

Distributivity in Seri verbs and nouns as cross-categorial pluractionality*

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1. Introduction

Most nouns in Seri, a language isolate spoken in northwestern Mexico (sei) by around 1000 people (INEGI 2020), have distinct singular and plural forms (Moser and Moser 1976, Marlett 1981, 1990, Marlett 2016:313). Number marking is complex, in that there is a great variety of plural exponents, ranging from suffixes and their various allomorphs to stem-internal changes and suppletion, a small selection of which is shown in Table 1. Plural exponents cannot be predicted and must be memorized by speakers.

(1) *Singular and plural noun forms (Moser and Marlett 2010)*

| SINGULAR | PLURAL | |
|----------|------------|-------------|
| zaap | zaap-coj | roadrunner |
| xtaasi | xtaasi-toj | estuary |
| hehe | hehe-t | plant |
| cootzi | cootzi-j | pig |
| santaar | santaar-oj | soldier |
| caatc | caat<j>c | grasshopper |

Possessed nouns constitute a separate subclass, characterized by either an absolute or possessive prefix. They include body part terms (e.g., \sqrt{sla} ‘ear,’ \sqrt{aap} ‘neck’), kinship

*This work has been funded by the Arts & Humanities Research Council (UK) under grant AH/P002471/1 (Seri verbs). Their support is gratefully acknowledged. We thank the Seri speakers for their collaboration and support, especially Gabriel Hoeffler, Genoveva Hoeffler, Teresa Hoeffler, Ana Maria Morales Ortega, Berenice Morales, Imelda Morales, Karella Perales. Special thanks to Debora Perales for her assistance with elicitation. We are also grateful to Robert Henderson, John W. W. Powell, and audiences at AIMM 5 and NELS 52 for their feedback. Abbreviations used in this paper follow Leipzig glossing rules with the following additions CM = compact, DIST = distributive pluractional, EMPH = emphatic, FLX = flexible, INDEF = indefinite, IO = indirect object, MULT = multiple pluractional, POSSED = possessed, RLS = realis, RLYO = realis yo-form, UNSPEC = unspecified, VBLZ = verbalizer, VT = vertical. Seri forms are given in the standard orthography; note that c, qu = /k/, cö, jö, xö = /k^w, x^w, χ^w/, h = /ʔ/, j = /x/, l = /ʎ/, x = /χ/, z = /ʃ/. Long vowels are represented by doubling.

terms (e.g., \sqrt{maz} 'paternal grandmother,' \sqrt{ta} 'mother') and personal items (e.g., \sqrt{taamt} 'sandal,' \sqrt{onam} 'hat') (Marlett 2016:305) (Table 23).¹ Plural marking of possessed nouns draws from the same set of exponents as common nouns (cf. Tables 1 and 2).

(2) *Singular and plural possessed noun forms (Moser and Marlett 2010)*

| SINGULAR | | PLURAL | |
|----------|------------------|------------|----------------------------------|
| iip | its tail | iip-coj | their tails |
| iime | her/his/its home | iim-toj | her/his/its homes; their home(s) |
| yaaco | her/his house | yaacö-t | her/his houses; their house(s) |
| itrooqui | her/his car | itrooqui-j | her/his cars; their car(s) |
| inol | her/his hand | inl-oj | her/his hands; their hands |

But as the glosses suggest, their interpretation has an additional twist: the plurality they refer to can be either that of the possessor or the possessee, provided they both have a feasible interpretation. For instance, in (3)² the form *yaaco* 'his/her house' may only be used if the possessor is singular, whereas *yaacöt* must be used if the possessor or the possessee is plural, as the unacceptability of (3d) illustrates. In these cases, number on the determiner and subject agreement on the verb serve to disambiguate number reference.³

- (3) a. *Ih-yaaco* *cap* *yaacoj.* 'My house is big.'
 1SG-POSSED.house DEF.VT RLYO.be_big
- b. *Ih-yaacö-t* *coi* *yaacöl.* 'My houses are big.'
 1SG-POSSED.house-PL DEF.PL RLYO.be_big.PL
- c. *Ha-yaacö-t* *cap* *yaacoj.* 'Our house is big.'
 1PL-POSSED.house-PL DEF.VT RLYO.be_big
- d. **Ha-yaaco* *cap* *yaacoj.* Int. 'Our house is big.'
 1PL-POSSED.house DEF.VT RLYO.be_big
- e. *Ha-yaacö-t* *coi* *yaacöl.* 'Our houses are big.'
 1PL-POSSED.house-PL DEF.PL RLYO.be_big.PL

On the face of it this looks like an example of what elsewhere has been discussed under the rubric of 'omnivorous number/agreement' (see Blix (2021) for a recent treatment): although possessor and possessee can be understood as separate arguments, plural morphology is indifferent to that distinction, and happily marks plurality of either one. In effect, there seems to be plural agreement with *both* arguments, but it is channelled through a single morphological slot. We suggest however that this is not what is going on.

