



# COREFERENTIAL PRONOUNS IN 'GERUND' PREDICATES IN TUPÍ-GUARANÍ LANGUAGES: A FORMAL APPROACH

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## ABSTRACT

This study investigates the syntax of coreferential pronouns in gerund clauses in Tupí-Guaraní languages, considering particularly the Kamaiurá language. As pointed out in the Tupinian literature, the distribution of person markers/pronouns in gerund constructions is determined by the semantic class of the predicate, which in turn interacts with the transitivity of the predicate and with a system of person hierarchy, giving rise to direct/inverse order. Assuming Zubizarreta and Pancheva's (2017) model of person marking in Paraguayan Guaraní in root/matrix clauses, we propose that gerund constructions with intransitive and transitive predicates are projections of the functional heads INFL/*v* and D/INFL/*v*, respectively. In these configurations, INFL and *v* are specified for an interpretable *person* feature, which enters an agreement relation with a D feature on the gerund predicate, giving rise to a direct/inverse system, respectively, under a condition on the fixed interpretation of tense in this context.

**Keywords:** gerund clauses, coreferentiality, agreement, Tupí Guaraní family

## RESUMO

O estudo investiga a sintaxe dos pronomes correferenciais em orações de gerúndio em línguas da família Tupí-Guaraní, considerando a língua Kamaiurá, em particular. Conforme aponta a literatura tupinista, a distribuição de marcas de pessoa em construções de gerúndio é determinada pela classe semântica do predicado, a qual interage com a transitividade do predicado e com um sistema de hierarquia de pessoa, em que se manifesta um sistema de ordem direta e inversa. Partindo do modelo de Zubizarreta e Pancheva (2017) na análise do sistema de marcação de pessoa no Guaraní Paraguaio em orações raiz/matriz, propomos que as construções de gerúndio com predicados intransitivos e transitivos são projeções dos núcleos funcionais INFL/*v* e D/INFL/*v*, respectivamente, sendo INFL e *v* especificadas para um traço interpretável de pessoa, que entra em uma relação de concordância com um traço D no predicado de gerúndio, o que dá origem a um sistema de ordem direta e inversa, em termos de uma condição de interpretação fixa de tempo nesse contexto sintático.

**Palavras-chave:** orações de gerúndio, correferencialidade, concordância, família Tupí Guaraní

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\* Universidade de Brasília, UnB. E-mail: heloisasalles@gmail.com. This squib heavily relies on Seki's (2000) seminal grammar of the Kamayurá language. The precise description of the data, as well as the theoretical analysis provided by Seki, are very inspiring for the present analysis. A preliminary version of this analysis, having Eloisa Pilati and Rozana Naves as my co-authors, to whom I am very grateful, was presented in the VI CIEL (Congresso Internacional de Estudos Linguísticos), which was held at the University of Brasília, on August, 25<sup>th</sup>-27<sup>th</sup>. I am also grateful to the audience, and particularly to Maria Luiza Zubizarreta and Márcia Dâmaso Vieira, who were invited speaker at the Conference, for their comments. My deepest respect to Márcia Dâmaso Vieira's (*in memoriam*) brilliant contribution to Tupinian studies. All errors are my own.

## 1 THE FACTS AND THE VIEW FROM THE TUPINIAN TRADITION

We investigate the syntax of coreferential person markers in so-called 'gerund' constructions in Tupí-Guaraní languages. In particular, we discuss data from Kamaiurá, a Tupí-Guaraní language spoken in Mato Grosso, Brazil, in a region around the high Xingu river. As noted in Seki (2000, p. 130),

[o] Gerúndio é uma forma amplamente usada em Kamaiurá (e em outras línguas da mesma família) com funções que se estendem além do nível da sentença. Tem seu uso altamente restrito às situações em que há co-referência entre argumentos em função de S[ujeito] ou A[gente] de dois ou mais verbos.<sup>1</sup>

It is well known that the distribution of person markers/pronouns in gerund constructions is determined by the semantic class of the predicate, which in turn interacts with transitivity and person hierarchy. Following Zubizarreta and Pancheva's (2017) analysis of person marking in Paraguayan Guarani, we argue that coreferential prefixes introduce an argument/D feature which enters an agreement relation with an interpretable person feature on the (embedded) INFL head, under a condition on the fixed interpretation of tense in these constructions.

