On the syntax of sentence final particles in Tenetehára

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Abstract  The goal of this paper is to analyze the distribution of Sentence Final Particles (SFPs) in Tenetehára. They are formed by a set of functional items that occur in a rigid syntactic position in the right periphery of the sentence. The order of SFPs in this language can be formally captured if one starts from a unique base structure from which their relative order can be derived. More specifically, the proposal is that the linearization of the particles at the right is the result of the raising of the lowest particle, i.e. the raising of a projection containing an agreement particle to the specifier of a dominating projection. The proposal advanced here integrates two theoretical proposals of the Principles and Parameters Theory: Cinque’s Hierarchy (1999) and the Derivation by Phase Approach (Chomsky 2001).

1 Introduction

Just like other languages from the Tupí-Guaraní family,¹ the Tenetehára language² represents a set of particles which are placed in sentence-final positions. As we are going to show, those items convey different grammatical meanings related to tense, aspect, modality³ and genderlect. In this work, our main goal is to analyze the distribution of five classes of Sentence Final Particles (SFPs) in Tenetehára,

²According to Rodrigues (1984/1985) and Duarte (2007), Tenetehára belongs to the Branch IV of the Tupí-Guaraní family (Tupí trunk). Part of this investigation was developed during the field works done in the Caru and Araboia Indigenous Land, between 2010 and 2018. We would like to thank the important support of the Tenetehára people who helped us to set up the linguistic data that is part of the present research.
³According to Palmer (2001), modality is intimately associated with tense and aspect. These three categories belong to the extended projection of the verb.
which are formed by a set of items that occur in a rigid syntactic position, being linearized in the right margin of the sentence, namely, in the sentence-final position.

Turning to Cinque (1999, 2009, 2010, 2014, 2017), the order of SFPs can be formally captured if one departs from a (single) base structure, from which, by means of phrasal movements, the linear order of SFPs in Tenetehára is achieved. The type of derivation chosen by Tenetehára involves SNOWBALL MOVEMENTS in the PICTURES-OF-WHOM mode of PIED-PIPING, typical of head final languages. These movements have the effect of inverting the MERGE order (i.e. the hierarchical order) of SFPs. It is worth mentioning that this base structure is valid for all languages as it is taken to be a product of Universal Grammar (Cinque 2005, 2009, 2013, 2017). As we will see in sections 3 and 4, the linearization of SFPs in Tenetehára corresponds to the order of a head final language, where such categories come in the mirror image order (Baker 2005) of these elements in the universal hierarchy of MIDDLEFIELD projections.

The SFPs systems in Tenetehára presents a good empirical contribution to Kayne’s (2005) ONE FEATURE, ONE HEAD PRINCIPLE and to the cartographic enterprise. According to this principle, each semantic/pragmatic feature corresponds to a syntactic atom in the structure, to the effect that each head carries only one feature. By this principle, syntactic atoms are not reduced to morphemes or words. Hence, projections like CP/TP/vP, in the extended projection of the V, and DP, in the nominal expression, are actually richer than previously assumed. The fact that Tenetehára presents a set of functional particles that cooccur in the Middlefield (i.e. in the TP domain) shows that only two heads, T and C, would not be enough to encode the grammatical properties instantiated by the SFPs. Thus, we assume Kayne’s (2005) premise that each morphosyntactic/semantic feature corresponds to an independent syntactic head with a slot in the functional hierarchy. Kayne’s (2005) principle becomes a methodological guideline within Cartography (Cinque & Rizzi 2010), since it captures the general idea that has boosted this program from its beginnings. In table 1, we present Tenetehára SFPs which correspond to functional categories rigidly ordered from left to right.
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Table 1  Sentence final particles

<table>
<thead>
<tr>
<th>SFP₁</th>
<th>SFP₂</th>
<th>SFP₃</th>
<th>SFP₄</th>
<th>SFP₅</th>
</tr>
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<tbody>
<tr>
<td>Reflexes of phi-features of CP in the TP domain</td>
<td>Evidentiality, deontic modality or epistemic modality</td>
<td>State change or introduction of an unexpected assertion (or of an assertion contrary to expectation)</td>
<td>Maintenance of the assertion and the state described by the verb</td>
<td>Genderlect</td>
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<tr>
<td>ihe</td>
<td>nehe</td>
<td>kury</td>
<td>no</td>
<td>ty (wà)</td>
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<tr>
<td>zane</td>
<td>ri’i</td>
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<td></td>
<td>zàkwà</td>
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<td>ure</td>
<td>ra’a</td>
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<td>pa / xe</td>
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<td>pe</td>
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<td>kyn (wà)</td>
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<td>a’e (wà)</td>
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<td>ma</td>
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The paper is organized as follows. In §2, we initially exhibit the paradigms of verbal agreement in Tenetehára. It is worth presenting this paradigm to provide the reader a better comprehension of the data that will be presented throughout the paper. After that, we make a description of the SFPs system in Tenetehára, by presenting the inventory of the categories shown in table 1. For the sake of exposition, SFPs are organized in five classes (SFP₁—SFP₅). The typology described in the table above corresponds to the linearization order of these categories, from left to right, in Tenetehára. Once we will analyze the distribution of SFPs in the wake of Cinque (1999, 2006, 2009, 2017), we have to reinterpret table 1. Hence, under the perspective of Cinque’s hierarchy (1999) and the Mirror Principle (Baker 2005), we assume two fundamental premises as valid for Tenetehára as well:

i. *Cinque’s hierarchy (1999):* the subdivision in SFPs (table 1) actually corresponds to a description of Tenetehára linear order. Therefore, it must be recognized that what we call SFP₂, for instance, would correspond to various syntactic heads within the inflectional domain;
ii. Mirror Principle (Baker 2005): the linear order of Tenetehára SFPs is purely epiphenomenal. Hence, as one goes from left to right in table 1, the order of phrasal movements (when more than one SFP cooccurs in a sentence), which are necessary to derive the linear order, is reflected in morphology.

In section 3, we bring sentences having more than one SFP. Our goal is to verify distributional constraints on the cooccurrence of SFPs.

In section 4, we interpret the data presented in §2 and 3 within Cinque’s (1999, 2006, 2009, 2010, 2013, 2017) cartographic framework combined with Chomsky’s (2001) derivation by phase approach. Finally, in section 5, we present our main findings and point out some issues which deserve future research.

2 Data Presentation

Before describing the SFP system, it is worth presenting the verbal agreement paradigms in Tenetehára. That will help us to understand the data discussed further in the paper.

2.1 Agreement in Tenetehára

As is the rule in the Tupí-Guaraní languages, Tenetehára nouns are not inflected for Case by suffixation to distinguish the subject from the object. According to Duarte (2007), Castro (2017), Camargos (2017), a.o., these syntactic functions are primarily expressed by two groups of personal markers.

Due to the sensitivity to the person hierarchy, which can be formalized along the lines of (1), in the contexts where the subject is higher than the object, the verb operates the prefix series of the first agreement paradigm to mark the external argument. On the other hand, when the object is higher in the person hierarchy, the verb triggers the prefixes of the second agreement paradigm, which refers to the internal argument.

(1) 1st person > 2nd person > 3rd person–FOC > 3rd person+FOC
(where ‘>’ means ‘higher than’)

In table 2, we synoptically show the prefixes of the paradigm 1, that refers to the external argument, and those of the paradigm 2, which refers to the internal argument, according to the person hierarchy presented in (1).
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In the examples below, the external argument is higher than the internal one in the person hierarchy. This way, the paradigm 1 is activated, which corresponds to the verbal agreement prefixes referring to the external argument.

(2) a. \textit{a-exak} zàwàruhu taw φ-pe ihe
\hspace{1em}1SG-see jaguar village RLT-in 1SG

‘I saw the jaguar in the village’

b. \textit{uru-exak} zàwàruhu taw φ-pe ure
\hspace{1em}1PL.EXCL-see jaguar village RLT-in 1PL.EXCL

‘We saw the jaguar in the village’

c. \textit{xi-exak} zàwàruhu taw φ-pe zane
\hspace{1em}1PL.INCL-see jaguar village RLT-in 1PL.INCL

‘We saw the jaguar in the village’

\(^4\)Used abbreviations: 1 first person; 2 second person; 3 third person; \textit{AT} evidential particle which indicates a situation attested by the speaker; \textit{CAUS} causative; \textit{CERT} epistemic modality of certainty; \textit{CHNG} particle indicating state and assertion change; \textit{DBT} epistemic modality of doubt; \textit{DECL} declarative; \textit{DPST} distant past; \textit{DSLC} verbal affix which indicates a dislocated nuclear argument; \textit{EMP} emphatic marker; \textit{PSB} deontic modality of possibility and permission; \textit{EXCL} exclusive; \textit{G} generic; \textit{FUT} future; \textit{GNDL} gender particle (genderlect); \textit{IMP} imperative; \textit{INCL} inclusive; \textit{INT} deontic modality of intention; \textit{MNT} particle indicating state and assertion maintenance; \textit{N} non- (e.g. \textit{NAT} evidential particle that indicates a situation non-attested by the speaker); \textit{NEG} negative, negation; \textit{PL} plural; \textit{PROG} progressive; \textit{PROJ} projective aspect; \textit{PROX} proximate aspect; \textit{PST} past; \textit{REP} repetitive aspect; \textit{RLT} relational prefix; \textit{RPST} recent past; \textit{SG} singular; \textit{TOP} topic.
d. *ere*-exak zàwàruhu taw ∅-pe ne
   2SG-see jaguar village RLT-in 2SG
   ‘You saw the jaguar in the village’ (singular)

e. *pe*-exak zàwàruhu taw  ∅-pe pe
   2PL-see jaguar village RLT-in 2PL
   ‘You saw the jaguar in the village’ (plural)

f. *w*-exak zàwàruhu taw  ∅-pe a’e
   3-see jaguar village RLT-in 3
   ‘He saw the jaguar in the village’

g. *w*-exak zàwàruhu taw  ∅-pe a’e wà
   3-see jaguar village RLT-in 3 PL
   ‘They saw the jaguar in the village’

In the examples shown in (3), the internal argument is higher than the external one, in the person hierarchy. As consequence of this relation, it is the internal argument that starts controlling the verbal agreement, as shown by the agreement prefixes in the paradigm 2. The examples below also show that, in the left of the verbal root, a morpheme, {r-}, is spelled out. It can be analyzed as an inverse voice marker (Payne 1994).