1. Non-possessed nouns use forms of the verb \sqrt{yaa} 'own, possess' to express possession (Marlett 2016:394)

2. Example identifier: EDSEI8MAY2019DRPM.LKPH.AMMO.KIKA, elicitation

3. As a rule, prefixal person exponents do not indicate number in Seri, but there is one exception: possessed noun stems beginning with the palatal glide *y* have special allomorphs of the possessive prefixes for first and second person when the possessor is plural. This is why the stem $\sqrt{yaacö}$ takes first person prefixes—*hi-* (with allomorph *-(ih)*) and *ha-*—marking possessor number in (i). The second person prefix is *mi-* (with allomorph *(i)n-*), but *ma-* in the plural before a *y* initial root. The third person prefix is *a-* for kinship terms and *i-* for other possessed nouns (regardless of number). See (Marlett 2016:318, 320) for more details.

Our fieldwork has found that the plural form of possessed nouns can also be used in cases like (4)⁴. Crucially, both possessor and possessee are singular. What thus do the plural exponents mark? We suggest that the answer lies in the meaning of these forms.

- (4) a. *Ih-yam-coj* *quih* *xojizi*. ‘My esophagus hurts all over.’
 1SG-POSSED.esophagus-PL DEF.FLX EMPH.ache
- b. *H-iipni-c* *quij* *xojizi*. ‘My forehead hurts all over.’
 1SG-POSSED.forehead-PL DET.CM EMPH.ache

In these cases, plural marking appears to indicate distributivity internal to the possessee (‘all over’). Interestingly, Seri verbs have a pluractional form which imposes precisely such a requirement (section 2). We propose that plural possessed nouns in Seri are better described as realizing a pluractional feature, one that is shared by both nouns and verbs. In the verbal domain, it requires distribution of a plurality of events over certain participant referents of that event, and in the nominal domain, it requires distribution of a plurality of possessive relations over possessor and/or possessee referents, thus mimicking the effects of possessor/possessee number agreement in certain cases, and also deriving the interpretation of the problematic cases in (4). A compositional formal analysis is presented in section 3. As we show in section 4, this analysis finds support in parallels at the morphological and semantic levels. Section 5 concludes and presents outstanding issues for further research.

2. Verbal pluractionality

Pluractional forms in Seri⁵ are part of a larger constellation of features within the Seri verbal system. Verbal morphology typically distinguishes singular and plural subject, which intersects with pluractionality, which is subdivided into two features, the multiple and the distributive (Pasquereau et al. To appear).⁶

The multiple type of pluractionality requires a plurality of eventualities that are temporally distributed, and is distinguished with both singular and plural subjects. Thus in (5) and (6), the MULT form (examples b) is false in a collective context where an event of running happens once but true if it happens several times. Of course, other types of distribution are possible in addition to temporal distribution.

- (5) CONTEXT 1: Juan ran a 100m race once. a: TRUE, b: FALSE⁷
 CONTEXT 2: Juan ran a 100m race several times. a: TRUE, b: TRUE
- a. *Moxima Juan quih yopanzx*. ‘Yesterday, Juan ran.’
 yesterday Juan DEF.FLX RLYO.run

4. Example identifier: EDSEI20ABR2022DRPM.ATHF.GHF.LKPH, elicitation

5. In the verbal domain, these forms have been previously described as ‘plural/multiple action,’ ‘plural object’ (Moser 1961, Marlett 1981, 1990), or ‘imperfective’ (Marlett 2016), see Cabredo Hofherr et al. (2018) for more information.

6. While most verbs make these distinctions, some verbs only express a subset of these feature values. For instance, the verb $\sqrt{\text{panzx}}$ ‘run’ does not.

- b. *Moxima Juan quih yopanozxim.* 'Yesterday, Juan ran.'
 yesterday Juan DEF.FLX RLYO.run.MULT
 'Yesterday, Juan ran.'