According to the Tupinian tradition (cf. RODRIGUES, 1954; SEKI, 2000; CABRAL; RODRIGUES, 2005; MAGALHÃES, 2007; among others), gerund constructions consist of a syntactic dependency, in which the subject argument of the gerund predicate is coreferential with the subject of the matrix predicate. This dependency further implies either simultaneity or sequential/future orientation with respect to tense interpretation, the latter including a modal meaning of volition.<sup>2</sup> This is illustrated in (1), with data from Kamayurá/TG.<sup>3</sup>

- (1) a-jot            we-maraka-m  
      1SG-come    1SG.COR-sing-GER  
      'I came singing/to sing.'

(adapted from Seki (2000, p. 130/197))

Moreover, person marking in gerund constructions display a direct/inverse inflectional system depending on transitivity and on the semantic class of the predicate (whether

1 Translation by the author: "The Gerund is a form widely used in Kamaiurá (and in other languages of the same Family) with functions that extend beyond the clause level. Its use is strongly restricted to contexts in which there is coreference between the arguments S or A of two or more verbs".

2 A related fact is the restriction on tense marking in the embedded predicate in multiple agreement constructions from M'Bya Guarani, as discussed in Vieira (2007).

3 List of abbreviations and symbols (adapted from the primary sources): Sa: (active/controller) subject of (nominalized) intransitive; So: (non-controller) subject of (nominalized) intransitive; A: (active) subject of (nominalized) transitive; O: (active) object of (nominalized) transitive; 1P,2P,3P: First, Second, Third person; SG: singular; PL: plural; COR: coreferential; GER: gerund; IMP: imperative; COM: comitative; OBL: oblique; =: clitic boundary; REL: relational prefix; DES: desiderative; CES: cessative; POT: potential; NZR: nominalizer; N: nuclear/argumental case; ACT: actual; PORT: portmanteau; TRZ: transitivizer.

dynamic or non-dynamic/stative).<sup>4</sup> With intransitive predicates, the series of coreferential prefixes is found, giving rise to a direct order, as illustrated in (1), above, from Kamayurá, and in (2a) and (2b), below, which display second person singular and first person plural, respectively 'e-' and 'jere-':

- (2) a. e-jot                    e-karu-m                    je=nite  
 2SG-come.IMP 2SG.COR-eat-GER 1s=COM  
 'Come to eat with me!'
- b. ja-jemo'ypy    jere-karu-m  
 1PL-begin    1PL.COR-eat-GER  
 'We start eating.'

(adapted from Seki (2000, p. 196))

With transitive predicates, in turn, it is the internal argument that is marked on the predicate, with the same categories marking the possessor, and a person split arises: while the first and the second person internal arguments are encoded by a clitic pronoun (cf. (3)), the third person internal argument is marked by a person (non-reflexive) prefix (cf. (4))<sup>5</sup>:

- (3) a-jot            ne=mo'e-m  
 1SG-come 2SG=teach-GER  
 'I come to teach you.'

(adapted from Seki (2000, p. 197))

- (4) a-jot            i-mo'e-m  
 1SG-come 3SG-teach-GER  
 'I come to teach him.'

(adapted from Seki (2000, p. 197))

4 Direct and inverse orders may correspond to the distinction between active/non-active voice, as proposed in the Tupinian tradition, the latter implying the realization of the relevant argument as a possessor, further distinguishing A and O, corresponding to the subject and the object of a transitive predicate, respectively, and Sa and So, corresponding to the volitional/controller of an intransitive predicate, and the non-volitional/non-controller subject argument of a descriptive intransitive predicate, respectively, as proposed in Dixon (1974, 1994), cited in Seki (2000).

5 As noted in Seki (2000, p. 56-7), the third person possessor is marked by a prefix which is realized by the allomorphs i- (~ij-) (with nouns of the class Ø), t- and h- (with nouns of the class r-). This prefix marks a (null) specific possessor, which is in complementary distribution with so-called r- prefix, which is found whenever the possessor phrase is realized within the projection of the predicate. The r-prefix, as opposed to the third person i- (and its allomorphs) is also found in the verbal domain (see also Rodrigues (1953)).