(3)  a. *he=*r-exak zàwàruhu taw  ∅-pe a’e
   1SG=RLT-see jaguar village RLT-in 3
   ‘The jaguar saw me in the village’

b. *ure=*r-exak zàwàruhu taw  ∅-pe a’e
   1PL.EXCL=RLT-see jaguar village RLT-in 3
   ‘The jaguar saw us in the village’

\footnote{Inverse voice markers are traditionally known as relational prefixes. Since this is not the goal of this work, we will not discuss the grammatical statute of these morphemes in Tenetehára. We highlight, however, that these relational prefixes are widely discussed in the Tupí-Guaraní literature and that several analyses have already been proposed for them. Under a generative perspective, for instance, Duarte (2009: 125) suggests that “the occurrence of the prefix {r-} should be understood as a reflex of the Absolutive Case valuation operation, which occurs in the vP domain”.

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In the next subsection, we illustrate each one of the five Tenetehára SFPs types with examples.

2.2 Sentence Final Particles

2.2.1 SFP1

In Tenetehára, even though it is not obligatory\(^\text{6}\), it is very common to find, in the right margin of the sentences, particles\(^\text{7}\) whose function is to resume the subject of verbal predicates, by agreeing with it in person and number. It is necessary to highlight that, in those positions, these particles do not occupy argumental positions. In addition to that, they do not necessarily reflect the person and number features encoded in the verb. The following examples illustrate this phenomenon:

\[
\begin{align*}
(4) \quad \text{a.} & \quad \text{ere-}(e)xak \text{ kwaharer ka’a } \text{ r-upi } \text{ ne} \\
& \quad \text{2SG-see} \quad \text{ boy} \quad \text{jungle} \quad \text{RLT-in} \quad \text{2} \\
& \quad \text{‘You saw the boy in the jungle’}
\end{align*}
\]

\[
\begin{align*}
\text{b.} & \quad *\text{ere-}(e)xak \text{ kwaharer ka’a } \text{ r-upi } \text{ a’e} \\
& \quad \text{2SG-see} \quad \text{ boy} \quad \text{jungle} \quad \text{RLT-in} \quad \text{3} \\
& \quad \text{‘You saw the boy in the jungle’}
\end{align*}
\]

\(^\text{6}\)In fact, these particles are not obligatory. However, some speakers report that the absence of these particles sounds as though “something is missing” or that “the word is incomplete”.

\(^\text{7}\)Although the literature usually refers to these particles as pronouns, this function is not very clear, since they can co-occur with full DPs.
(5)  
a. \( \text{nê} = \text{r-exak kwa} \text{har er kâ'a r-upi a'ê} \)  
\( 2\text{SG}=\text{RLT-see boy jungle RLT-in 3} \)  
‘The boy saw you in the jungle’

b. \( *\text{nê} = \text{r-exak kwa} \text{har er kâ'a r-upi ne} \)  
\( 2\text{SG}=\text{RLT-see boy jungle RLT-in 2} \)  
‘The boy saw you in the jungle’

First, note that the direct agreement system arises in the examples in (4), as in (2) too. So, in (4a), the verbal predicate \( \text{exak} \) ‘to see’ selects the second person subject, which triggers, in the verb, the morpheme \( \{\text{ere}-\} \), and the DP object \( \text{kwa} \text{har er} \) ‘boy.’ Notice that the second person particle \( \text{nê} \) occurs in the end of the sentence and resumes the external argument subject in terms of person and number features. On the ungrammaticality of (4b), it is connected to the fact that the pronoun appearing in the end of the sentence is not compatible with the Subject, in terms of person and number features.

As for the examples in (5), the inverse system of argument encoding emerges in the verbal predicate, in line with the person hierarchy given in (1). In (5a), the verbal predicate \( \text{exak} \) ‘to see’ introduces the DP subject \( \text{kwa} \text{har er} \) ‘boy’ and the second person object which triggers the prefix \( \{\text{ne}-\} \) in the verb, since it is in the higher position in the hierarchy. Since the object controls agreement in this situation, the inverse context prefix \( \{\text{r}-\} \) occurs in the verb. Additionally, the third person particle \( \text{a'ê} \), which occurs in the end of the sentence, resumes the external argument (Subject) agreeing with it in terms of person and number. Thus, the well-formedness of (5a), as well as the ungrammaticality of (5b), provide morphosyntactic evidence in favor of the analysis that the pronoun occurring in the end of the sentence can only be controlled by the external argument of the verbal predicate, independently of the agreement established on the verb.