(6) CONTEXT 1: A group of children ran together in a 100m race against a group of adults once. a: TRUE, b: FALSE

CONTEXT 2: A group of children ran together in a 100m race against a group of adults several times. a: TRUE, b: TRUE

- a. *Moxima xicaquiziil coi yopancojc.* 'Yesterday, the children ran.'
 yesterday child.PL DEF.PL RLYO.run.PL
- b. *Moxima xicaquiziil coi yopancoxlca.* 'Yesterday, the children ran.'
 yesterday child.PL DEF.PL RLYO.run.PL

The distributive type of pluractionality requires a plurality of events that are distributed over participants (denoted by an internal argument). This type is contrastively marked only with singular subject forms. For example, the sentence in (7a) containing the singular subject neutral form *hant iyootox* 'he dragged, pulled it/them' is true in contexts C, D, and E, that is it is true if Juan dragged the suitcases, regardless of the number of dragging events or of the way the suitcases are arranged. However, the same sentence with the singular subject MULT form *hant iyootoxim* is only true in context C, since it's the only context in which there are several events of dragging (one suitcase) that are distributed temporally. The same sentence with the singular subject DIST form *hant iyootyax* is true in both contexts C and D because these are the only contexts in which there are several events of dragging that are distributed over the referent of an internal argument, here the object. The DIST form is not licensed in context E because there is only one event of dragging, see (Pasquereau and Cabredo Hofherr To appear) for further details.

(7) CONTEXT 3: Juan has three suitcases. He doesn't have rope or a cart and no one can help him. He dragged them one after the other.⁸

CONTEXT 4: Juan has three suitcases. He tied a piece of rope to each one and dragged them at the same time.

CONTEXT 5: Juan has three suitcases. He put the suitcases on a cart and dragged them at the same time.

- a. *Juan quih ʘxiica an iqueaacalca ʘ coi hant i-yootox.*
 Juan DEF.FLX suitcases DEF.PL down 3>3-RLYO.extend.
 Juan dragged the suitcases. Context 3: true, Context 4: true, Context 5: true

7. Example identifier: AFT5, elicitation, also in (Pasquereau and Cabredo Hofherr 2020:40).

8. Example identifier: Questionnaire2FT5, elicitation, also in (Pasquereau and Cabredo Hofherr To appear). The phrase for 'suitcases' is analyzable as 'thing.PL 3POSS.in 3POSS[OBL.NMLZ]UNSPEC.SBJ.store_personal belongings,' that is 'things that one stores personal belongings in.'

- b. *Juan quih* \lfloor *xiica an iqueaactalca* \rfloor *coi* *hant i-yootoxim*.
 Juan DEF.FLX suitcases DEF.PL down 3>3-RLYO.extend.MULT
 Juan dragged the suitcases. Context 3: true, Context 4: false, Context 5: false
- c. *Juan quih* \lfloor *xiica an iqueaactalca* \rfloor *coi* *hant i-yootyax*.
 Juan DEF.FLX suitcases DEF.PL down 3>3-RLYO.extend.DIST
 Juan dragged the suitcases. Context 3: true, Context 4: true, Context 5: false

A notable property of the system is the polyfunctionality of all the morphological exponents of plurality, broadly construed. Subject plurality and pluractionality (both multiple and distributive) largely draw from the same set of morphological markers, so that it is typically impossible to identify the meaning of an isolated form solely on the basis of its morphology; this only becomes apparent within the context of individual verbal paradigms (Moser 1961, Marlett 2016, Baerman 2016).⁹ This complexity is compounded by the great allomorphic variety (a small hint of which is given in Table 1), which cannot be predicted and must be memorized by speakers.

To summarize, both types of pluractionality require a plurality of eventualities but they differ in how these should be individuated: MULT requires (at least) temporal distribution whereas DIST requires (at least) distribution over the referent of an internal argument of the verb. We refer the interested reader to (Cabredo Hofherr et al. 2018, Pasquereau and Cabredo Hofherr 2020, Pasquereau and Cabredo Hofherr To appear) for more detail.

3. Analysis: pluractionality across nouns and verbs

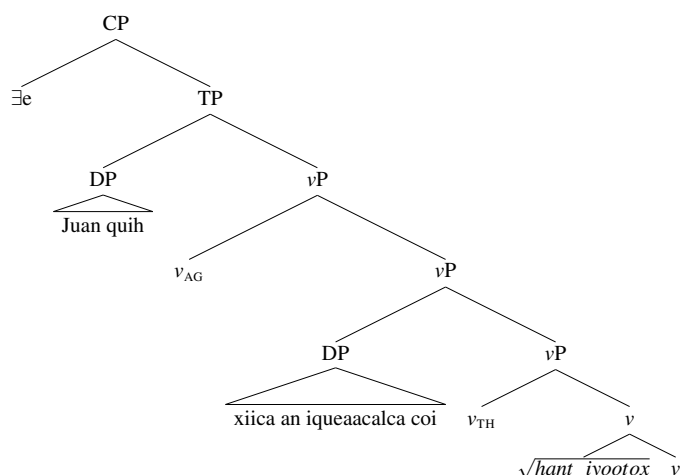
We propose that the plural possessed nouns in Table 2, (1) and (2) are in fact the realization of a singular noun modified by the DIST pluractional. The intuition is that just like DIST requires a plurality of dragging eventualities when it combines with *hant iyootox* ‘he/she drags it/them’ in (5c), it requires a plurality of having states when it combines with *yaaco* ‘his/her house’ in (1b, d, e). The DIST morpheme also requires that this plurality of events covary with a plurality of individual referents of an inner argument (i.e., non-transitive subject, see Pasquereau and Cabredo Hofherr (To appear)). In the case of *hant iyootyax* in (5c) this is achieved by having eventualities of dragging covarying with suitcase referents. In the case of *yaacöt* (1) there are two possibilities: eventualities of having (a house) can covary with possessor referents or with possessee/house referents. This analysis also extends nicely to the seemingly problematic cases in (2), thus providing a unified analysis of plural possessed nouns in Seri. We present below the details of how such an analysis can be implemented.