Descriptive intransitives predicates occur in two different constructions, as the relevant argument may be encoded either as a possessor, following the same pattern described above for transitive predicates, or by a coreferential prefix, following the pattern described for intransitives, as illustrated in (5a-b) and (6), respectively, from Kamayurá:

- (5) a. a-jot je=r-akuw-am  
1SG-vir 1SG=REL-doente-GER  
'Eu vim estando doente/para adoecer.' [I came sick/ I came in order to become sick]
- b. o-'ut w-akuw-am<sup>6</sup>  
3-vir 3-doente-GER  
'Ele veio estando doente/para adoecer.' [I came sick/ I came in order to become sick]
- (6) a-jot we-katu-ram  
1SG-vir 1SG-ser.bom-GER  
'Eu vim para ser/ficar bom.' [I came to be good]

(data extracted from Seki (2000, p. 197))

Depending on the language, a dedicated gerund suffix is found on the predicate (namely, GER 'm'), as illustrated in (1)-(6), from Kamayurá, above. In other languages from the TG stock, the gerund marker may not be found, the gerund construction being distinguished essentially in terms of the system of coreferential pronouns, as opposed to the system licensing the relevant argument as a possessor.

As noted in Salles (2002, 2007), coreferentiality is also found in constructions involving predicate embedding/complementation. In this case, a complex predicate is formed under predicate incorporation, with a single person prefix marking the subject of the complex predicate, as illustrated in (7a), from Kamayurá:<sup>7</sup>

- (7) a. a-ha-potat  
1SG-ir-DES  
'I want to eat.'

(adapted from Seki (2000, p. 132))

6 According to Seki (2000, p. 55), the prefix 'w-' is an allomorph of the prefix 'o-', encoding "terceira pessoa co-referente ao sujeito da oração (...)" [third person coreferential to the subject of the clause].

7 An analysis of predicate embedding/complementation in TG languages (namely, Tupinambá, Guajá and Kamayurá) in terms of syntactic incorporation is provided in Salles (2007).

Predicate incorporation is also found with aspectual predicates, as illustrated in (7b):

- (7) b. a-karu-pik  
 1s-comer-CES  
 'We stop eating.'

(extracted from Seki (2000, p. 133))

Interestingly, the gerund construction with the series of coreferential pronouns may be found with aspectual predicates, as illustrated in (7c):

- (7) c. ja-jemo'y<sub>py</sub> jere-karu-m  
 1PL-begin 1PL.COR-eat-GER  
 'We start eating.'

(extracted from Seki (2000, p. 199))

Disjoint interpretation, in turn, is expressed through nominalization of the embedded predicate, the relevant (disjoint) argument being marked as a possessor, further displaying a person split, as first/second person is realized as a clitic (8a), whereas the (null) third person possessor is marked with the prefix 'i-' (8b). This marking is associated with the sole argument of (dynamic) intransitive and stative/descriptive intransitive predicates, as well as with the internal argument of transitive predicates. The latter is comparable to what is found in gerund constructions with transitive verbs (above).

- (8) a. a-kwahaw=in [ne=r-akup-aw-a]  
 1SG-saber=POT [2SG=REL-doente-NZR-N]  
 'Eu sei que você está doente.' [I know that you are sick]

(extracted from Seki (2000, p. 173))

- b. a-potar=ete [[je=ra'yra] brasil<sub>ia</sub>-p i-jotaw-a]  
 1SG-want=ACT [1SG=son Brasilia-Loc 3SG-go-N]  
 'Eu quero que meu filho vá a Brasília.' [I want (for) my son to go to Brasília]

(extracted from Seki (2000, p. 176))

## 1.1 PARTIAL CONSIDERATIONS

In so-called gerund constructions, coreferential prefixes encode the subject of intransitive predicates, thus implying direct order. They are found in both adjoined and embedded contexts (with raising/aspectual predicates). With transitive predicates, the internal argument is marked on the predicate (as opposed to the direct system found in intransitive gerund constructions), further displaying a person split, in which first and second person are realized as clitics and third person is realized as a prefix. In this respect, with transitive predicates, the gerund construction patterns with embedded nominalizations.

Regarding stative/descriptive intransitive predicates, the relevant argument is encoded either as a coreferential prefix, thus implying direct order, or as a possessor, which also displays a split, as 1P and 2P are realized as clitics while 3P is realized as a prefix. In turn, stative/descriptive intransitive predicates are hybrid, as they allow for both patterns, while dynamic intransitive predicates only allow for the direct order pattern. In embedded/complementation contexts involving volitional and mental ability (matrix) predicates, coreferentiality is expressed under predicate incorporation (giving rise to a complex predicate), with a single person prefix marking the subject, thus implying direct order.

