

Boundaries, Phases and Interfaces

Case studies in honor of Violeta Demonte

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A note on the syntax of possession in Paraguayan Guaraní

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This article shows that the pronominal system of Paraguayan Guaraní provides evidence that 3P (null) possessor pronouns behave differently from 1P and 2P (overt) possessor pronouns and argues that this difference can be captured by a conjunction of hypotheses, namely, that the 3P possessor pronoun in Paraguayan Guaraní is negatively specified for Person feature and that its syntax is crucially different from that of 1P and 2P possessor pronouns. The null possessor pronoun is an *nP* (not a DP) that receives its interpretation via local binding. We furthermore argue that all inalienable possessor pronouns in Paraguayan Guaraní originate as an *nP* and that 1P and 2P pronouns must *sideward-merge* with a D and then merge as specifiers of higher heads (either in the nominal or verbal domain) to be syntactically realized as full DPs. We extend the analysis proposed for inalienable possessors to a certain class of transitive verbs (known as *triforme* verbs) as well as to nominal possessor constructions.

Keywords: triforme nouns and verbs; inalienable possessors; Vergnaud's Conjecture (VC); sideward-merge; *nP* predicates vs. DP referential arguments; +participant pronouns vs. non-participant pronouns

1. Introduction

In a well-known paper, Benveniste (1971) proposed that 1P and 2P pronouns have a different morpho-syntactic status than 3P pronouns. While the former (to which we refer as +(Speech) Part(icipant) pronouns) are specified for a person feature, the 3P pronouns are not. We do not exactly adhere to this position because 3P pronouns may also enter into agreement relations with functional categories, but we do recognize that only 1P and 2P pronouns are *positively specified for person*, as proposed by Nevins (2007):

- (A) 1P and 2P are specified as +Participant, with \pm Author feature distinguishing between the two. On the other hand, 3P is specified as -Participant, -Author.

Déchaine & Wiltschko (2002) (D&W) furthermore argued that the +Part pronouns may have a different syntax than the 3P pronoun. While the former are systematically

full (referential) DPs, the 3P may be a smaller syntactic category – what they call a *phi*-P – that functions as a variable.

In the same vein, we will argue here that weak 3P pronouns in Paraguayan Guaraní, namely inalienable possessors and other internal arguments of the noun (referred to here as Poss arguments) are *n*Ps, and not DPs. This proposal can be made compatible with (A) if we assume that only person features that are positively specified *must* be projected in syntax because these, we claim, are interpretable features. The 3P, being negatively specified for person values, *may or may not* be projected in the syntax. We assume that person features, when projected, are located on D. In other words, DPs are specified for person, but not *n*Ps. The latter may be specified for number (and possibly gender, though gender is absent in Paraguayan Guaraní) but not for person. We argue that 3P weak (possessor) pronouns in Paraguayan Guaraní do not project person features: they are *n*Ps (and not DPs). For this reason, they are dependent on the syntactic context for their interpretation, i.e. they function as bound variables. It follows that they do not directly enter into a person-agreement relation with a probe, only indirectly via their binder. As we will show, this allows us to give a more principled explanation for the very productive class of nouns known as *triformes* in Paraguayan Guaraní (*triformes* are roots whose initial consonant varies according to the grammatical context in which they appear). It also allows us to unify the morpho-syntactic analysis of *triforme* nouns and *triforme* verbs with that of *triforme* predicate nominals (including those traditionally analyzed as adjectives), all of them with the syntax of inalienable possession.¹ We show that the same analysis can be extended to (*biforme*) oblique pronouns.

2. Triforme nouns and the +Part vs. 3P distinction

Paraguayan Guaraní has a class of nouns known as *triforme* because they have three forms, with distinct initial segments depending on the grammatical context. We see that in contexts of +Part pronominal Possessors, the noun is *r*-initial and in contexts of –Part pronominal Possessors, the noun is *h*-initial. The latter contrasts with regular inalienable nouns, in which the 3P Possessor pronoun is marked with the *i*-prefix; e.g. *i.po* ‘his hand’. Importantly, individual-denoting *triforme* nouns in Paraguayan Guaraní (there are also event-denoting *triforme* nouns, as we will see in Section 3) are systematically inalienable nouns, intrinsically (as in the case of body parts) or by extension (as in the case of ‘house’).²

1. On the grammar of possession in Paraguayan Guaraní within a functionalist/cognitive framework, see Velazquez-Castillo (1996).

2. Among *triforme* nouns, we find core inalienable nouns denoting body parts like those in (i) and inalienable relations (ii), as well as what can be considered inalienable nouns by extension as in (iii).

(1) *tova* ‘face’ (t-initial in nominal contexts)

- a. **che** rova
1POSS face ‘my face’
- b. **nde** rova
2POSS face ‘your face’
- c. **hova**
3POSS.face ‘his/her face’

Following the proposal put forth by Vergnaud & Zubizarreta (1992), Barker (2008), and others, Zubizarreta & Pancheva (2017) (Z&P from now on) assume that inalienable possessors are generated in Spec of NP (or *nP* in more current terms), unlike alienable possessors which are generated in Spec of D_{POS} . The Poss argument is licensed via agreement by D_{POS} (comparable to English ‘s), either in Spec or a c-commanded position. (Possessors are marked in bold.)

- (2) a. [**DP** D_{POS} [*n_P* [*nP*]]] (alienable Possessor argument)
b. [D_{POS} [*n_P* **DP** [*nP*]]] (inalienable Possessor before raising)

Z&P furthermore propose that +Part pronouns must move to the edge of D_{POS} , as shown in (3). (Underlines indicate a chain created via movement, with the head of the chain in bold.) It is argued there that the promotion of +Part pronouns is due to a more general phase-edge constraint that applies in person-centered languages (like Paraguayan Guaraní and Algonquian) and which requires a positively *p*-specified D at the edge of the phase domain – with the possessed DP defined as a phase, along with *vP* and IP. We will not be concerned with the Person Constraint in this paper and refer the interested reader to the above-mentioned work.