3.1 Assumptions

We assume a Seri sentence like (5a) has the LF structure in (8a) (ignoring such distinctions as tense and aspect among others), and the corresponding truth-conditions in (8b).

9. The glosses in this paper thus reflect the value of an inflected form within a lexeme’s paradigm, and not the full range of possible meanings in the lexicon as a whole.

(8) a.



b. $\llbracket \text{CP} \rrbracket = \exists e. * \text{drag}(e) \ \& \ * \text{agent}(e) = \text{John} \ \& \ * \text{theme}(e) = \sigma_x. * \text{suitcase}(x) \ \& \ |x| > 1$

We assume a neo-Davidsonian treatment of verbs as properties of eventualities (states or events) (Davidson 1967, Carlson 1984) which are further connected to their arguments/adjuncts via thematic roles. Thus, the verb root $\sqrt{\text{hant iyootox}}$ ‘drag’¹⁰ denotes the set of eventualities of dragging (9) and is categorized as a verb by the head v , which for our purposes denotes an identity function.¹¹

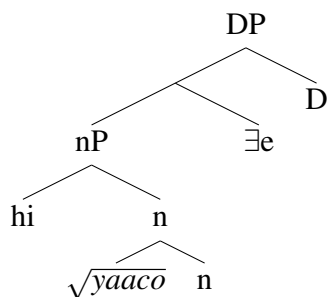
(9) $\llbracket \sqrt{\text{hant iyootox}} \rrbracket = \llbracket [v \sqrt{\text{hant iyootox}}] \rrbracket = \lambda e_s. * \text{drag}(e)$

The arguments of this verb are introduced via functional heads as in (10), which combine with predicates of eventualities via Event Identification (Kratzer 1996).

(10) a. $\llbracket v_{\text{AG}} \rrbracket = \lambda x_e. \lambda e_s. * \text{agent}(e) = x$ b. $\llbracket v_{\text{TH}} \rrbracket = \lambda x_e. \lambda e_s. * \text{theme}(e) = x$

We assume possessed nouns have the morphosyntax in (11). Based on Myler (2016), the root is categorized as a noun and combines with its possessor in [Spec, nP], and the nP is the complement of a Determiner. The head n is interpreted as a type-neutral identity function which takes the denotation of its sister node and returns the same denotation. Furthermore we follow Larson (1998:157) and assume that there is an eventuality quantifier above NP which binds the eventuality variable in the denotation of the possessed noun root.

(11)



10. The complex verb *hant iyootox* is composed of the verb *iyootox* ‘extend, stretch out’ and the noun *hant* ‘land.’ The analysis glosses over this morphosyntactic specificity as it has no bearing on our claim.

11. In DM, the categorizer v specifies whether the eventuality is a state, an event, or cause. For our purposes, these refinements are irrelevant.

Possessed noun roots express inalienable possession, that is a relation between an eventuality, a possessor and a possessee as in (12) (Myler 2016).

$$(12) \quad \llbracket \sqrt{y\acute{a}a\acute{c}o} \rrbracket = \lambda x_e \lambda y_e \lambda e_s. *house(y) \ \& \ *have(e) \ \& \ *theme(e)=y \ \& \ *holder(e)=x$$

We assume Larson's eventuality quantifier above NP and TP has the denotation of the eventuality quantifier in Zimmermann (2007).

$$(13) \quad \llbracket \exists e \rrbracket = \lambda P_{\langle st \rangle} \exists e_s. P(e)$$