Assuming the well-known similarities among TG languages (cf. RODRIGUES, 1994; SEKI, 2000; ZUBIZARRETA; PANCHEVA, 2017), we shall investigate the properties of gerund constructions in Kamayurá in terms of Zubizarreta and Pancheva's (2017) model of person alignment in Paraguayan Guaraní. In the analysis we will focus on dynamic intransitive and transitive predicates.

## 2 ZUBIZARRETA; PANCHEVA'S (2017) ANALYSIS OF PERSON ALIGNMENT/MARKING IN PARAGUAYAN GUARANI ROOT/MATRIX CLAUSES

Zubizarreta; Pancheva's (henceforth Z; P) (2017) account of person marking in Paraguayan Guaraní (PG) points out that a direct/ inverse system is at stake, in root/ matrix clauses. Assuming Ritter; Wiltschko's (2014) theory, according to which Infl has a dedicated function of anchoring the described event to the speech event, which is achieved via a *Tense specified Infl* or via a *Person specified Infl*, Z;P's (2017) hypothesis is that there is a direct connection between a direct/inverse system and a system where Infl is specified for Person, not for Tense, Paraguayan Guaraní (PG) meeting this condition.<sup>8</sup>

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<sup>8</sup> Z; P (2017) take into consideration previous studies arguing that Tense is not grammatically encoded in Tupí Guaraní (TG) languages (cf. TONENHAUSER, 2011, cited by the authors).

Languages with a *Person-specified Infl* give primacy to participants in the speech event with respect to person marking on the predicate, under a person-hierarchy, which is stated as follows:<sup>9</sup>

- (9) Person hierarchy in Generalized (and Restricted) P-languages
- a. Participant > 3 (Universal)
  - b. (i) 1P > 2P / (ii) 2P > 1P (Language particular)

The direct order is observed in intransitives and transitive clauses, the latter in terms of a person hierarchy, whenever the external argument (EA) is higher than the object (O) on the P-hierarchy (where O includes the internal argument and Possessors of incorporated inalienable objects). Accordingly, the inverse order arises when O is higher on the P-hierarchy than the external argument. In generalized P-languages the difference between the two orders is structurally reflected in the hierarchical organization of O with respect to EA.

The *Person constraint on phases* ensures the visibility of a *P-unique* argument that can map onto a speech act participant (an interface notion), being triggered by an interpretable and valued p-feature on the head of a phase. In the formal analysis, they assume the structure-building notion of phase, as a syntactic domain in which only the head and its left edge are visible for the next level of computation, as formulated in Chomsky's (2001) Minimalist framework. In particular, the *phase-edge person constraint* determines that a [+Participant] argument (when present) obligatorily moves from the verbal (*vP*) internal position to the inflectional domain, in terms of the following components:

- (a) *Domain of application*: phases that contain one or more [+participant] specified Ds;
- (b) *P-prominence*: the [+Participant]-specified D must be located at the edge of the phase  $\beta$  that enters an agreement relation with the interpretable person feature on the head of  $\beta$ ;
- (c) *P-uniqueness*: at most one D in  $\beta$  is eligible to satisfy (b);
- (d) *P-primacy*: in cases where more than one D can satisfy (b) in  $\beta$  and where one D is specified as [+Author] and the other as [-Author], then for any given language L, the D that satisfies (b) is specified as (i) [+Author] or (ii) [-Author] (a parametrized condition).

In Z; P's (2017, p. 8) model, the P-constraint requires agreement with the person feature on the phase head, which is interpretable and valued, hence the agreement relation does not imply feature valuation (as AGREE does in Minimalism), rather it serves "to identify the argument that anchors the described event to the speech event". The P-constraint adds the notion of phase as the relevant domain, and the edge of phase as the relevant structural

<sup>9</sup> Regarding P-hierarchy, Z; P (2017) assume the distinction between 1P and 2P versus 3P, as originally formulated by Benveniste, in terms of presence of *person* specification in the former, but not in the latter.



position. In generalized Person-languages, Infl and *v* carry a *p*-feature.<sup>10</sup> Regarding PG, an interpretable *p*-feature is introduced on the functional head Infl. While 3P object does not trigger positive specification for the Participant feature on '*v*', with object 1P and 2P, '*v*' is marked positively. In the domain of Infl, '*v*' enters an agreement relation with the object.