- (i) *tesa* – *resa* – *hesa* ‘eye’, *topepi* – *ropepi* – *hopepi* ‘eye-lid’, *topea* – *ropea* – *hopea* ‘eye lashes’, *tova* – *rova* – *hova* ‘face’, *tetyma* – *retyma* – *hetyma* ‘leg’, *tembe* – *rembe* – *hembe* ‘lip’, *tāi* – *rāi* – *hāi* ‘teeth’, *tañykā* – *rañykā* – *hañykā* ‘jaw’, *tāimbira* – *rāimbira* – *hāimbira* ‘gums’, *tague* – *rague* – *hague* ‘hair’, *ta’anga* – *ra’anga* – *ha’anga* ‘image’
- (ii) *túa* – *rúa* – *húa* ‘father’, *teindy* – *reindy* – *heindy* ‘sister of boy’, *tovaja* – *rovaja* – *hovaja* ‘brother or sister in law’
- (iii) *óga* – *róga* – *hóga* ‘house’, *tupa* – *rupa* – *hupa* ‘bed’, *okē* – *rokē* – *hokē* ‘door’, *ovetā* – *rovetā* – *hovetā* ‘window’, *tape* – *rape* – *hape* ‘road, path’, *taity* – *raity* – *haity* ‘nest’, *tembi’u* – *rembi’u* – *hembi’u* ‘food’, *tupia* – *rupia* – *hupia* ‘egg’, *Tupā* – *Tupā* – *Hupā* ‘God’, *téra* – *réra* – *héra* ‘name’, *tuvicha* – *ruvicha* – *huvicha* ‘leader’

While all triforme nouns are inalienable (intrinsically or by extension), it is not the case that all inalienable nouns belong to the triforme class, including vowel-initial ones such as *ahy’ò* (‘throat’) and *áva* (‘hair’), among many others. These are inflectionally regular nouns; cf. the inalienable possessed nominals *ij.ahy’ò* (‘his throat’), *hi.áva* (‘his hair’) and the alienable possessed nominal *ij.ajaka* (‘his/her basket’). Possessor marker *i* → becomes *ij-* before stressless ‘a’ and *i-* → becomes *hi-* before stressed ‘a’.

- (3) [$\underline{DP}_{1/2P}$ [D_{pos} [n_P ($\underline{DP}_{1/2P}$) nP]]] (inalienable Possessor after raising)

Z&P propose the spell-out rule in (4) to account for the *r*-root vs. *h*-root contrast in triforme expressions. It is suggested there that the *r*-rule is triggered by heads of phase domains, i.e. by *v* (in the verbal domain) and by *D* (in a possessed nominal domain). Phases are defined as projections of heads with an external argument or an interpretable person feature. In Paraguayan Guaraní, *I*, *v*, possessed *D*, as well as oblique *Ps* (as we will see later) define phases because they either have an external argument and/or they carry an interpretable person feature.

- (4) *Spell-out rule for triforme roots (the r-rule):*
If the head of a phase domain that contains a triforme root agrees with a *DP* at its edge, the root is spelled out as *r*-initial. Otherwise, the root is *h*-initial.

It is furthermore argued by Z&P that the *r*-root/*h*-root contrast is not about the morphological marking of +Part 1*P* and 2*P* pronoun vs. –Part 3*P* pronouns because full lexical *DPs* (for reasons independent of the above-mentioned Person-Constraint) must move out of the *n*-domain to the edge of D_{pos} . As predicted by the *r*-rule (4), full lexical Poss *DPs* also co-occur with an *r*-root (and not with an *h*-root), as seen in (5).³

- (5) Maria rova/ *hova
Maria face
'Maria's face'

Z&P propose that full lexical Poss *DPs* must raise out of the *nP* and into the *D*-domain for morpho-phonological reasons: overt elements in the inflectional domain (i.e. between *I* and *v* and between *D* and *n*) must be clitics or affixes that can morpho-phonologically integrate with the lexical root. A null possessor, being phonologically invisible, may appear between *D* and *n*. While that proposal is empirically correct, as far as we know, here we want to explore the other side of the null possessor pronoun, namely its syntactic and semantic properties. If, as suggested by D&W op.cit, +Part pronouns must be *DPs* because they are referential elements (like definite descriptions and names), then we can gain an understanding of the above patterns, modulo certain other assumptions.

Vergnaud (2013) (and in earlier unpublished work) proposed that there is a correlation in the complexity of merged constituents structures. Category *V* merges with categories of similar complexity, and so does *N*. Thus, an *N* *Obj* of *V* must move above *VP* in order to combine with a *D* and acquire the complex structure of a *DP*. Without going into the formal details of such a proposal, for our present purposes it suffices to

3. Because the *r*-form always surfaces in cases of argument promotion within the phase domain, Z&P suggest that the *r*-rule is the morpho-syntactic signature of *DP*-movement within the phase domain that contains a triforme root.

retain the following entailment: *within the nominal phrase, $N(P)$ (or $n(P)$) can merge with $N(P)$ (or $n(P)$) but crucially $N(P)$ (or $n(P)$) cannot merge with $D(P)$ because the latter has a more complex structure than the former.* We will refer to such complexity constraint on Merge as the *Vergnaud's conjecture* (or VC). If VC is correct, then we need to refine some assumptions put forth earlier and repeated in (6). Indeed, the conjunction of (6a) and (6c) is compatible with VC, but not the conjunction of (6a) and (6b).⁴

- (6) a. Inalienable Poss are generated in Spec of n
 b. 1P and 2P pronouns are DPs, like names and definite descriptions
 (D&W 2002)
 c. 3P pronouns are nP s

To solve the contradiction, we propose that the inalienable Poss argument of the noun is generated initially in Spec of nP as an nP and that for it to acquire referential status as a +Part pronoun or a full lexical DP, it must first merge with D – call it *sideward-merge* (after *sideward movement* cf. Nunes 2001) – and then merge with D_{POS} . We illustrate the sideward-merge operation in the derivation below; see in particular (7d) (Possessors are marked in bold).