Regarding Seri definite DPs, although nothing hinges on the choice of this particular analysis, we adopt an analysis of definite determiners in terms of maximality (14) from Cable (2014), to which we add a cardinality requirement to distinguish singular from plural definite determiners.¹²

$$(14) \quad \begin{array}{l} \text{a.} \quad \llbracket cap \rrbracket = \lambda P_{\langle e,t \rangle} \cdot \sigma_x. P(x) \ \& \ |x|=1 \ ; \ \llbracket coi \rrbracket = \lambda P_{\langle e,t \rangle} \cdot \sigma_x. P(x) \ \& \ |x| > 1 \\ \text{b.} \quad \text{Definition of } \sigma_x \\ \quad \text{(i) } \sigma_x. P(x) = \text{the entity } \alpha \text{ such that } \alpha \in * \{x : P(x)\} \text{ and if } \gamma \in * \{x : P(x)\}, \text{ then } \\ \quad \gamma \leq \alpha \\ \quad \text{(ii) } \textit{Definition of } *P \\ \quad \text{If } P \text{ is a set, then } *P \text{ is the smallest set such that (i) } P \subseteq *P, \text{ and (ii) if } \alpha \text{ and } \beta \in \\ \quad *P, \text{ then } \alpha + \beta \in *P \end{array}$$

Last but not least, we assume the DIST type of pluractionality in Seri has the denotation in (15) based on Kuhn and Aristodemo (2017): DIST denotes the set of eventualities having at least two proper subparts with different thematic participants, where $\theta(e)$ is the tuple of these participants: $\langle agent(e), theme(e), \dots \rangle$.

$$(15) \quad \llbracket DIST \rrbracket = \lambda e_s. \exists e', e'' \prec e \ [\theta(e') \neq \theta(e'')]$$

3.2 Composing pluractionality with verbs

Given our assumptions in section 3.1, a DIST pluractional sentence like (5c) has the LF structure in (16a): the verb *hant iyootox* combines with PLUR via Predicate Modification (Heim and Kratzer 1998), and the rest of the composition proceeds via other standardly assumed composition rules (Event Identification and Function Application (Kratzer 1996)) to yield the truth-conditions in (16b).

12. Singular definite articles also specify the posture or shape of the referent of their complement, but we leave this out of the current analysis.

- (16) a. $[_{CP} \exists e [_{TP} [_{DP} \text{Juan quih}] [_{vP} v_{AG} [_{vP} [_{DP} \text{xiica an iqueaacalca coi}] [_{vP} v_{TH} [v [v \sqrt{\text{hant iyootox}} v] \text{DIST}]]]]]]]]$
 b. $[[CP]] = \exists e. *drag(e) \ \& \ \exists e', e'' \prec e [\theta(e') \neq \theta(e'')] \ \& \ *agent(e) = \text{John} \ \& \ *theme(e) = \sigma_x. \ *suitcase(x) \ \& \ |x| > 1$

Informally, our syntactic and semantic assumptions predict that the sentence in (16a) is true if there is a (plural) event of dragging the suitcases by Juan, e , with at least two sub-events differing in at least one thematic participant. Since the only thematic participant that is not singular is the theme, the condition of thematic variation amounts to the constraint that $\exists e', e'' \prec e [theme(e') \neq theme(e'')]$, which captures the contrast in (5) according to which DIST is licensed only if there is more than one event of dragging and these events covary with suitcase referents.

3.3 Composing pluractionality with nouns

We start with explaining why the same root form must be used when the possessor or the possessee is plural. Our claim is that so-called plural roots are in fact DIST pluractional. Accordingly, the pluractional form *yaacöt* has the LF in (18a) with the interpretation in (18b): a relation between two individuals—a possessor and a possessee—and a state of possession. The categorizing head n is interpreted as an identity function (Wood 2015, Myler 2016), and DIST composes with n via Event Identification' (Kratzer 1996).¹³

- (17) a. LF structure of possessive noun root modified by DIST, e.g., *yaacöt*
 $[n [n \sqrt{\text{yaaco}} n] \text{DIST}]$
 b. $[[nP]] = \lambda x \lambda y \lambda e. *house(x) \ \& \ *have(e) \ \& \ *theme(e) = x \ \& \ *holder(e) = y \ \& \ \exists e', e'' \prec e. [\theta(e') \neq \theta(e'')]$

The pluractional morpheme has the effect of requiring a plurality of subeventualities of having (at least 2) that differ in their participant tuples. Since the eventuality of having in (17) has a holder and a theme, the plurality requirement introduced by the pluractional morpheme can be satisfied by having a plurality of having states that covary with their theme referents or their holder referents. This is why having a plural possessee (i.e., a theme of the state of having) or possessor (i.e., a holder of the state of having) licences the form *yaacöt* 'his/her/their houses.' Disambiguation is achieved only further on, for example, by merging a singular or plural determiner. We illustrate each specific case below.

We assume the full possessive DP in Seri has the LF in (18): the pluractional n composes with the person prefix via Function Application, the event quantifier composes with

13. We assume a version of the rule of Event Identification in (Kratzer 1996) that conjoins a predicate of eventualities and a function of type $\langle e, \langle e, \langle s, t \rangle \rangle \rangle$ as in (i).