Table 3 synoptically gives the complete set of SFP\(_1\)s:
According to Costa (2009), verb moods such as indicative, subjunctive and imperative are grammatical sources available to express modality. In Givón’s view (2001), modality is a wider linguistic category which expresses the speaker’s attitude towards what they are saying in the proposition (Givón 2001: 300). Therefore, while mood is typically expressed through verbal morphology (for instance, by free or bound morphemes) (Cinque 1999: chapters 3 and 4), modality is expressed by different linguistic tools (Costa 2009) such as AdvPs in Romance, “restructuring” verbs in European Romance languages etc.

As reported by Haan (1999), epistemic modality evaluates proofs. Based on this evaluation, it attributes a degree of commitment to the speaker’s elocution. In this sense, the statement can be evaluated (measured) so as to have high, reduced or low evidence. Hence, epistemic modality will be used to express the speaker’s degree of confidence with respect to the truth expressed in the propositional content (Cinque 1999: 86). On the other hand, an evidential states that there are indications to the speaker’s statement, though they refuse to evaluate/interpret such pieces of evidence anyway, and simply indicates the information source. Finally,

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8 According to Givón (2001), there are essentially two types of judgements on the propositional information conveyed by the speaker, namely: (i) epistemic judgement: truth, probability, certainty, belief and evidence; and (ii) assessment judgement (“deontic”): desire, preference, intention, ability and obligation.

9 The category “evidentiality” is actually subdivided in four subcategories: reportive evidentiality, inference, deduction and perception of event (Hengeveld & Dall’Aglio-Hattner 2015).
in Palmer’s view (Palmer 2001: 70), deontic/dynamic modality “refers to events that are not actualized, events that have not taken place but are merely potential, and may, therefore, be described as ‘event modality’.” In the dynamic modality, the conditioning factors are external to the subject, whereas in the deontic modality the conditioning factors are internal.

In Tenetehára, one finds the following (sentence-)final particles related to mood/modality:

(i) ri’i: epistemic modality of certainty

According to Boudin (1966) and Harrison & Harrison (2013), the particle ri’i is used to mark the recent past\(^\text{10}\). In Silva’s (2010) view, on the other hand, this particle expresses an assertion, in contexts where the speaker performs confirmative assertions. In our analysis, ri’i is taken to be the lexicalization of the epistemic modality of certainty. This is illustrated by the data below.

(6) a-ha rakwez ka’a r-upi ihe ri’i
1SG-go RPST.AT jungle RLT-to 1SG CERT

‘Surely, I went to the jungle’

(7) a-ha-putar ka’a r-upi ihe ri’i
1SG-go-PROX jungle RLT-to 1SG CERT

‘I’m going to the jungle’ (immediate and certain future: I’m already going)

(8) a-zegar-(pu)ta(r) ri’i
1SG-sing-PROX CERT

‘I’m going to sing’ (Silva 2010: 509)

\(^{10}\)It is possible that this category is undergoing a grammaticalization process, thus moving from T\(_\text{Past}\) to the higher projection of the epistemic modality, under Cinque’s (1999) treatment of the functional categories of the clause. See Roberts & Roussou’s (2008) proposal, which turns to Cinque’s (1999) hierarchy to propose a formal theory of grammaticalization.
(9) *ne=∅-wioràw ∅-pupe rakwez a-zur ihe ri’i ty i’-i*
   2SG=RLT-guitar RLT-inside RPST.AT 1SG-come 1SG CERT GNDL 3-tell
   zu’i  i-zupe
   frog  3-to
   “‘I certainly came in your guitar’, the frog told him‘ (Duarte et al. 2018: 40)

(10) *u-zewyr rakwez he=r-ywyr a’e ri’i i’-i-mua’u*
    3-return RPST.AT 1SG=RLT-brother.young 3 CERT 3-tell-fake
    ihe=∅-we
    1SG=RLT-to
    “‘My younger brother certainly returned”, he told me a lie’ (Duarte et al. 2018: 25)

Observe that, in (6), the intransitive verb *ha ‘to go’* selects the first-person singular subject represented by the prefix {a-}. The same happens in (7). Besides that, in both sentences, the particle *ri’i* highlights the confirmative judgment made by the speaker on the event described. In the data in (8), the verb *zegar ‘to sing’* has as its nuclear argument the first-person subject morphologically realized by the prefix {a-}, along with the proximative aspect morpheme {putar}. Once more, the particle *ri’i* shows that the speaker confirms that the event will indeed happen.

In (9), the particle *ri’i* marks the epistemic modality of certainty. This particle is also present in (10), where it conveys the speaker’s commitment with respect to the propositional content.