In languages such as PG, primacy is given to the speaker (9bi). Intransitives predicates display a direct paradigm, as expected: the sole D at the edge of '*v*' is the External Argument (EA). The phi-features of D trigger agreement with Infl, and are realized on Infl as prefixes, as illustrated in (10) with 1SG and 2SG prefixes, 'a-', 're-'. Direct order is found with transitive predicates with the same series of prefixes, whenever the internal argument is 3P, as the EA is higher in the person-hierarchy, thus meeting the P-constraint at the *v* level. When the EA is 1SG and the internal argument is 2SG or 2PL, the so-called 'portmanteau' prefixes 'ro-' and 'po-' are found, respectively, as illustrated in (12a).<sup>11</sup> In turn the EA is promoted to the edge of INFL, as illustrated in (11a) (which includes the transitivizer prefix 'mbo'), with its associated structures (11b) and (12b), respectively.

- (10) (Che) a-yahu; (Nde) re-yahu    direct order  
       (I) 1SG-bathe; (you) 2SG-bathe  
       'I bathe.';        'You bathe.'

(extracted from Z; P (2017, p. 12))

- (11) a. (Che) a-mbo-yahu ichupe/ Juan-pe; (Nde) re-mbo-yahu ichupe/Juan-pe  
       (I) 1SG-bathe him/                    Juan-OBL; (you) 2SG-bathe him/Juan-OBL  
       'I bathe him/Juan.'; 'You bathe him/Juan.'

- b. [ D I<sub>1SG/2SG</sub> ]<sub>VP</sub> [ DP<sub>1SG/2SG</sub> ] [ v<sub>p</sub> [ V DP<sub>p</sub> ] ]

(extracted from Z; P (2017, p. 12 / p. 17))

- (12) a. (Che) ro-mbo-yahu; (Ore) po-mbo-yahu  
       (I) PORT-TRZ-bathe; (We) PORT-TRZ-bathe  
       'I bathe you.';        'We bathe you.'

<sup>10</sup> The authors note: "[i]n proposing to treat the person features on Infl and *v* in Generalized P-languages as *interpretable*, we draw on parallels with tense and aspect features on these heads, which are interpretable in languages like English" (Z; P, 2017, p. 7).

<sup>11</sup> Z; P (2017, p. 11) observe that the so-called 'portmanteau' morphemes (also found in other TG languages) give rise to different accounts. In their analysis, these morphemes are "[t]he morphological marking of P-ordering among participants in clause (d) of the P-constraint". In this sense, they are not analysed as multiple agreement of [+PARTICIPANT] arguments, rather they mark the EA as 1SG and 1PL while signalling that the internal argument is 2P.



- b.  $[D]_{1SG/1PL} [v_P (DP_{1SG/1PL}) [v_{2SG} [V DP_{2SG}]]]$

(extracted from Z; P (2017, p. 12 / p. 17))

The inverse order arises with transitive predicates, when the EA (2P; 3P) is lower than the direct object (1P; 2P) in the P-hierarchy, under movement of the relevant DP to the edge of the phase  $v$ , thus nullifying “the initial hierarchical relation between the EA and the internal argument D” (Z; P, 2017, p. 18), and subsequently to the edge of INFL, “thus complying with the P-constraint”. In turn, the agreement relation with INFL meets the P-constraint at the level of the INFL-phase domain” (Z; P, 2017, p. 19), as illustrated in (13a), followed by its associated structure in (13b/ 13c).

- (13) a. (Nde) che=mbo-yahu; (Ha'e) ne=mbo-yahu inverse order  
(You) 1SG=TRZ-bathe; (She) 2SG=TRZ-bathe  
'You bathe me.:' 'She bathes you.'