(i) Event identification': $f_{\langle e, \langle e, \langle s, t \rangle \rangle \rangle} \ g_{\langle s, t \rangle} \rightarrow \lambda x_e \lambda y_e \lambda e_s [f_{\langle e, \langle e, \langle s, t \rangle \rangle \rangle}(x)(y)(e) \ \& \ g(e)]$

An alternative solution to the type mismatch of DIST and possessed nouns would be to give possessed nouns another type/logical form, perhaps by making them completely parallel to verbs, as predicates of states.

nP via Function Composition (Wood 2015, Myler 2016), and finally with the definite determiner via Function Application.

- (18) a. LF structure of distributive possessive noun, e.g., *ihyaacöt coi* ‘my houses’ in (1)
 $[_{DP} [[_{nP} \text{hi} [_{n} [_{n} \sqrt{yaacö} n] \text{DIST}]] \exists e] \text{coi}]$
 b. $[[DP]] = \sigma_x \exists e. *house(x) \ \& \ *have(e) \ \& \ *theme(e)=x \ \& \ *holder(e)=speaker \ \& \ \exists e', e'' \prec e. [\theta(e') \neq \theta(e'')] \ \& \ |x| > 1$

The morpheme DIST requires a non-atomic state of having, *e*, whose (plural) theme satisfies the property *house* and whose holder refers to the speaker. Since the holder of *e* is singular, the only way for at least two states of house-having to be thematically individuated is if they covary with house referents of the theme of *e* (by cumulativity of theta relations), thus yielding the SG possessor PL possessee interpretation described in Marlett (2016).

If the possessor/holder is not restricted to being singular, the plurality requirement introduced by the pluractional morpheme is already satisfied since the plurality of holder referents is enough to thematically individuate a plurality of states of having. The possessee/theme is therefore free to have a singular (19) or a plural (20) referent.

- (19) a. LF structure of *hayaacöt cap* ‘our house’ in (1c)
 $[_{DP} [[_{nP} \text{ha} [_{n'} [_{n} \sqrt{yaacö} n] \text{DIST}]] \exists e] \text{cap}]$
 b. $[[DP]] = \sigma_x \exists e. *house(x) \ \& \ *have(e) \ \& \ *theme(e)=x \ \& \ *holder(e)=speaker+ \ \& \ \exists e', e'' \prec e. [\theta(e') \neq \theta(e'')] \ \& \ |x|=1$
 (20) a. LF structure of *hayaacöt coi* ‘our houses’ in (1e)
 $[_{DP} [[_{nP} \text{ha} [_{n'} [_{n} \sqrt{yaacö} n] \text{DIST}]] \exists e] \text{coi}]$
 b. $[[DP]] = \sigma_x \exists e. *house(x) \ \& \ *have(e) \ \& \ *theme(e)=x \ \& \ *holder(e)=speaker+ \ \& \ \exists e', e'' \prec e. [\theta(e') \neq \theta(e'')] \ \& \ |x| > 1$

Crucially our analysis derives the interpretation of the puzzling cases in (2). For instance, under our analysis the DP *ihyamcoj quih* is assumed to have the LF in (21a) and the denotation in (21b).

- (21) a. LF structure of *ihyamcoj quih* ‘my esophagus’ in (2a)
 $[_{DP} [[_{nP} \text{hi} [_{n'} [_{n} \sqrt{yam} n] \text{DIST}]] \exists e] \text{quih}]$
 b. $[[DP]] = \sigma_x \exists e. *esophagus(x) \ \& \ *have(e) \ \& \ *theme(e)=x \ \& \ *holder(e)=speaker \ \& \ \exists e', e'' \prec e. [\theta(e') \neq \theta(e'')] \ \& \ |x|=1$

Here too pluractionality has the effect of requiring there to be a non-atomic state of having, *e*, whose (plural) theme satisfies the property *esophagus* and whose holder refers to the speaker. Since the holder of *e* is singular, the thematic variation requirement boils down to the requirement that $\exists e', e'' \prec e [theme(e') \neq theme(e'')]$. Since the speaker does not have more than one esophagus, the covariation requirement is satisfied by forcing the individuation of esophagus parts covarying with substates of having.

As the subject of the verb *xojizi* ‘aches’ in (22a), the DP in (20b) composes with vP via Function Application, which yields the truth-conditions in (22b).