(ii) *ra’a*: epistemic modality of doubt

The particle *ra’a* marks the immediate past in question contexts (Harrison & Harrison 2013). However, a more detailed analysis would indicate that the particle *ra’a* gives the sentence the flavor of epistemic modality of doubt, as can be seen by the following data:

(11) *u-mai’-u kwaharer ra’a*
    3-thing-eat child DBT
    ‘Did he eat already?’
(12) o-ho-putar Hikar Amarante ∅-pe a’e ra’a
3-go-PROX Hikar Amarante RLT-to 3 DBT

‘(I don’t know if) Hikar will go to Amarante’

(13) a. w-exak z(e)-aipo amo i-zuru-pyter mehe a’e ra’a
3-see NAT-DBT other 3-mouth-suck when 3 DBT

‘(I think) he_k saw someone while he_k kissed someone else’

b. *w-exak rakwez amo i-zuru-pyter mehe a’e ra’a
3-see RPST.AT other 3-mouth-suck when 3 DBT

‘He saw someone while he kissed someone else’ (*recent past attested with doubt)

In (11), the predicate mai’u ‘eat something’ projects the DP kwaharer ‘child’ as its subject. Given that, it triggers the third person particle a’e as SFP1. Additionally, the epistemic modality of doubt ra’a indicates that the speaker does not know if the propositional content is true. In the data in (12), the SFP2 ra’a also conveys the epistemic modality of doubt.

In (13), the predicate exak ‘see’ selects two nuclear arguments, namely, the first-person subject—which triggers the prefix {w-} in the verb—and the indefinite pronoun amo ‘other’, as the direct object. Moreover, the SFP1 a’e reflects the person and number features of the external argument. Besides that, (13) exhibits a subordinate clause headed by the complementizer mehe ‘when’ and the verbal predicate i-zuru-pyter ‘kiss’. Finally, the grammaticality of (13a), contrasted to the ungrammaticality of (13b), is due to the fact that the particle z(e)-aipo (evidential particle that indicates a situation non-attested by the speaker, plus the epistemic modality of doubt particle) has, in its internal structure, elements that express uncertainty, and because of that, it is compatible with the SFP2 ra’a, an epistemic of doubt particle. In this sense, sentence (13b) is ungrammatical because the particle rakwez, that marks the past tense attested by the speaker, is incompatible with the particle ra’a (epistemic modality of doubt). A particle of doubt cannot co-occur with an evidential particle.

(iii) nehe: deontic modality of intentionality

In Boudin (1966) and Harrison & Harrison’s (2013) description, the particle
nehe marks the near future. Silva (2010) presents a more detailed analysis. Besides acknowledging that this particle marks the future, the author explains that it also expresses intentional modality. In fact, it can be corroborated by means of the following examples.

(14)  
\[ w\text{-}exak\text{-}\text{putar} \text{ Hikar} \text{ amo} \text{ h-emi-riko-ràm} \text{ i-katu-ahy-ma’e} \quad \text{a’e} \]
\[ 3\text{-}\text{see-PROX} \text{ Hikar a} \quad 3\text{-}\text{NMLZ-to.be-FUT} \quad 3\text{-}\text{good-INTS-NMLZ} \quad 3\text{SG} \]
\[ \text{nehe} \]
\[ \text{INT} \]

‘Hikar will find a good wife’

(15)  
\[ w\text{-}exak\text{-}___ \text{ Hikar} \text{ amo} \text{ h-emi-riko-ràm} \text{ i-katu-ahy-ma’e} \quad \text{a’e} \]
\[ 3\text{-}\text{see-___} \text{ Hikar a} \quad 3\text{-}\text{NMLZ-to.be-FUT} \quad 3\text{-}\text{good-INTS-NMLZ} \quad 3\text{SG} \]
\[ \text{nehe} \]
\[ \text{INT} \]

‘Hikar has the intention of finding a good wife’

In the data in (14) and (15), the verb exak ‘to see’ selects the DP Hikar—which controls the form of the third person SFP\textsubscript{1} a’e—as its subject and h-emi-riko-ràm i-katu-ahy-ma’e ‘a good wife’ as its object. The particle nehe in (15) indicates that the speaker believes that the subject of the sentence has the intention of accomplishing what is uttered in the propositional content of the statement.

The comparison between (14) and (15) indicates that the co-occurrence of the proximative aspect morpheme -putar with the SFP\textsubscript{2} nehe is compatible, since the semantic feature [+future] is shared by both morphemes. However, (15) points out to the fact that such co-occurrence is not obligatory.

(16)  
\[ aze \text{ pe-putar} \text{ uru-zuka} \quad \text{pe=∅-me nehe} \]
\[ \text{if 2PL-want 1PL.EXCL-break 2PL=RTL-to INT} \]

‘If you want, we can break it (the jar) for you’ (Duarte et al. 2018: 34)

(17)  
\[ e\text{-}mu-aku \quad \text{‘y nehe} \]
\[ 2\text{IMP-CAUS-warm water INT} \]

‘Warm up the water’
(18)  e-mu-awyze  zo  ’aw  awa  nehe  i-’i
          2IMP-CAUS-be.reconciled  NEG  that (who)  man  INT  3-tell

‘Do not reconcile with the man! He said’ (Harrison & Harrison 2013: 163)

The particle nehe in (16–18) conveys the intentional modality. In (16) it co-occurs with the verb zuka ‘to break,’ which projects the first person plural exclusive subject, whose morphology exhibit the form {uru-}. In (17), the SFP nehe indicates that the speaker acts on the subject of the sentence to produce in the latter the intention of performing the action expressed by the verbal predication. In (18), there is the occurrence of the imperative negation particle zo, and the particle nehe—pointing to the fact that the subject of the verb muawyze ‘to reconcile’ intends to perform the action expressed by this predicate.