- (7) a. [n_1 NP] \rightarrow nP_1 (inalienable nominal)
 b. [nP_2 [nP_1]] \rightarrow nP_1
 (inalienable possessed nP merges with possessor nP)
 c. [D_{POS} [nP_2 [nP_1]]] \rightarrow DP_{POS}
 (D_{POS} merges with inalienable possessed nP)
 d. [D nP_2] \rightarrow DP (sideward-merge of +Part pron Poss with D)
 e. [DP D_{POS} [nP_1]] (possessed DPs, with referential Poss (& QP Poss))

To summarize the above proposal, inalienable possessed DPs with referential Poss have the structure in (8a) and inalienable possessed DPs with a 3P Poss have the structure in (8b). Underlines indicate one or more members of a chain, with the one in bold as the head of the chain.

- (8) a. [$_{DP1}$ [$_{DP2}$ D_2 [nP_2]]] [D_{POS} [nP_2 [nP_1]]] (+Part Poss Pron, lexical Poss)
 b. [$_{DP1}$ D_{POS} [nP_2 [nP_1]]] (3P Poss Pron)

We thus have an account of why +Part inalienable Poss pronouns, as well as full lexical inalienable Poss, must move to the edge of D_{POSS} . It is only there that they can merge with D (according to VC) and become a full DP as required by (6b). We may now reformulate

4. It is not clear that Paraguayan Guaraní has lexical items for nominal quantifiers. It has “all” (-veva) but not “every” and borrows *alguno* (‘someone’) and *ninguno* (‘noone’) from Spanish. These two trigger the *r*-rule (*algunoroga* ‘someone’s house’, *ningunoroga* ‘noone’s house’, suggesting that they are QPs with a complex internal structure comparable to that of DPs).

the *r*-rule in (4) as in (9). The *r*-root is the morphological signature of a derivationally type category-shifted argument, i.e. an *n*P argument that moves to become a DP.

- (9) A triforme root is spelled out as an *r*-root if its argument is derivationally defined as a chain $\underline{\text{DP}}-n\text{P}$. Otherwise, it is spelled-out as an *h*-root (the spell-out domain is the phase domain).

D&W (2002) argued that on the interpretational level, DPs differ from *n*Ps in that the latter, but not the former, can function as variables.⁵ If that is the case, then the inalienable 3P Poss in (1c) must have a binder in the linguistic context. Before we illustrate this asymmetry with regards to pronominal Poss, we must briefly summarize the syntax of inflectional agreement in PG. Z&P argue that clausal inflection in Paraguayan Guaraní, as in the Algonquian languages, is divided into two types of paradigms: the *direct order* inflectional paradigm and the *inverse order* inflectional paradigm.⁶ In the direct order, the inflectional paradigm is constituted by a set of prefixes that reference the external argument; see Table 1 below. In the inverse order the inflectional paradigm is constituted by weak Object pronouns; see Table 2 below.

Table 1. Direct inflectional paradigm

External Argument	Singular	Plural	
1P	a-	EXCL.	INCL.
	ro- with 2SG Object	ro-	ja- /ña-
	po- with 2PL Object	po- with 2PL Object	
2P	re-	pe-	
3P	o-	o-	

Table 2. Direct and Indirect Object strong pronouns

	1P	2P	3P
SG	chéve	ndéve	ichupe
PL	ñandéve (incl), oréve (excl)	peême	ichupe.kuera

The direct order is found when the external argument is higher than the Object in the P(erson)-hierarchy stated in (10), while the inverse order is found when the Object is higher than the external argument in the P-hierarchy. The Object may be the internal

5. Person features on 1 and 2 pronouns may be deleted and in this case such pronouns too may function as variables, as shown in Kratzer (2009).

6. Payne (1994) also classifies Guaraní (and Tupi-Guaraní more generally) as a direct/inverse system.

argument of a transitive verb or the inalienable possessor of an incorporated inalienable nominal complement.

- (10) a. +Part > 3P
b. 1P > 2P

Developing ideas in Ritter & Wiltschko (2014), Z&P argue that Infl in Paraguayan Guarani (like Infl in Algonquian) has an interpretable *p*-feature (but no interpretable Tense feature). Z&P further propose that in such languages, in conformity with the *Person Constraint* mentioned earlier, the interpretable *p*-feature triggers promotion of the Object pronoun in the inverse order, first to the edge of the *v*-*phase* (via phrasal movement) and then to the edge of the *I*-*phase* (via head movement); Infl in this case is spelled-out as a clitic (see the paradigm in Table 2).⁷

To illustrate, consider cases where the possessed inalienable *n*P has been incorporated into the verbal domain to form a larger predicate. The pronominal Poss paradigm is summarized in Table 3 below.

Table 3. Possessor pronouns

	1P	2P	3P
SG	che	nde/ne	i- (regular nouns) / ∅ (triforme nouns)
PL	ñande/ñane (incl), ore (excl)	pende/pene	i- (regular nouns) / ∅ (triforme nouns)

Consider the examples in (11), where incorporation of the *n*P inalienable into the verbal predicate puts the Poss in the domain of *v*, making the Poss the formal Object of *v* (not unlike an ECM structure). In such construction, the Poss argument is also the affected argument (cf. Velázquez-Castillo 1996), which we attribute to the presence of an Applicative projection. More specifically, we assume that in these transitive inalienable structures, there is an Appl-*v* (located above the *v* that introduces the external argument) that licenses an applicative argument. The derivation of the Poss proceeds as follows. Recall that all inalienable Poss arguments originate as *n*Ps in the Specifier of the inalienable *n*P. In the case of the 1P Poss in (11a) and 2P Poss in (11b) (the inverse order cases), the Poss *n*P first side-merges with D. The output Poss DP merges with *v*P to meet the Person-Constraint, at which point it triggers the application of the *r*-rule (9). From there, Poss DP moves to the edge of the *v*-ApplP where it acquires the Applicative *th*-role. It agrees with Infl and moves to the edge of Infl. As for the null 3P *n*P possessor in (11c) (the direct order cases), the Poss *n*P remains in situ and therefore the inalienable triforme nominal noun surfaces as *h*-initial. Recall that