- (22) a. $[_{CP} \exists e [_{TP} [_{DP} \textit{ihyamcoj quih}] [_{v} v_{TH} [_{v} \sqrt{xojizi} v]]]]]$
 b. $\exists e. *ache(e) \ \& \ *theme(e)=\sigma_x \exists e'. *esophagus(x) \ \& \ *have(e') \ \& \ *theme(e')=x \ \& \ *holder(e')=speaker \ \& \ \exists e'', e''' \prec e'. [\theta(e'') \neq \theta(e''')] \ \& \ |x|=1$

Pluractionality in the DP *ihyamcoj quih* thus forces a ‘partitioning’ of the speaker’s esophagus into esophagus parts, and the whole esophagus is in a state of aching. Therefore the meaning ‘hurting all over’ comes from the state of *aching* having as a theme an entity of which various (at least two) parts must be individuatable.

4. Parallels between plural possessed nouns and pluractional verbs

If the same morpheme that modifies verbs also modifies (possessed) nouns, we would expect there to be parallels between DIST verbs and DIST nouns. In the next section, we show that this is indeed the case: at the level of exponents, meaning, and paradigms.

4.1 Morphological parallels between nouns and verbs

Our claim that the same meaning, pluractionality, is expressed across nouns and verbs finds support in the fact that the same exponents are used across nouns and verbs to encode number distinctions. Plural marking on possessed nouns is not distinct from plural marking in the verbal system, drawing from the set of exponents used for both subject number and pluractionality. Compare the (possessed) noun paradigms with the verbal paradigm in Table 23.¹⁴ Note that the exponents that mark plural in the noun paradigm express both subject number and pluractionality in the verbal system.

(23) *Plural marking in nominal and verbal paradigms (Moser and Marlett 2010)*

| SINGULAR | PLURAL | | Verb stem | NUMBER |
|----------|--------------|--------------------|------------------|-------------|
| yaxnacj | yaxnacl-c | (bird’s) breast | -itapaainl-c | SG SBJ MULT |
| iip | iip-coj | its tail | -itapaainal-coj | PL SBJ |
| ihaasim | ihaasam-olca | (arrow’s) feathers | -itapaainal-olca | PL SBJ MULT |

4.2 Interpretive parallels between possessed nouns and verbs

The DIST type of pluractionality requires a plurality of events distributed over participants as shown above where the plurality of dragging events is distributed over the referent of a plural object. When DIST occurs on a verb whose internal argument is grammatically singular as in (24), a plurality of parts of this referent is constructed such that they covary

14. Verb forms in Table 23 are stripped of their inflectional prefixes, which mark properties such as TAM and person agreement. And although the table shows possessed nouns, recall that the plural exponents do not differ from those of non-possessed nouns.

with burning events. In (24)¹⁵, DIST forces distribution of a plurality of states of being burnt over a plurality of bread parts (Pasquereau and Cabredo Hofherr To appear).

- (24) a. *Siimet quih tazo yital-c.*
bread DEF.FLX one RLYO.burn-DIST
'One bread is cooked (i.e., burnt here and there).'
- b. $[_{CP} \exists e [_{TP} [_{DP} \text{siimet quih tazo}] [_{VP} \nu_{AG} [_{V} [_{v} \text{yitaj } \nu] \text{DIST}]]]]]$
- c. $[[\text{CP}]=\exists x. *bread(x) \ \& \ |x|=1 \ \& \ \exists e \ *burn(e) \ \& \ \exists e', e'' \prec_e [\theta(e') \neq \theta(e'')] \ \& \ *theme(e)=x]$

Informally, our syntactic and semantic assumptions predict that the sentence in (24a) is true if there is a (plural) event of burning, e , with at least two sub-events differing in at least one thematic participant, and (ii) the theme of e is a bread entity of cardinality 1. Since the only thematic participant in (24c) is the theme, the condition of thematic variation amounts to the constraint that $\exists e', e'' \prec_e [theme(e') \neq theme(e'')]$, which produces the effect in (2b) that subparts of the bread (by cumulativity of theta relations Krifka 1992) are burnt. Interestingly, this is exactly parallel to the effect pluractionality has on the initially puzzling possessed noun examples in (4) (see our analysis in (20)). Alongside this, the DIST form may serve, with some verbal lexemes at least, as a plural subject agreement form (25)¹⁶.

- (25) *Siimet coi yital-c.* 'The breads have burned.'
bread DEF.PL RLYO.burn-DIST

This parallels the dual function of plural marking—plural possessee or plural possessor—in possessed nouns, suggesting the paradigm structure in Table 26.

- (26) *Paradigmatic comparison of verbs and possessed nouns (Moser and Marlett 2010)*

| | | | DIST |
|-------------|-------|---------------|---|
| Verbs | yitaj | it is burnt | yitalc it is burnt here and there; they are burnt |
| Poss. Nouns | yaaco | her/his house | yaacöt her/his houses; their house |

4.3 Derivational relationship between possessed nouns and verbs

The morphological and semantic parallels between nouns and verbs is even more concretely manifested in derivational relationships. Possessed nouns can be transposed into verbs through the addition of verbal inflectional prefixes (Marlett 2016:498), as in (27), derived from *i-xaaza* '3-POSSESSOR.arrow'.

