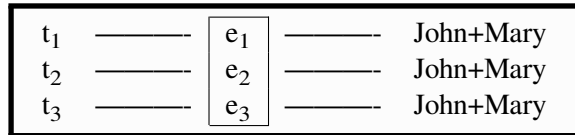


Context: Juan went to Puerto Libertad several times.

FIGURE 1. DISTRIBUTION OVER TIMES

This iterative reading is also available for a plural subject. The sentence in (23) is true if John and Mary (together) went to Puerto Libertad several times: in that case, the plurality of events is distributed over a plurality of times as illustrated in Figure 2.

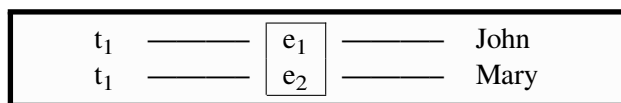
(23) Last week, John and Mary went to Puerto Libertad.



Context: John and Mary (together) went to Puerto Libertad several times.

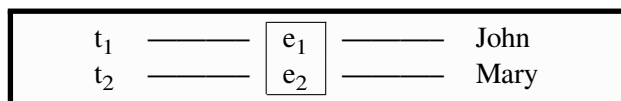
FIGURE 2. DISTRIBUTION OVER TIMES

However, the presence of a plural subject opens up the possibility of other distributive configurations, namely distributive dependencies involving the plural subject with or without concomitant distribution in time. Thus, if John and Mary went to Puerto Libertad at the same time but separately, the plurality of events of going to Puerto Libertad is distributed over the plurality of participants only (Figure 3a). Types of distribution are not exclusive and the plurality of events can be distributed over both times and participants (Figure 3b).



Context: John and Mary went to Puerto Libertad at the same time but separately.

(a) DISTRIBUTION OVER PARTICIPANTS



Context: John and Mary went to Puerto Libertad separately, one after the other.

(b) DISTRIBUTION OVER TIMES AND PARTICIPANTS

FIGURE 3. DISTRIBUTION OVER PARTICIPANTS ONLY OR PARTICIPANTS+TIMES

Pluractional markers differ with respect to the types of distributive configurations available to the event plurality they introduce. In what follows we compare the distributive dependencies that SG SBJ and PL SBJ MULT-forms allow.

### 3.4.1 Intransitive verbs

In intransitive constructions, SG SBJ MULT-forms can be licensed by configurations that distribute over times: example (24) with the SG SBJ MULT-form *cöyeequitim*<sup>4</sup> ‘cross.MULT’ can be used truthfully in Context B where several sub-events of crossing are individuated but not in Context A with an extended but continuous crossing event.

- (24) *Karelia quih cói hax quimej com imac*  
 Karelia DEF while river DEF between  
*cöyeequitim* *iti, yopca.*  
 3IO.RLS.YO.CROSS.SG.SBJ.MULT 3POSS.in RLS.YO.rain  
 ‘While Karelia was crossing the river, it started raining.’ [ED-  
 SEI5NOV2019DRPM.ATHF.LKPH.AMMO] SG SBJ MULT  
**Context A:** Karelia crossed a very wide river (once, without stopping).  
 It took her a long time and it started raining while she was on the bridge.  
 FALSE  
**Context B:** Karelia crossed a river several times. It started raining while  
 she was on the bridge. TRUE

<sup>4</sup>The verb *cöyeequitim* ‘cross’ is intransitive - the space crossed is expressed in an adpositional phrase headed by *imac* ‘between’.

In (24) a distributive dependency with the singular subject is not possible because of real-world constraints: parts of Karelia cannot cross the river separately, and distribution of the sub-events over times is the only option. With plural subjects, in contrast, it is possible to have a distributive dependency between the multiple events and the plural subject without distribution over time. When eliciting truth-value judgements for example (25) with a PL SBJ MULT-form we observed variation in speaker judgements. For older speakers Context A with simultaneous events involving a plurality of participants was sufficient to license the PL SBJ MULT-form, while younger speakers were less consistent in their judgement. In context B with distribution of sub-events over times as in (25) the PL SBJ MULT-form was accepted by all speakers.