7. See also Bruening (2001, 2005) for a syntactic Object promotion analysis of the inverse order in Passamaquoddy.

we proposed that the phonologically null *nP* Poss in (11c) lacks a paradigmatic person feature (and possibly a number feature as well); it only has a +animate feature. This null *nP* Poss receives its interpretation by virtue of being bound by the strong dative pronoun or dative lexical DP in (11c).⁸ On the other hand, the external argument is systematically a null *pro* across structures, located at the edge of *v* in the inverse order and at the edge of *I* in the direct order and licensed by virtue of being bound to an overt (or covert) Topic.

- (11) a. (Nde) che.rova (jo)héi (inverse order)
 (You) 1SG.POSS.face wash
 ‘You washed my face’
- b. (Hàè) nde.rova (jo)héi (inverse order)
 (He/she) 2SG.POSS.face wash
 ‘He/she washed your face’
- c. (Che) a.hova(jo) héi {ichupe/ Pedro.pe} (direct order)
 (I) 1PS.face wash {to him/her/ to Pedro}
 ‘I washed {his/her face/ Pedro’s face}’

Now, if indeed the null Poss lacks a person feature (and possibly a number feature) and its interpretation is dependent on the binder, it leaves open the possibility that its interpretation could be something else than a 3P. This is indeed the case in the direct order example in (12), where we have a portmanteau prefix (PORT) that cross-references a 1P subject and a null 2P object. The PORT prefix *ro-* formally identifies the null Applicative Obj as 2SG and the PORT prefix *po-* formally identifies the null Applicative Obj as 2SG (see Z&P for discussion and a formalization of PORT prefixes in PG, as well as further detailed discussion of the structures with an incorporated inalienable complement). The null Applicative Obj binds the in-situ null *nP* Poss contained within the incorporated inalienable NP. Since these cases do not involve Poss-raising, the nominal inalienable root is *h*-initial.

- (12) a. Che *ro*.hova (jo)héi (direct order)
 I PORT.face wash
 ‘I wash your.SG face’
- b. Che *po*.hova (jo)héi (direct order)
 I PORT.face wash
 ‘I wash your.PL face’

To recapitulate, we have proposed that the null Poss is an *nP* argument located in the Spec of the inalienable *nP*. It is negatively specified for a person feature and

8. In the context of complex predicates, the verb *johéi* is abbreviated as *héi*, an abbreviation process that is common in compounds as well.

gets its interpretation by virtue of being locally bound to a DP.⁹ We turn next to triforme verbs.

3. Triforme verbs as derived from triforme nouns

Alongside a set of triforme (inalienable) nouns, Paraguayan Guaraní also has a set of triforme verbs; eg. *techa*, *recha*, *hecha* ('sight', 'see'); *tendu*, *rendu*, *hendu* ('listen'), *ta'arō*, *ra'arō*, *ha'arō* ('wait'); *teka*, *reka*, *heka* ('search'); *tenói*, *renói*, *henói* ('call'), *topehýi*, *ropehýi*, *hopehýi* ('sleep').¹⁰ The *t*-forms are unambiguously nouns: e.g. *O.meẽ chéve topehýi*, Lit: *It gives me sleep*, meaning 'It makes me sleepy'. The *r*-root appears in the inverse order and the *h*-root appears in the direct order, as exemplified in (13) and (14) below. In the inverse cases (13a) and (14a), the +Part Obj moves to the edge of *vP* to meet the Person-Constraint, and then to the edge of Infl. In the direct order cases, the prefix references the external argument and the Obj does not move (because the Person-Constraint does not require it to move). In the case of (13bi) and (14bi), the prefix *re-* references the 2P external argument and the in-situ Obj is a strong 3P pronoun. In the case of (13bii) and (14bii), we see the portmanteaux prefix *ro-*, which, as mentioned earlier, morphologically cross-references a 1P external argument and a 2SG Object. More precisely, in such structures the PORT prefix *ro-* formally identifies

9. The challenge for the proposed analysis comes from examples in which the inalienable is found in subject position, as in the examples below, accepted by our consultant. We propose that the binder of the null Poss in (ii) is a covert Topic in our consultant's dialect (we later checked this paradigm with another consultant, who rejected (ii), a judgment more in line with our analysis).

- (i) {Maria/ che/ nde} rova akointe i.kya
 {Maria/ my/ your} face always 3P.dirty
 'Maria's/my/your} face is always dirty'
- (ii) Hova akointe i.kya
 3P.face always 3P.dirty
 'His/her face is always dirty'

10. Often triforme eventive nouns and verbs are related to an individual-denoting triforme noun. Eg. *Techa/recha/hecha* ('sight/see') is related to *tesa/resa/hesa* ('eye'). There are many complex verbs derived from *tesha*; e.g. *techakuaa/rechakuaa/hechakuaa* ('understanding, understand'), *techambi/rechambi/hechambi* ('suspicion, suspect/guess'), *techaramo/recharamo/hesharamo* ('admiration, admire'), *techavoi/rechavoi/hechavoi* ('forboding, to have forboding'), *techagi/rechagi/hechagi* ('neglect'). The transitive triforme verb *tovasa/rovasa/hovasa* ('blessing/ bless') is derived from the triforme noun *tova/rova/hova* ('face') and the verbal stem *-sa* 'pass, literally meaning 'to pass the face', which makes reference to the hand gesture used in the act of giving a bless.

the null Obj as 2SG. In their counterparts in (13biii) and (14biii), the PORT prefix *po-* formally identifies the null Obj as 2PL.