(iv) rihi: deontic modality of possibility, permission, exhortation and request

According to Boudin (1966), the particle rihi expresses possibility, permission and exhortation. In Harrison & Harrison’s (2013) analysis it conveys the following meanings: (i) yet and now, (ii) exhortative and (iii) future. This particle can also express the imperfect aspect (as opposite to the particle kwez (perfect aspect)) (Silva 2010).

(19)  aipo  ere-iko  tuwe  ko  r-upi  rihi  ty  i-’i  i-zupe  wà
       DBT 2SG-to.be  EMP  here  RLT-in  PSB  GNDL  3-tell  3-to  PL

‘“How is it possible that you are around here?” They said (the Maíras) to him (the stubborn) (dialogue between the men)’ (Duarte et al. 2018: 34)

(20)  a-ha-putar  ka’a  r-upi  ihe  rihi
       1SG-go-PROX  jungle  RLT-to  1SG  PSB

‘It is possible that I go to the jungle’

(21)  aipo  ere-ho-putar  ka’a  r-upi  ne  rihi  ty
       DBT 2SG-go-PROX  jungle  RLT-to  2SG  PSB  GNDL

‘Is it possible that you will go to the jungle (dialogue between two men)’
Besides the epistemic of doubt particle *aipo*, the example (19) exhibits the particle *rihi* which denotes possibility. The same particle is present in the examples in (20) and (21). In those examples, the semantics of *rihi* refers to the possibility of the execution of the action linked to the verb *ho* ‘to go.’ The lexical item *aipo* in (21) also expresses the epistemic modality of doubt, already described.

In accordance with Taylor (1989), the imperative mood is decomposed in levels of imperativeness, namely: imperative itself, prohibitive, optative, exhortative, premonitory, supplication and advice. Our conjecture is that the particle *rihi*, when expressing the imperative, is located at the exhortative level.

(22)  
\[ e\text{-zur} \quad xe \quad rihi \]
\[ 2\text{IMP-come here} \quad PSB \]

‘Please come here’

(23)  
\[ za\text{-ha-wi} \quad ka’a \quad \emptyset\text{-pe} \quad rihi \]
\[ 1\text{PL.INCL-go-REP jungle} \quad RLT\text{-in} \quad PSB \]

‘Let’s go into the jungle again’

The data in (22) exhibit the intransitive verb *zur* ‘to come,’ whose subject is expressed by the second person morpheme in the imperative mood, represented by the morpheme \{e-\}. This morpheme, together with the SFP\(_2\) *rihi*, adds an exhortative imperative reading to the statement. The particle *rihi* also appears in (23). In that example, it denotes that this imperative is made in a polite manner by the speaker. Having described in detail the syntactic-semantic behavior of SFP\(_2\)S, we sum up their major functions in table 4 below:
On the syntax of sentence final particles in Tenetehára

Camargos, Castro, & Tescari Neto

<table>
<thead>
<tr>
<th>Particle</th>
<th>Modality</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ri‘i</em></td>
<td>Epistemic</td>
<td>Certainty</td>
</tr>
<tr>
<td><em>ra‘a</em></td>
<td>Epistemic</td>
<td>Doubt</td>
</tr>
<tr>
<td><em>nehe</em></td>
<td>Deontic</td>
<td>Intention</td>
</tr>
<tr>
<td><em>rihi</em></td>
<td>Deontic</td>
<td>Possibility and permission (with imperative/jussive: order, exhortation, request)</td>
</tr>
</tbody>
</table>

Table 4  Sentence Final Particles 2 (SFP\textsubscript{2})

### 2.2.3 SFP\textsubscript{3}

The third group of particles (SFP\textsubscript{3}) has categories that express change of state or that introduce an unexpected assertion (or an assertion contrary to the expectation)\textsuperscript{11}. Moreover, it seems that the proximative aspect is associated with this particle, reason why speakers usually translate this item as the adverb “now.”

\textsuperscript{11}In this context, Boudin (1966) says that the particle *kury* points out the temporal notion: in this moment and presently. According to Harrison & Harrison (2013), it indicates resolution: now, then. Finally, in Silva’s (2010) view it encodes the temporal notion: now and today.

(24)  
\begin{verbatim}
a-zega\-kakwez\ n-a-zega\-wi-kwaw \ kury
\end{verbatim}

\begin{verbatim}
1SG-sing\ DPST.AT\ NEG-1SG-sing-REP-NEG\ CHNG
\end{verbatim}

‘I sang, now I don’t anymore’ (Silva 2010: 504)

(25)  
\begin{verbatim}
a-pynyk\ kakwez\ n-a-pynyk-wi-kwaw \ kury
\end{verbatim}

\begin{verbatim}
1SG-dance\ DPST.AT\ NEG-1SG-dance-REP-NEG\ CHNG
\end{verbatim}

‘I danced, now I don’t anymore’ (Silva 2010: 504)
It should be noted that, in the sentences (24) and (25), the particle *kury* occurs in the second clause, since it introduces a proposition that indicates a change in the event of the previous sentence. Other examples are given below.