- b.  $[v_P DP_{1SG/2SG} [v_{2SG/3SG} [v_{1SG/2SG} [V (DP_{1SG/2SG})]]]]]$

- c.  $[D]_{1SG/2SG} [v_P [v_{1SG/2SG} [v_P (DP_{1SG/2SG}) [v_{2SG/3SG} [v_{1SG/2SG} [V (DP_{1SG/2SG})]]]]]]]$

(extracted from Z; P (2017, p. 14))

In the next section, we will (tentatively) investigate the application of Z; P's (2017) system of person licensing in PG's root/matrix clauses to the above-mentioned facts about the distribution of coreferential prefixes in gerund constructions in Kamayurá language, as opposed to the realization of the relevant argument as a possessor.

### 3 AN ANALYSIS OF THE GERUND CONSTRUCTION IN KAMAYURÁ IN TERMS OF ZUBIZARRETA AND PANCHEVA'S (2017) THEORY OF PERSON ALIGNMENT/MARKING IN ROOT/MATRIX CLAUSES IN PARAGUAYAN GUARANÍ

As shown in the previous section, Person marking in Paraguayan Guarani (PG), a Tupí Guarani (TG) language, is expressed in the direct order with intransitive predicates, under prefix marking. With transitive predicates direct order arises whenever the EA is higher than the internal argument on the P-hierarchy, with the same series of prefixes found with intransitive predicates, further including 'portmanteau' prefixes for encoding the asymmetry between 1P and 2P (singular and plural). The inverse order arises in transitive predicates whenever the internal argument is higher (1P; 2P) than the EA (2P; 3P). In turn, gerund clauses in Kamayurá (a TG language) display direct order with intransitive predicates, the subject being marked by the series of so-called coreferential prefixes. With transitive



predicates, it is the internal argument that is marked on the predicate, as a possessor. The inverse order arises consistently in all persons — further displaying a person split, as 1P and 2P occur as a clitic, while 3P occurs as a prefix.

As mentioned above, a relevant property of the gerund construction is that tense interpretation is fixed, being either simultaneous or sequentially oriented with respect to tense in the matrix clause. In the former interpretation the gerund construction is ordered obligatorily after the matrix clause, while in the latter, ordering with respect to the matrix clause is irrelevant. As noted in Seki (2000), the occurrence of the gerund construction in the first position, before the matrix clause, gives rise to the so-called 'circumstantial' (CIR) mode on the verb in the matrix clause, which is taken as a piece of evidence for the adjunct status of the gerund construction with respect to the matrix clause, as this mode is triggered in the presence of adjuncts in the first position of the clause.<sup>12</sup>

Assuming Z; P's (2017) model, P-licensing in a gerund construction with intransitive predicates, as in (1), repeated in (14), applies directly: the external argument of the embedded clause is introduced by *v* in *specvP*, and is licensed under agreement with the P(erson)-feature in its extended projection, namely IP. The P-feature on INFL is spelled out by the dedicated series of coreferential prefixes (*we-*), while the *v* head is spelled out by the Gerund suffix (*-m*) (which may be null, depending on the language):

- (14) a-jot            we-maraka-m  
       1SG-come 1SG.COR-sing-GER  
       'I came singing/to sing.'

(adapted from Seki (2000, p. 130/197))

- (15) ... a<sub>i</sub>-jot [ (...) [<sub>IP</sub> I<sub>[+D]</sub> +[we-]<sub>i</sub> [<sub>VP</sub> [<sub>EA</sub> DP<sub>1SG-i</sub> [<sub>v</sub> v+[*-m*] [<sub>VP</sub> V<sub>maraka</sub> ]]]]]]

As we have seen, in gerund constructions with transitive predicates it is the internal argument that is marked, giving rise to an inverse order, in 1P, 2P and 3P. These facts pattern with nouns involving possession, which are analysed in Z; P (2017) in terms of the P-constraint. In Z; P's (2017) analysis, possessive nominals are projections of a D head which selects a possessor D (D<sub>poss</sub>): if D<sub>poss</sub> carries a [+participant] feature, 1P and 2P possessor moves to the edge of the D<sub>poss</sub> projection, as a clitic pronoun. In turn, if the D<sub>poss</sub> is marked as [-participant], no possessor promotion applies — the person prefix on the predicate being similar to Third person prefixes agreeing with INFL in the verbal domain.

<sup>12</sup> According to Seki (2000, p. 131), this verbal form is conditioned by the occurrence of an adverbial phrase in the first position of the clause: "o modo circunstancial é usado somente com verbo ativos, nas situações em que o sujeito é uma terceira pessoa e não vem expresso por nominal posicionado antes do adverbial" [the circumstantial mode is only used with active verbs, whenever the subject is a third person and is not expressed by a full noun positioned before the adverbial.]