- (13) a. (i) (Nde) *che recha* (inverse order)
 (You) 1SG.see
 ‘You see me’
 (ii) (Ha’è) *nde recha*
 (S)he 2SG.see
 ‘(S)he sees you’
- b. (i) (Nde) *re.hecha ichupe* (direct order)
 (You) 2SG.see her/him
 ‘You see him’
 (ii) (Che) *ro.hecha*
 (I) PORT.see
 ‘I see you’
 (iii) (Che) *po.hecha*
 (I) PORT.see
 ‘I see you all’
- (14) a. (i) (Nde) *che ra’arō* (inverse order)
 (You) 1SG.wait
 ‘You wait for me’
 (ii) (Ha’è) *nde ra’arō*
 (She/he) 2SG.wait
 ‘(S)he waits for you’
- b. (i) (Nde) *re.ha’arō ichupe* (direct order)
 (You) 2SG.wait 3PS
 ‘You wait for her/him’
 (ii) (Che) *ro.ha’arō*
 (I) PORT.wait
 ‘I wait for you’
 (iii) (Che) *po.ha’arō*
 (I) PORT.wait
 ‘I wait for you all’

Z&P (2017) analyze the weak 1P and 2P pronoun in the inverse order with *triforme* verbal predicates as the internal argument of the verb sister to *v*, in parallel with the inverse order with predicates headed by regular (non-*triforme*) verbs. Here we propose a more elaborate alternative, namely that *the 1P and 2P weak pronouns in the case of triforme verbs originate as the Poss argument of a nominal complement of v*. We propose that, as in the case of the incorporated inalienable structures (11a–b), the Poss argument is first promoted to the edge of the *v*-phase and then to the edge of the I-phase.

Such an analysis is prompted by the existence of examples of event-denoting tri-forme nominal complement as in the examples below. Consider (15), where the clause is headed by an imperfective aspectual light verb (*oi*)*ko* that takes a PP as complement (*vaka reká.pe*). This PP complement is headed by a locative Prep (*-pe*) and an event-denoting nominal complement headed by the tri-forme noun *teka/reka/heka* ‘search’, which takes *vaka* ‘cow’ as an internal argument (*vaka reka* ‘cow’s search’). To the extent that this argument originates in Spec of *n* and sideward-merges as a DP in Spec of D_{POS} , the noun surfaces as an *r*-root.¹¹ Note that the PP complement of (*oi*)*ko* may also denote a physical location, as illustrated in (16). This fact provides indirect support for the analysis of *reka* in (16) as denoting an abstract location.

- (15) (Haè) oi.ko vaka reká.pe
 (She/he) 3SG.COP cow.POSS search.LOC
 Lit. ‘(S)he is in the activity of cow-searching’
- (16) a. (Haè) oi.ko Paraguay.pe
 (She/he) 3SG.COP Paraguay.LOC
 ‘(S)he lives in Paraguay’
- b. (Che) ai.ko che sý.ndi
 (I) 1SG.COP 1SG.POSS mother.WITH
 ‘I live with my mother’

Other relevant examples, in which tri-forme nominal complements are event-denoting are given in (17) and (18). In (17), the main verb is the aspectual light verb (*ai*)*me* that encodes a delimited event and takes as its complement the nominal *ra’arõ* (‘waiting’). In (18), the main verb is the verb *go* that takes the nominal complement *recha* (‘sight’) that expresses the purpose of the going (as encoded by the purpose suffix *-vo*).

- (17) Ai.me Maria ra’arõ.me
 1SG.COP Maria wait.PREP
 ‘I am waiting for Maria’ (lit. ‘I am in Maria’s waiting’)
- (18) A.ha Maria rechá.vo
 1SG.go Maria sight.PURP
 ‘I am going to see Maria’ (lit. ‘I am going to the sight of Maria’)

We propose to extend the same syntactic analysis of the event-denoting nominal complement (15)–(17) to tri-forme transitive verbs like those in (13) and (14), with the difference that in the latter cases, there is no overt lexical verb, but simply a null *v* that merges directly with an event-denoting *nP* complement. These *nPs* are headed by a

11. Phonologically, tri-forme nouns are best represented as vowel-initial stems that are spelled-out with a C onset, where C is *t*-, *r*-, or *h*- depending on grammatical context. We ignore this detail here.

triforme noun that introduces a Poss argument that gets analyzed as the Object of ν (as in the case of incorporated individual-denoting inalienable nPs discussed earlier). To illustrate, consider the derivation of (13ai) *Che nde recha* (inverse order). The Poss argument having the status of a \underline{DP} - nP chain, the r-rule (9) applies at the νP phase (19b) and the root is spelled out as an r-root

- (19) a. [νP DP_1 [ν [$_{nP}$ nP tешa]]] \rightarrow sideward-merge of nP and D, and merge of output with νP
 b. [νP [$_{DP2}$ D nP] [$_{\nu P}$ DP_1 [ν [$_{nP}$ nP tешa]]]] \rightarrow merge of D Poss with I
 c. [$_{IP}$ D I [νP [$_{DP2}$ \underline{DnP}] [$_{\nu P}$...]]] \rightarrow merge of IP with Top
 d. [$_{TOP}$ *Nde*_i [$_{IP}$ [$_{D}$ **che**] I [$_{\nu P}$ [$_{DP}$ che] [$_{\nu P}$ DP_1 [$_{\nu P}$ [$_{nP}$ [$_{nP}$ che] reshа]]] ...
 ‘Nde che reshа’ (‘You saw me’)

We illustrate next the direct order cases, where the nP Poss argument does not sideward merge with D and does not undergo movement. Recall that in the direct order cases, the DP external argument is the highest in the P-hierarchy and therefore it agrees with I and moves to the edge of I. The in-situ Poss argument is a variable and its interpretation is dependent on the syntactic binder. We give the final output structures for (13bi) and (13bii) below, omitting the Applicative ν -layer for simplicity sake. In (20a), the null Poss nP is bound by the 3P Applicative DP argument and in (20b), the null Poss nP is bound by the null 2P Applicative DP, which is formally identified by the PORT prefix. Since there is no Poss raising to the edge of the verbal phase, the r-rule (9) does not apply and the root has h-initial form.