- (25) *Cmajüic quih hant ipzx com imac cöyatoquelam.*  
 woman.PL DEF river DEF 3POSS.middle 3IO.RLS.YO.CROSS.PL.SBJ.MULT  
 ‘The women crossed the river.’ [EDSEI9MAY2019DRPM.ATHF] PL SBJ MULT  
**Context A:** The women crossed the river together, once. 40+: TRUE, 40-: %  
**Context B:** The women crossed the river together, various times 40+: TRUE,  
 40-: TRUE.

### 3.4.2 Transitive

In transitive constructions, SG SBJ MULT-forms are licensed by pure temporal distribution (26).

- (26) *Cmaam quij quisüil cmaam quij ilit*  
 woman DEF SBJ.NMLZ.small woman DEF 3POSS.hair  
*iyacoaazalim.*  
 3;3.RLS.YO.braid.SG.SBJ.MULT  
 ‘The woman braided the girl’s hair several times.’ [PCSEI19DEC2017XMHRMH] SG  
 SBJ MULT

Distribution of the predicate *ilit iyacoaazalim* ‘braid.MULT’ over the singular subject only is not possible without adding distribution over times or over the object (see below) because of real-world constraints: a single person cannot braid multiple braids at the same time. In contrast, in example (27) with a SG SBJ MULT-form of the verb meaning ‘to drag’, distribution over the object only (without distribution over times) is a possible scenario: Juan can pull each suitcase with a separate rope. However, distribution over the object only is not sufficient to license the SG SBJ MULT-form: (27) cannot be used truthfully in a context with a distribution of simultaneous events over suitcases.

- (27) Context: At 2pm today, I saw Juan pulling his 3 suitcases behind him  
 with 3 ropes. SG SBJ MULT



#Juan *quih* <sub>xiica an iheaacalca</sub> *quih hant* *iyootoxim*.

Juan DEF 3POSS.suitcase.PL DEF down 3;3.RLS.YO.drag.SG.SBJ.MULT

'Juan dragged his suitcases.' [SC: TRUE if he does it several times or goes to several places] [Questionnaire6FT3]

The context in (27) specifies a punctual time adverbial *at 2pm*, excluding distribution over times. In this context the example is judged false: the speakers' comment explicitly states that iteration of the same event or sequential events with movement in different directions would make the example acceptable.

For the transitive verb *iyootaxlca* 'carry.MULT' distribution over the plural subject only (Figure 4a) or over the object only (Figure 4b) is not sufficient to licence the PL SBJ MULT-form.

(28) *Xicacaziil quih* <sub>xiica an iqueaacalca</sub> *quih hant*

children DEF suitcase.PL DEF land

*iyootaxlca*.

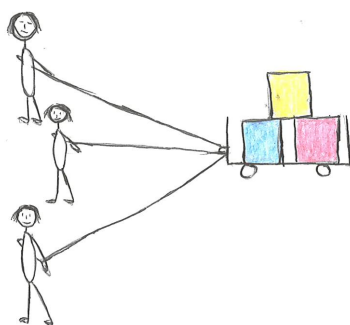
3;3.RLS.YO.carry.PL.SBJ.MULT

'The children dragged the suitcases.' [Questionnaire2FT4]

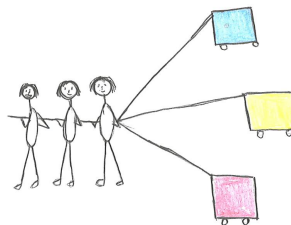
PL SBJ MULT

SITUACION: ESTA TARDE VÍ A 3 NIÑOS  
ARRASTRANDO 3 MALETAS. USARON  
UNA CARRETA Y UNAS CUERDAS.  
10/11/12

SITUACION: ESTA TARDE VÍ A 3 NIÑOS  
ARRASTRANDO 3 MALETAS. LAS ARRASTRABAN  
JUNTOS USANDO CUERDAS.  
7/8/9



(a) CONTEXT A: FALSE



(b) CONTEXT B: FALSE

FIGURE 4. DISTRIBUTION OVER SUBJECT OR OBJECT

We tested the sentence in (29) with different boys carrying different suitcases to obtain simultaneous distribution over both subject and object. Speakers differed in their judgements: older speakers accepted the PL SBJ MULT-form this context while younger speakers showed variable judgements. Example (29) excludes variation in time by specifying a punctual time adverbial *at 2pm today* in the context description.