A crucial difference between possessive nouns and gerunds with transitive predicates is that in the latter, not only the internal argument, but also the EA is syntactically represented. In this case, coreferential interpretation with the matrix subject arises under (subject) control. In turn the syntactic representation of the subject interacts with the fixed interpretation of Tense (cf. LANDAU, 2011).<sup>13</sup> We would like to suggest that this is the reason why the internal argument is consistently marked on the predicate.

Following Alexiadou's (2001) analysis of event nominalizations, we tentatively propose that gerund constructions with transitive predicates are projected in a mixed configuration in which a functional D selects INFL and  $v$ , given the parallel between D and C. The  $v$  projection introduces the external argument and is spelled out by the Gerund suffix, exactly as in intransitives. If INFL and  $v$  are marked with an interpretable  $p$ -feature, the internal DP moves to the edge of the INFL phase, occurring as a first or a second person clitic pronoun. In the third person, no movement applies, and the internal argument is marked by the person prefix on the gerund predicate. This is illustrated in (3), repeated in (16), followed by the associated structure in (17), and in (4), repeated in (18), followed by the associated structure in (19).

- (16) a-jot        **ne=mo'e-m**  
 1SG-come 2SG=teach-GER  
 'I come to teach you.'

(adapted from Seki (2000, p. 197))

- (17)  $a_i$ -jot [<sub>DP</sub> D [<sub>InflP</sub> [<sub>DP</sub> ne=] [<sub>InflP</sub> INFL<sub>[2SGj]</sub> [<sub>vP</sub> (DP<sub>2SGj</sub>) [<sub>vP</sub> [PRO]<sub>i</sub> [<sub>v</sub> [<sub>2SGj</sub> +[-m] [<sub>V<sub>mo'e</sub></sub> [DP<sub>2SGj</sub>]]]]]]]]]]

- (18) a-jot        **i-mo'e-m**  
 1SG-come 3SG-teach-GER  
 'I come to teach him.'

(adapted from Seki 2000: 197)

- (19)  $a_i$ -jot [<sub>DP</sub> D [<sub>InflP</sub> [i-]<sub>j</sub> +INFL<sub>[3SGj]</sub> [<sub>vP</sub> [PRO]<sub>1SG-i</sub> [<sub>v</sub> v+[-m] [<sub>vP</sub> V<sub>mo'e</sub> [DP<sub>3SG-j</sub>]]]]]]]]]]

As shown in (17) and (19), the agreement relation is established in the domain of the phase, as proposed in Z; P's (2017) for root/matrix clauses in PG: the (1P and 2P) DP argument agreeing with the interpretable  $p$ -feature on INFL (and  $v$ ) is introduced as a clitic pronoun, at the edge of the phase, in the specifier of INFL, under DP promotion from the  $vP$  projection.

<sup>13</sup> A related topic that we cannot discuss in this squib is the grammatical status of tense markers in nominalizations in TG languages (cf. TONENHAUSER, 2011), and in languages from other stocks (cf. LECARME, 1999, for Somali).

In the third person, INFL is not p-specified, and the DP internal argument is marked on the INFL head by a person prefix (thus implying object agreement, but not DP promotion).

While the choice between the configurations in (15) and (17)/(19) depends on whether the gerund construction is a (dynamic) intransitive or transitive predicate, respectively, in gerund constructions with stative/descriptive intransitive predicates, either configuration is possible. The immediate conclusion is that the configuration involving the D head is not specific to predicates with two arguments, thus implying that its occurrence is independent of P-primacy. In turn the presence of the D head activates possessor marking, under P-prominence.<sup>14</sup>

## 4 FINAL REMARKS

This study examined the syntax of gerund clauses in Kamaiurá, a TG language, showing that different agreement systems determine the expression of the arguments, depending on whether the predicate is a stative/ descriptive intransitive or a dynamic intransitive/transitive. Assuming Z; P's (2017) theory of person alignment in Paraguayan Guaraní in root/ matrix clauses, the following properties were proposed in the analysis of Gerund constructions in Kamaiurá:

- (i) with intransitives predicates (whether dynamic or stative/ descriptive), a direct order pattern arises, the subject being spelled out by a dedicated series of coreferential prefixes, in a configuration headed by INFL and *v*, which may be specified for an interpretable person feature, thus triggering DP movement to the edge of INFL.
- (ii) with transitive predicates, an inverse order arises, the internal argument being licensed in a mixed projection, involving the functional heads D, INFL, *v*, in which INFL and *v* may be specified for an interpretable person feature, while EA is licensed under control.