- (20) a. [$_{TOP}$ *Nde* [$_{IP}$ \underline{D}_{2SG} [$_{RE}$ [$_{\nu P}$ \underline{DP}_{2SG} [$_{\nu P}$ ν [nP [nP_i] hesha] [$_{Di}$ ichupe] ...]
 ‘Nde re.hesha ichupe’ (‘You saw him/her’)
 b. [$_{TOP}$ *Che*_i [$_{IP}$ \underline{D}_{1SG} [$_{RO}$ [$_{\nu P}$ \underline{D}_{1SG} [$_{\nu P}$ [nP [nP_i] hesha] ν] [$_{Di}$ 2P] ...]
 ‘Che ro.hesha’ (‘I saw you’)

We have reanalyzed *transitive* triforme predicates as a case of light ν with an event-denoting nP , where the Obj originates as the Poss argument of the nP . What about *intransitive* triforme predicates? These do exist as well; e.g. *tasē*, *rasē*, *hasē* ‘cry’, as illustrated in (20) below.¹² Essentially the same analysis proposed earlier for the transitive triforme cases can be extended to the intransitive triformes. The difference between

12. As mentioned in note 11, many transitive triforme verbs are derived from triforme nouns. This is also the case for many intransitive triformes, such as *tesarái/resarái/hesarái* (‘to forget’), made up of triforme noun *tesa* ‘eye’ and negative suffix $-(a)i$ (lit. without eye).

- (i) Maria hesarái i.memby.gui
 Maria forgot 3POSS child.Source PREP
 ‘Maria forgot her child’

the two is that in the case of transitive structures, the theta-role introduced by *v* and the one introduced by the nominal complement are assigned to two distinct arguments. On the other hand, in the intransitive cases, as in the example below, the theta-role introduced by *v* (= internal causer/experiencer) and the theta-role introduced by the nominal complement (= possessor) are assigned to one and the same argument. More precisely, in the case of the 1P and 2P Poss argument (21a–b), the Poss *nP* that originates in the Spec of the nominal complement of *v* sideward-merges with D and then the output structure merges with *vP*, picking up the theta-role introduced by *v*. These are cases of Poss-raising and the root is spelled out as an *r*-root. On the other hand, in the case of the 3P Poss *nP*, which does not undergo any further merging operation outside the incorporated *nP*, we would need to assume that *v* introduces a DP external argument (the internal causer/experiencer) and that it binds the *nP* Poss argument. Such cases are exemplified by (21c) and (22a). These are cases of Poss-control and the nominal root is spelled-out as an *h*-initial root. Compare furthermore the minimal pairs (22a) (a clause) and (22b) (a possessed nominal phrase). As just mentioned, the former is a case of Poss-control, with no Poss-raising (and therefore no *r*-rule application) and with the lexical DP as a topic that binds the in-situ Poss. On the other hand, (22b) is a case of Poss-raising from Spec of *nP* to Spec of D_{POSS} . The *r*-rule applies at the D_{POSS} phase, giving rise to the *r*-initial nominal root.

- (21) *tasē/ rasē/ hasē* ‘cry’
- a. (Che) *che* *rasē*
 (I) 1SG.POSS cry
 ‘I cry’
- b. (Nde) *nde* *rasē*
 (You) 2SG.POSS cry
 ‘You cry’
- c. (Háè) *hasē*
 (She/he) 3SG.POSS.cry
 ‘She/he cries’
- (22) a. *Maria* *hasē*
Maria.TOP 3SG.POSS.cry
 ‘Maria cries’

Still other examples of intransitives derived from triforme nouns are *tatati/ hatati/ratati* ‘smoke’ (related to triforme *tata* ‘fire’), *tāimbiti, rāimbiti, hāimbiti* ‘teeth-pressing’ and *tāitarara, rāitarara, hāitarara* ‘teeth-teetering’ (both related to *tāi* ‘teeth’), *tendysry, rendysry, hendysry* ‘drool’ (related to *tendy* ‘saliva’).

We also note that it appears that most instances of triforme verbs are experiencers that undergo an internal bodily or mental change. Perhaps all intransitive triforme verbs are in effect of this type.

- b. Maria rasē
 Maria.POSS cry
 'Maria's cry'

In the next section, we extend the analysis proposed above for triforme intransitives to other verbal predicates with a possessed nominal complement.

4. Other predicates with inalienably possessed nominals

In Paraguayan Guaraní, the stative predicates traditionally analyzed as predicative constructions are also Possessor constructions. These are exemplified below, with a morphologically regular root in (23) and a triforme root in (24). With regular roots, the marker of 3P Poss is the prefix *i-* and with triforme roots, the 3P Poss is null and the root is *h-*initial, as in the case of triforme nouns. This Poss construction applies across the board for statives and does not make a distinction between individual and stage-level predicates.