- (29) Context: At 2pm today, I saw Juan, Isaac and Manuel each pulling one suitcase. PL SBJ MULT

*Xicacaziil quih xiica an iheaacalcoj quih hant*  
 child.PL DEF 3POSS.suitcase.PL DEF down  
*iyootyaxlca.*  
 3;3.RLS.YO.drag.PL.SBJ.MULT

‘The children dragged their suitcases.’ [Questionnaire6FT3] 40+: TRUE, 40-: %

Like PL SBJ MULT-forms of intransitive verbs in (25) above, PL SBJ MULT-forms of transitives can also be licensed by purely temporal distribution: example (29) is acceptable if the children drag the suitcases together several times.

The data examined in this section, summarized in Table 7, suggests that SG SBJ and PL SBJ MULT-forms have different distributive properties: SG SBJ MULT-forms are licensed by distribution over times whereas PL SBJ MULT-forms are licensed by distribution over times or by (simultaneous) distribution over arguments, at least for older speakers.

		SG SBJ MULT	PL SBJ MULT	
			40-	40+
INTR.	dist. over time only	✓	✓	✓
	dist. over ptcp only	✗	%	✓
TRANS.	dist. over time only	✓	✓	✓
	sbj	✗	✗	✗
	dist. over ptcp only {	✗	✗	✗
	obj	✗	✗	✗
	sbj & obj	✗	%	✓

TABLE 7. SUMMARY

In the next section, we look in more detail at the potential sources of the variation in the meaning of PL SBJ MULT-forms observed between younger and older speakers.

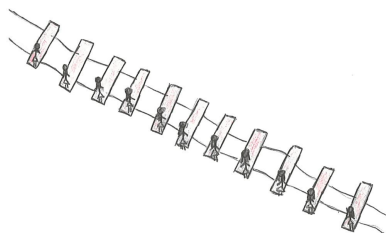
#### 4. MULT-FORMS AND SPEAKER VARIATION

In order to better understand speaker variation observed for PL SBJ MULT-forms we reran the relevant examples, using pictures for all contexts to make spatial configurations and directions of movements more explicit.

We re-elicited the example in (25), repeated in (30), using pictures that specified whether the movement of the women was in the same direction (Figure 5a) or simultaneous but in different directions (Figure 5b). Given the elicitation with the pictures, speakers agreed that the sentences was true in the multi-directional context (Figure 5b) but not in the mono-directional context (Figure 5a).

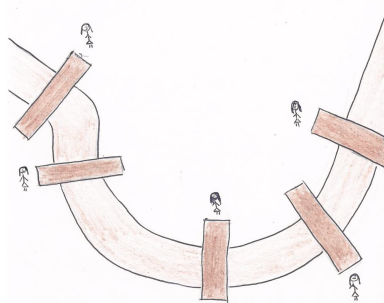
- (30) *Cmajjic quih hant ipzx com imac cöyatooquelam.*  
 woman.PL DEF river DEF 3POSS.middle 3IO.RLS.YO.CROSS.PL.SBJ.MULT  
 ‘The women crossed the river.’ [EDSEI9MAY2019DRPM.ATHF] PL SBJ MULT

SITUACIÓN: LAS MUJERES CRUZARON EL  
 ARROYO AL MISMO TIEMPO,  
 CADA QUIEN EN SU PROPIA TABLA.  
 >>



(a) PICTURE 1: FALSE

SITUACIÓN: LAS MUJERES CRUZARON EL ARROYO  
 CADA UNA USÓ SU PROPIA TABLA.  
 LAS MUJERES ESTABAN EN DIFERENTES  
 ORILLAS.