(26) *upaw wa-’u-n wà kury*
    everybody 3PL-eat-DSCL PL CHNG
    ‘Suddenly, everybody was eaten’

(27) *màràn t-eko-haw ∅-pe re-ata ne kury*
    how many 3G-to.be-NMLZ RLT-in 2SG-walk 2SG CHNG
    ‘In how many villages have you been?’

(28) *w-exak ze-k-aipo tapi’ir ka’a r-upi i-ata mehe a’e wà kury*
    3-see NAT-PST-DBT tapir jungle RLT-por 3-walk when 3 PL
    CHNG
    ‘Suddenly, they saw the tapir while it walked through the jungle’

In the sentences above, the realization of the particle *kury* indicates that the verbal predicates introduce a new event. In (28), for instance, the presence of this particle entails that the subject of the predication, third person plural, saw the tapir right at that moment, not previously.

2.2.4 SFP₄

*Boudin (1966)* translates the particle *no* as “also.” *Harrison & Harrison (2013)* reports both *also* and *again* as good translations for *no*. *Silva (2010)*, on the other hand, states that this particle conveys the repetitive aspect. In our analysis, SFP₄ *no* indicates the maintenance of the assertion and the state described by the verbal predication. Generally, it points out the repetition of an action (or event) with other subjects. It may also be able to establish a sequence of events performed by the same subject. Normally, speakers translate this particle as the adverb *also*. It appears in the end of each sentence or just in the end of the last clause.
(29)  a. zane-karuk ty, i-’i ze-k-aipo i-zupe wà
   1PL.INCL-afternoon GNDL 3-tell NAT-PST-DBT 3-to PL

   ‘Good afternoon, they (the guests) said to it (the jaguar)’

  b. zane-karuk aipo, i-’i ze-k-aipo zàwàruhu
   1PL.INCL-afternoon DBT 3-tell NAT-PST-DBT jaguar

   wa=n-upe a’e no
   3PL=RLT-to 3 MNT

   ‘Good afternoon, the jaguar also said to them’

   The reason the particle no occurs in the second sentence in (29) is related to
   the fact that this predication keeps the event of the previous clause and just alters
   its subject. Then, in this example, the event is conserved and its subject is altered.
   Let us see some examples, where the event is kept.

(30)  a. i-ma’eahy ze-k-aipo a’e r-upi w-ixe o-ho ywykwar
   3-sick NAT-PST-DBT there RLT-in 3-enter 3-go hole

      ∅-pupe
      RLT-inside

   ‘It (the jaguar) got sick and that is why it entered in a hole’

  b. na’e w-ixe o-ho wywykwar ∅-pupe a’e wà no
     so 3-enter 3-go hole RLT-inside 3 PL MNT

   ‘So, they (the first preys) also entered the hole’

  c. w-ixe mìar o-ho a’e wà no
     3-enter prey 3-go 3 PL MNT

   ‘The preys (the last) entered too’

(31)  o-ho awa ko ∅-pe, o-ho kuzà a’e no
     3-go man farm RLT-to 3-go woman 3 MNT

   ‘The man went to the farm, the women went too’
In the following examples, differently from the previous ones, the subject and the event introduced by the verbal predication are kept. However, there is a change of the participants whose syntactic function is that of the object.

(32) $u$-zuka awa $zàwàruhu$, $u$-zuka tapi’ir no
3-kill man jaguar 3-kill tapir MNT

‘The man killed the jaguar, he also killed the tapir’

(33) $o$-mono $u$-kamir $i$-zupe $u$-ku’a-pixi-haw no
3-give 3-shirt 3-to 3-belt-tie-NMLZ MNT

‘He gave his shirt and also his belt’ (Harrison & Harrison 2013: 90)

### 2.2.5 SFP$_5$

Finally, we present the gender particles, which fit in the definition of *genderlects*, term initially coined by Tannen (1990) and further developed by Rose (2013, 2015) in reference to a category found in South American indigenous languages. The *Genderlect Theory* emphasizes that both men and women of a given community, though speaking the same language, speak different dialects, nonetheless. According to Tannen (1990), each gender has a vocabulary set and favorite topics (many times unconsciously) which will result in differences highlighted in many domains, such as phonology, morphology and the lexicon. In this sense, in Tenetehára, there are particles whose grammatical function is to mark the gender of the interlocutors, namely that of the speaker and that of the listener. They can be divided in two series, one with the forms used by the male gender and the other with the forms used by the female gender. Those particles are shown in table 5.

<table>
<thead>
<tr>
<th>Listener</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
<td>$ty$ (wà)</td>
</tr>
<tr>
<td>Female</td>
<td>$zàkwà$</td>
</tr>
<tr>
<td>Not marked</td>
<td>$pa$ / $xe$</td>
</tr>
</tbody>
</table>

Table 5  Sentence Final Particles 5 (SFP$_5$)
These particles are very common in conversation. According to Seki (2000), in Kamaiurá (Tupí-Guaraní Family), some of these particles convey the exclamative mood and regularly indicate emotion. Such affirmation seems to be in accordance with the Tenetehára data below.