- (27) *In-t-cm-i-xaaza?* 'Don't you have an arrow?' (Moser and Marlett 2010:540)
2-RLT-NEG-VBLZ-arrow

15. Example identifier: EDSEI30OCT2019DRPM.ATHF.AMMO.GHF, spontaneous

16. Example identifier: EDSEI16NOV2019DRPM.GH.GHF.LKPH.ATHF, spontaneous

Typical meanings of such verbs are along the lines of 'have X,' but frequently idiomatic uses develop, as with *-asleepec* 'delouse another person's head,' derived from *isleepec* 'area behind a person's ear.' Crucially, such verbs retain the plural marking morphology of their base nouns, along with all its allomorphy, further suggesting that number categories in Seri are shared across word classes.¹⁷ Thus, a morphologically plural verb form like *-yaacö-t* 'have house' will have the same range of interpretations as the corresponding noun, but being a verb, there should be no hesitation about using the term *pluractional*. This strongly suggests we are dealing with the same feature, shared across verbs and nouns.

5. Conclusion

Possessed nouns in Seri (kinship terms, body part terms, and terms for a few personal items) have typically been described as reflecting the number of the possessee or the possessor: when both are singular, a singular form is used, but if the possessee or the possessor (or both) is plural, a plural form is used. A problem for such a description is posed by examples where both possessor and possessee are singular but a plural form is used all the same, albeit with an interpretation that seems to involve distribution over parts of the possessee. In this paper, we claim that these seemingly problematic cases actually reveal the true meaning of so-called plural possessed nouns. But to see it, one needs to be aware of the number system of verbs: verbs express pluractionality, and in particular one kind of pluractionality which we called DIST following (Pasquereau and Cabredo Hofherr To appear), which requires distribution over (parts of) participants. We claim that it is the same pluractional morpheme, DIST, that combines with verbs and with possessed nouns. This not only allows us to explain away the problem posed by plural forms that are used when no plural possessor or possessee is present, but it also explains why in the other cases the same form is used when the possessor or possessee or both is plural. Such an analysis is further supported by parallels between verbs and nouns at different levels of analysis. We leave to further research the task of explaining why the singular form (i.e., non pluractional form in our analysis) is not possible when a plural possessee or possessor is present.

Our proposal that pluractionality modifies both verbs and possessed nouns in Seri raises a number of questions that future research should address. First, if it is indeed the case that the same pluractional morpheme DIST applies to both nouns and verbs, why is it the case that DIST is optional with verbs but seems obligatory with nouns? And relatedly, how do non-DIST nouns get their singular possessor singular possessee interpretation? Second, do non-possessed nouns have pluractional forms? For now, our analysis crucially capitalizes on the claim that possessed nouns have an event variable in their denotation, whereas

17. One could think that the derivation works in the other direction, namely that possessed nouns are really nominalized verbs, as is the case with kinship terms in Quechan (Halpern 1942). In that case possessed nouns would not be evidence of inherently cross-categorical pluractionality; rather, they would simply illustrate the importation of verbal pluractionality into the nominal system. But this would introduce unnecessary complications into the analysis. First, because Seri does have a productive process of deverbal nominalization, characterized by distinct morphological markers (Marlett 2016: Chapter 14), which are not found with the core class of possessed nouns. Second, idiomatic uses found in denominal verbs are not imported back into the nominal system, as far as we know, which would have been evidence for verb-to-noun conversion.

non-possessed nouns do not. Accordingly, the answer to this question could be that only possessed nouns have a pluractional form because only they have an event variable. But claims have been made that in fact all nouns involve an eventuality variable (e.g., Larson 1998, Parsons 1990). Further research should therefore examine the claim made in this paper within the context of the whole range of Seri nouns, not just possessed nouns, and of the claim that all nouns have an eventuality variable. Third, some possessed nouns have an additional plural form used to indicate plurality of the possessor (*yanopj* ‘her/his hand,’ *yanopl-c* ‘her/his hands,’ *yanopl-coj* ‘their hands’). Arguably, the first plural form has the same ambiguity as the examples discussed above, and receives its restricted interpretation (plurality just of the possessee) due to paradigmatic pressure from this second plural form. But how does this second plural form get its interpretation? Does it explicitly encode plural possessors? (Note that these second plural forms are drawn from the common stock of plural exponents, so there is nothing in the form itself that would signal this.) Or is it the by-product of a scalar interpretation of plurality, which aspects of the morphological paradigm suggest (Baerman 2016)?

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