(b) PICTURE 2: TRUE

FIGURE 5. DIRECTIONALITY AS A PARAMETER OF EVENT INDIVIDUATION

To test contexts with simultaneous events to control for readings with an iteration over time of similar sub-events, we provided a context with movement in different directions with Figure 5b. The two pictures are not minimally different, however: in addition to the difference in direction the events in Figure 5b

are spatially more separate. It is possible that the difference in speaker judgements does not stem from movement in different directions as such but from the fact that events are sufficiently different from each other perceptually to count as separate in Figure 5b while the events depicted in Figure 5a were in the same direction as well as uniformly distributed in space. The exact source of the contrast therefore needs to be tested in further fieldwork.

For the example in (29), repeated in (31), we proposed three pictures distinguishing (i) collective action by Juan, Isaac and Manuel illustrated in Figure 6a, (ii) individual actions with movement in a common direction illustrated in Figure 6c, and (iii) individual actions with movement in different directions illustrated in Figure 6b.

- (31) Context: At 2pm today, I saw Juan, Isaac and Manuel each pulling one suitcase. PL SBJ MULT

*Xicacaziil quih xiica an iheaacalcoj quih hant*  
 child.PL DEF 3POSS.suitcase.PL DEF down  
*iyootyaxlca.*  
 3;3.RLS.YO.drag.PL.SBJ.MULT

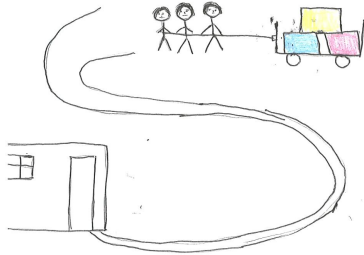
‘The boys dragged their suitcases.’ [Questionnaire2FT4]

With more explicit specification of spatial configuration and movement in the different contexts, the differences in acceptability judgements between speakers disappeared. All speakers agreed that in a context of collective action as in Figure 6a the sentence was false, while all speakers agreed the example was true in the context of individual actions with movement in different directions as in Figure 6b. For individual action without a further distinguishing element between the subevents, speaker judgements varied.

In particular, although the sentence/context pairs were presented in a random order among other such pairs, we noticed an effect of order of presentation (from one elicitation session to the next). When Figure 6a (collective action) was presented before Figure 6c (uniform individual action), the context in Figure 6c tended to be considered appropriate. When Figure 6c (uniform individual action) was presented before Figure 6b (diverse individual action), speakers considered the context Figure 6c to be insufficient. This suggests that MULT-forms include a diversity condition that can be fulfilled by temporal distinctness of the sub-events for SG SBJ and PL SBJ MULT-forms and by events distributed over sub-parts of the plural subject with an additional diversity condition for PL SBJ MULT-forms.

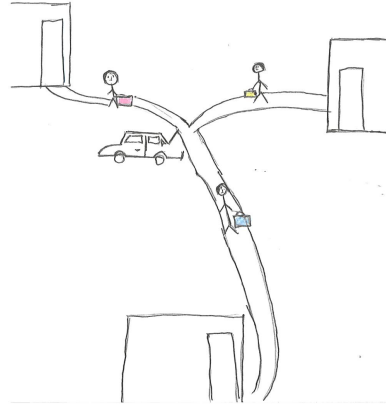
Overall, the results of the second elicitation, summarized in Table 8, support the conclusion that the variation we initially observed resulted from differences between speakers regarding the enrichment to the context we had given them