An additional remarkable property of gerund constructions is that coreferential prefixes are a dedicated series of direct order markers, pointing to the special status of the subject position in gerunds.

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<sup>14</sup> In Seki's (2000) discussion, the occurrence of the nominalized construction with (stative/descriptive) intransitives is morphologically constrained, as it is found with the class of nominalizations selecting the null prefix (as opposed to the *i-* prefix). This condition does not exclude what is said about descriptive/non-dynamic intransitives being able to select either configuration. We will leave the details about the structures involving stative/descriptive intransitives for future work.

## REFERENCES

ALEXIADOU, A. *Functional Structure in Nominals: Nominalization and Ergativity*. Amsterdam/Philadelphia: John Benjamins Publishing Company, 2001.

CABRAL, A. S. C.; RODRIGUES, A. D. O desenvolvimento do gerúndio e do subjuntivo em Tupí-Guaraní. In: RODRIGUES, A. D.; CABRAL, A. S. C. (ed.) *Novos estudos sobre línguas indígenas*. Brasília: Editora da UnB, 2005. p. 47-58.

LANDAU, I. *Elements of control: structure and meaning in infinitival constructions*. Dordrecht: Kluwer Academic Publishers, 2000.

LECARME, J. Nominal Tense and Tense Theory. In: CORBLIN, F. et al. (org.). *Empirical Issues in Formal Syntax and Semantics*. v. 2. (CSSP, 1997). The Hague: Holland Academic Graphics, 1999. p. 333-354. Available in: <[https://www.academia.edu/2486019/Nominal\\_Tense\\_and\\_Tense\\_Theory](https://www.academia.edu/2486019/Nominal_Tense_and_Tense_Theory)>. Access in: March 1st, 2022.

MAGALHÃES, M. S. O gerúndio em Guajá. In: RODRIGUES, A. D.; CABRAL, A. S. C. (ed.). *Línguas e Culturas Tupí*. v. 1. Campinas, SP: Curt Nimuendajú; Brasília: LALI/UnB, 2007. p. 349-355.

RODRIGUES, A. D. Morfologia do verbo Tupí. *Letras 1*, separata, Curitiba, 1953.

RODRIGUES, A. D. *Línguas brasileiras: para o conhecimento das línguas indígenas*. São Paulo: Loyola, 1994.

SALLES, H. Subordinação em línguas da família Tupí-Guaraní. In: CABRAL, A. S. A. C.; RODRIGUES, A. D. (org.) *Atas do I Encontro Internacional do Grupo de Trabalho sobre Línguas Indígenas da ANPOLL*. Belém, PA: Editora da UFPA, 2002, p. 418-424.

SALLES, H. Foricidade e marcação de pessoa em línguas da família Tupí-Guaraní. In: A. D. Rodrigues; A. S. C. Cabral (ed.). *Línguas e Culturas Tupí*. v. 1. Campinas, SP: Curt Nimuendajú; Brasília: LALI/UnB, 2007. p. 417-425.

SEKI, L. *Gramática do Kamaiurá: Língua Tupí-Guaraní do Alto Xingu*. Campinas, SP: Editora da UNICAMP/São Paulo: Imprensa Oficial, 2000.

TONENHAUSER, J. Temporal reference in Paraguayan Guaraní, a tenseless language. *Linguistics and Philosophy*, n. 34, p. 257-303, 2011.

VIEIRA, M. D. As construções com concordância múltipla em Guaraní. In: CABRAL, A. S. C.; RODRIGUES, A. D. (org.). *Línguas indígenas brasileiras: fonologia, gramática e história*. Tomo 1. Belém, EdUFPA, 2002. p. 425-433.

ZUBIZARRETA, M-L; PANCHEVA, R. A formal characterization of person-based alignment. The case of Paraguayan Guaraní. *Natural Language and Linguistic Theory*, v. 35, p. 1161-1204, 2017. DOI: <<https://doi.org/10.1007/s11049-016-9357-5>>.