- (23) *pochy* 'angry', *porā* 'pretty', 'good', *vai* 'ugly', 'bad', *puku* 'long', *vate* 'tall', *pohýi* 'heavy', *tavy* 'fool', *tarova* 'crazy', *tuja* 'old', *pyahu* 'new', *arandu* 'intelligent', 'with good memory'
- a. (Che) che *pochy*
 (I) 1SG.POSS angry
 'I am angry'
- b. (Nde) nde *pochy*
 (you) 2SG.POSS angry
 'You are angry'
- c. (Haè) i.*pochy*
 (She/he) 3POSS.angry
 'She/he is angry'
- (24) *tasy*, *rasy*, *hasy* 'ill' or 'in pain'; *tesāi*, *resāi*, *hesāi* 'healthy'; *topehýi*, *ropehýi*, *hopehýi* 'sleepy'; *tory*, *rory*, *hory* 'happy', 'joyous'; *tetiãe*, *retiaè*, *hetiaè* 'vivacious', 'with good humor'; *teõ*, *reõ*, *heõ* 'humid', 'wet'
- (The *t*-forms are unambiguously nouns)
- a. (Che) che *rasy*
 (I) 1SG.POSS ill/in pain
 'I am ill/in pain'
- b. (Nde) nde *rasy*
 (you) 2SG.POSS ill/in pain
 'You are ill/in pain'
- c. (Haè) *hasy*
 (she/he) 3SG.POSS.ill/in pain
 'She/he is ill/in pain'

Note that the same minimal contrast observed in (22) between the root in a clausal structure (with the lexical DP as topic) and the root in a nominal phrase (with the lexical DP as Poss) is found with stative predicates as well; see below.

- (25) a. Maria hasy
 Maria.TOP 3SG.POSS.ill/in pain
 ‘Maria is ill/in pain’
- b. Maria rasy
 Maria.POSS {ill/pain}
 ‘Maria’s illness/pain’

It is natural to view the above stative predicates as nominals that denote abstract property-concepts (Francez and Koontz-Garboden 2015). The individual-denoting argument bears a possessor relation to these property-denoting nominals, on the one hand, and a relation of beholder of a state, on the other hand. We therefore propose to extend the analysis put forth for the eventive intransitives predicates *rasẽ/hasẽ* (‘cry’) to the stative predicates in (23)/(25), except that in the context of such stative nominals, *v* assigns a *beholder* role (not a *doer* role) to the Poss argument.¹³

The same possessor construction is found with inalienable nominals that denote kinship relations (e.g. *i.memby* ‘to have a child’) or extended inalienable relations (e.g. *hoga* ‘to have a house/home’).¹⁴

- (26) ‘to have a (ill) child’
- a. (Che) che memby (hasy)
 (I) 1POSS child (sick)
 ‘I have a (ill) child’

13. A reviewer asks if there is a semantic generalization that underlies intransitive eventive (intransitive) triformes and statives triformes such as those in (23) and (24). If the former are indeed predicates in which the external argument is an experiencer (as suggested in note 11), then maybe there is indeed a semantic generalization that runs across both types of predicates, namely that of “inalienability”, to the extent that an experiencer/experienced relation is by definition an inalienable relation of a more abstract nature.

14. The case of triforme noun *tupîa/rupîa/hupîa* (‘egg’) is particularly illuminating. ‘Egg’ must be specified with respect to a type: *ryguasurupîa* (‘chicken egg’), *yperupîa* (‘duck egg’), etc. Thus, we can say (ii) but not (i) and we can say (iv) but not (iii). (*i.type* → *ijype* in (iv))

- (i) *Che che rupîa ‘I have eggs’
- (ii) Che che [yype rupîa] ‘I have duck eggs’
- (iii) *Ha’e [hupîa] ‘She/he has duck eggs’
- (iv) Maria i.[jype rupîa] ‘Maria has duck eggs’

- b. Nde nde memby (hasy)
(you) 2.POSS child (sick)
'You have a (ill) child'
- c. (Haè) i.memby (hasy)
(she/he) 3POSS.child (sick)
'(She/he) have a (ill) child'
- d. Maria i.memby (hasy)
Maria.TOP 3POSS.child (sick)
'Maria has a (ill) child'
- Cf. Maria memby (hasy)
'Maria's (ill) child'
- (27) 'to have a (faraway) house'
- a. Che che róga (mombyry)
I 1SG.POSS house (faraway)
'I have a (faraway) house'
- b. Nde nde róga (mombyry)
you 2SG.POSS house (faraway)
'You have a (faraway) house'
- c. Haè hóga (mombyry)
she/he 3SG.POSS.house (faraway)
'She/he has a (faraway) house'
- d. Maria hóga (mombyry)
Maria.TOP 3SG.POSS.house (faraway)
'Maria has a (faraway) house'
- Cf. Maria róga (mombyry)
'Maria's (faraway) house'

The cases of (ii) and (iv) are relevant because they show that we need to refine our *r*-rule. We may assume that *yperup'ia* consists of an *nP* merged with a Class(ifier)P, and that the Poss argument originates as an NP in Spec of NP (a predicate), it sideward-merges with *n*, and the output *nP* (an argument) merges with ClassP. ClassP can then merge with an *nP* that introduces its own Poss argument (*v*). This possessed nominal predicate can combine with *v*, giving rise first to a complex verbal predicate (vi) and eventually to the form in (ii) (with a 1SG DP Poss argument) and in (iv) (with a 3SGnP Poss argument).

(v) [*nPnP* [ClassP [*nP* ype] [ClassP CL [NP [NP ype] [Nrupi'a]]]]

(vi) [*vP* [*nPnP* [ClassP [*nP* ype] [CL [NP [NP ype] [N rupi'a]]]] *v*]

To account for the *r*-root in (ii) and (iv), we would need to generalize the *r*-rule so that it also applies to cases of triforme roots with an argument that consists of the chain NP-*nP*.

As noted in Velazquez-Castillo (1996), the possessor nominal construction exemplified above can be used to express the meaning of ownership (as in “I own a cow”), but not to express the more general meaning of custodial possession (as in “I have your cow”). To express the latter meaning, the verb (*a*)*guereko* (‘to have’) must be used, as illustrated in (28)–(29). Contrast those with examples with a body part, which give rise to an unambiguous inalienable interpretation; see (30)–(31). These facts provide support to the idea that the possessed nominal predicates encode the meaning of inalienability, modelled in terms of the syntactic structures discussed earlier.