SITUACIÓN: TRES HOMBRES LLEVARON EL EQUIPAJE DE JOSÉ HASTA SU CASA. USARON UNA CARRETA. 79



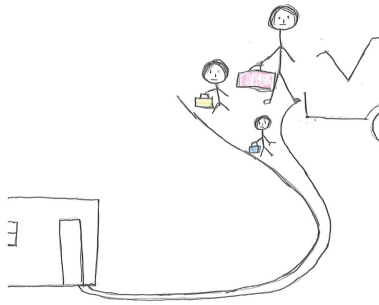
(a) PICTURE 1: FALSE

SITUACIÓN: MARÍA, ANA Y RAQUEL LLEVARON DE SUS MALETAS A SUS CASAS. TRES HOMBRES LLEVARON HERNOSSULO. 80



(b) PICTURE 3: TRUE

SITUACIÓN: TRES HOMBRES LLEVARON JUNTOS EL EQUIPAJE DE JOSÉ HASTA SU CASA. CADA HOMBRE TONÓ UNA MALETA. 78



(c) PICTURE 2: %

FIGURE 6. DISTRIBUTION OVER SUBJECT/OBJECT AND DIRECTIONALITY

which left certain details open to interpretation. The results of our elicitations suggest that while older speakers entertain contexts with events individuated by the agent and events individuated by iteration, younger speakers in the absence of clues to the contrary have a strong preference for iteration contexts with PL SBJ MULT-forms. However, while younger speakers do not seem to consider simultaneous construals spontaneously, when the context makes a simultaneous context with sufficiently distinctive sub-events salient, younger speakers accept simultaneous construals. The results of our elicitations therefore suggest that the difference between speakers is not the range of contexts available for the PL SBJ MULT-forms but a stronger preference for iterative construals in younger speakers.

	SG SBJ MULT	PL SBJ MULT	
		40-	40+
distribution over participants only			
+different directions	n/a	✓	✓
–different directions	n/a	✗	✗
distribution over time only	✓	✓	✓

TABLE 8. SUMMARY

Summarising, the data in this section show that singular and plural subject MULT-forms might seem to lexicalize different pluractional features or different values of the same features: singular subject MULT-forms require distribution over times and plural subject MULT-forms plural subject MULT-forms can be licensed by either distribution over times or distribution over participants. But in fact, these differences are superficial: with a plural subject simultaneous multiply events are readily available with distribution over the plural subject. In contrast, simultaneous multiple events involving the same *singular* subject do not seem to yield sufficiently distinct sub-events to license SG SBJ MULT: speakers do not accept the SG SBJ MULT-form with events of carrying suitcases that are distributed over (material) parts of the singular subject, e.g.e Juan’s hands in 27. As a consequence, the SG SBJ MULT-form is limited to distribution in time only.

## 5. CONCLUSION

Seri verbs have four stem forms, distinguishing neutral and MULT-forms for singular and plural subjects respectively. As there are no unambiguous morphological exponents for the MULT-forms, the structure of the morphological paradigm has to be inferred indirectly from the syntactic and semantic properties of the rele-

vant forms.

In this study we have examined the semantic properties of Seri SG SBJ and PL SBJ MULT-forms. We have shown that the SG SBJ and PL SBJ MULT-forms are both pluractionals: they both require contexts involving an event plurality. However SG SBJ and PL SBJ MULT-forms differ with respect to the distributive dependencies they license: singular subject MULT-forms require distribution over times while plural subject MULT-forms can be licensed by distribution over times or by simultaneous events distributed over a plural argument. Seri SG SBJ and PL SBJ MULT-forms therefore appear to require different distributive dependencies. This contrast however is plausibly due to the conjunction of two independent properties.

Firstly, distribution over plural object arguments is not readily available without simultaneous distribution either in time or over the subject argument. Secondly, the PL SBJ MULT-form is by definition associated to the presence of a plural subject, making interpretations with distribution over the subject argument without temporal distribution possible. It is therefore not clear how the distributive differences can be separated from the presence of the plural subject intrinsic with PL SBJ MULT forms.

We further showed that the speaker variation with respect to the PL SBJ MULT-forms that we observed initially disappears when the spatial configuration associated with different events in the context is made more precise. This suggests that the differences between speakers reflect different preferences for certain types of contexts in the absence of contextual clues. Younger speakers seem to prefer iterative contexts while older speakers more readily entertain contexts with spatial distribution. Consequently, the differences in acceptability judgements cannot be attributed to differences in the range of interpretations of PL SBJ MULT-forms between older and younger speakers, only to differences in their preferences for these interpretations.

This means that these contrasts do not provide an argument to analyse SG SBJ MULT-forms and PL SBJ MULT-forms as expressing event plurality with different distributive conditions, i.e. as instantiating different features. The data discussed in this study therefore support an analysis of the Seri verbal paradigm in terms of two cross-classifying features as in Table 3 assumed in the literature on Seri.

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