- (28) a. (Che) che vaka
 (I) 1SG.POSS cow
 ‘I own cow’
 b. *Che nde vaka
 (I) 2SG.POSS cow
 ‘I own your cow’
- (29) a. (Che) a.guereko che vaka (che róga.pe)
 I 1SG.have my cow (in my house)
 ‘I have my cow (in my house)’
 b. (Che) a.guereko nde vaka (che róga.pe)
 I 1SG.have your cow (in my house)
 ‘I have your cow (in my house)’
- (30) a. (Che) che akã ky’a.
 (I) 1SG.POSS head dirty
 ‘My head is dirty’
 b. *(Che) a.guereko akã ky’a
 ‘I have a dirty head’
- (31) a. (Che) che.memby
 ‘I have children’
 b. *(Che) a.guereko memby
 ‘I have children’

In the next section, we suggest that oblique pronouns in Paraguayan Guaraní also have the syntactic structure of inalienable possessed nominals.

5. Oblique pronouns as inalienable possessed nominals

The oblique preposition in (32) (with its multiple shades of meaning) is a complex one: it consists of a biforme bisyllabic root (*rehe/hese*) preceded (obligatorily) by a weak pronoun. In line with the analysis put forth above, we propose to analyze these

weak pronouns as a Poss pronoun in a nominal structure headed by the biforme nominal *rehe/hese*. Some example sentences are given in (33), which does not exhaust the shades of meaning of these oblique forms.

- (32) *rehe/hese*: ‘at/about/because of’
- che rehe* (‘at/about/because of me’)
 - nde rehe* (‘at/about/because of you’)
 - hese* (‘at/about/because of him/her’)
 - Maria rehe* (‘at/about/because of Maria’)
- (33)
- a.maña nde rehe* (‘I look at you’)
 - re.jú che rehe* (‘You come for me’)
 - a.porandu hese* (‘I ask about him’)
 - a.porandu Maria rehe* (‘I ask about Maria’)

The account of *r*-root vs. *h*-root alternation can be generalized to these oblique pronouns by analyzing them as inalienable possessed nominal phrases (see below), which merge with an abstract oblique-Case-assigning preposition that carries an interpretable *p*-feature and therefore defines a phase. Following the nominal structures we proposed earlier for inalienable Possessors (see (2)–(4)), we propose the structure in (34a) for (33a–b)/(33d) and the structure in (34b) for (32c)/(33c). The former has an *r*-root because the Poss is a DP/*n*P chain that agrees with a P_{POS} and the latter has an *h*-root because it is the *elsewhere* case.

- (34)
- $[[_{DP} D \underline{nP}] [D_{POS} [\underline{nP} [rehe]]]]$
 - $[D_{POS} [\underline{nP} [hese]]]$

We speculate that the meaning of the inalienable possessor relation in (33) is one of belonging to a class: *nP* belongs to the class of animate individuals. All pronouns in Paraguayan Guaraní are animates, whether overt or covert. Inanimates are referred to as ‘thing’ (= *mbaè*). It is tempting to further extend the analysis of inalienable possessed nominals to the 3_P strong Obj pronoun *ichupe*, which we suspect is composed of the 3_P Poss prefix *i*- (often dropped in spoken speech), a nominal root *chu*- and the differential object marker (the suffix *-pe*) that appears with all animate objects.

6. Conclusion

In this paper, we have explored the proposal put forth by D&W (2002) that referential nominal phrases, nominal variables, and predicate nominals have different structural complexity, whereby NPs unambiguously function as predicates, DPs unambiguously function as referential arguments, and *n*Ps may function either as variable arguments or as predicates. We combined this proposal with Nevins’s view of pronouns, whereby

+Part pronouns are positively-specified with a person feature, while 3P pronouns are not. We furthermore assumed two conjectures: 1) A positively-specified p-feature must be projected on D. This entails that 3P, but not +Part pronouns, may function as *n*P_s, i.e. as variables (1P and 2P pronouns may also function as variables if their person features are deleted; see note 5). 2) Vergnaud's conjecture (VC), which entails that *n*P may merge with *n*P, but not with DP. The combination of the above gives us the results that a Poss argument that originates in Spec of *n*P must move out in order to acquire a DP status (through sideward merge with a D, with the resulting DP merging as a specifier of D_{POS}). We used this result to explore the syntax of Poss arguments in Paraguayan Guaraní and the restatement of the *r*-rule that governs the complementary distribution of *r*-roots and *h*-roots in Paraguayan Guaraní. Given our analysis, the *r*-root is a morphological reflex of the sideward movement of a Poss argument and the creation of a DP-*n*P chain. The null possessor is an *n*P (not a DP). The person feature being a property of D, the null Poss lacks person feature. Therefore, it depends on an external binder for its interpretation.

We extended this analysis from triforme inalienably possessed nominals to triforme verbal predicates, such as eventive *techa*, *recha*, *hecha* 'sight/see', and stative predicates that denote possession of property concepts, such as *tasy*, *rasy*, *hasy* 'pain/ill'), which, we argue, are formed from an underlying possessed triforme nominals. Finally, we extended the same analysis to biforme oblique pronouns. Thus, we arrived at a view of Paraguayan Guaraní that is very much possessor-centric: more specifically, it has a productive set of structures in which the Obj (in the case of transitives) or the Subj (in the case of eventive intransitives) originate as the Poss argument of a nominal complement of a light *v*. On the theoretical side of things, the proposed analysis provides strong support for the view that +Part pronouns and -Part pronouns may have distinct syntax and featural properties, as well as different semantics.

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Maria Luisa dedicates this article to her longtime friend and colleague Violeta Demonte.

The following abbreviations are used in the examples and tables: COP: copula; LOC: locative; P: person; PART: speech participant; PL: plural; PORT: portmanteau prefix; POSS: possessive; PREP: preposition; PURP: purpose suffix; SG: singular; TOP: topic.

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