(34) **Dialogue between two men**

a. \(ne=\emptyset\)-katu \(ty\)
   \(2\text{SG}=\text{RLT-good}\) \(\text{GNDL}\)
   ‘Are you okay?’

b. \(he’e\ pa\ ne=\emptyset\)-katu \(ne\ no\)
   yes \(\text{GNDL}\) \(2\text{SG}=\text{RLT-good}\) \(2\text{SG MNT}\)
   ‘Yes! Are you okay too?’

(35) **Part of a dialogue between two women**

a. \(aipo\ ne=r-aku\ \(kyn\)
   \(\text{DBT}\) \(2\text{SG}=\text{RLT-hot}\) \(\text{GNDL}\)
   ‘Do you have a fever?’

b. \(a-kwaw\ \(ne=\emptyset\)-kàg-(h)aw\ \(ihe\ \kyn\)
   1\text{SG}-\text{know}\ \(2\text{SG}=\text{RLT-strong-NMLZ}\) \(1\text{SG}\) \(\text{GNDL}\)
   ‘I know your strength’

Note that in the examples below, when a genderlect particle is used in a construction headed by the conjunction \(ta’e\) ‘because,’ the particle \(xe\) comes up to mark when the speaker is male; when the speaker is female, it is the particle \(kyn\) which appears.

(36) \(e-ze’eg\ \(zo,\ ta’e\ \(kwarer\ u-zeapyaka\ \(wa-iko\ \(wà\ xe\)
   2\text{IMP}-\text{speak}\ \neg\text{because}\ \text{boy}\ 3\text{-listen}\ \text{3PL-PROG PL}\) \(\text{GNDL}\)
   ‘Don’t speak now, because the boys are hearing’ (man speaking)
On the syntax of sentence final particles in Tenetehára Camargos, Castro, & Tescari Neto

(37) e-ze’eg zo, ta’e kwarer u-zeapyaka wa-iko wà kyn
2IMP-speak NEG because boy 3-listen 3PL-PROG PL GNDL

‘Don’t speak now, because the boys are hearing’ (woman speaking to another woman)

Having described the SFPs system in detail, we now examine the co-occurrence of these SFPs as well as their ordering restrictions.

3 Ordering Restrictions

We take the sentences in (38)-(41) below to analyze the co-occurrence of at least two SFPs within the same clausal domain. The tests used are decisively significant inasmuch as they can help us to verify issues like ordering restrictions (when more than one SFP appear in the sentence) and relative scope. Based on the methodology of the Cartography Program, five SFPs classes were identified, taking into account their possible combinations in the sentence. Besides that, each of those classes has a distinct feature, in line with Kayne’s (2005) “One Feature, One Head” Principle, and a dedicated, independent syntactic position (which can be identified through distributional tests). Let us combine two SFPs at once, each one coming from a distinct SFP group, in the two possible orders. At the end, by transitivity, we can thus reconstruct the relative order of the five classes of SFPs which obviously will match their order in the Cinque hierarchy.

(38) SFP₁ a’e > SFP₂ ra’a

a. ✓ u-zuka awa tapi’ir a’e ra’a
   3-kill man tapir 3 DBT
   ‘Did the man kill the tapir?’

b. * u-zuka awa tapi’ir ra’a a’e
   3-kill man tapir DBT 3
   ‘Did the man kill the tapir?’

The grammaticality of (38a) in contrast to the ungrammaticality of (38b) points to the fact that a’e precedes ra’a. Thus, SFP₁ > SFP₂.

The same methodological expedient can be used to test the position of SFP₂ w.r.t. SFP₃ and so on and so forth:
(39) SFP\(_2\) nehe > SFP\(_3\) kury
   a. ✓ a-zàn-putar nehe kury
       1SG-run-PROX INT CHNG
       ‘I’m going to run now’
   b. *a-zàn-putar kury nehe
       1SG-run-PROX CHNG INT
       ‘I’m going to run now’

The well-formedness of (39a), on the one hand, compared to the ill-formedness of (39b), on the other, indicates that the particle nehe (which belongs to the same class of ra’a, namely, SFP\(_2\)) must precede kury (from the class 3 (SFP\(_3\))). Hence, by transitivity, one arrives at the following hierarchical extract: SFP\(_1\) > SFP\(_2\) > SFP\(_3\).

(40) SFP\(_3\) kury > SFP\(_4\) no
   a. ✓ u-hem kuzà kury no
       3-arrive woman CHNG MNT
       ‘Suddenly the woman arrived too’
   b. *u-hem kuzà no kury
       3-arrive woman MNT CHNG
       ‘Suddenly the woman arrived too’

By the same line of reasoning, (40a) and (40b) shows that kury (SFP\(_3\)) precedes no (SFP\(_4\)). Thus, by combining the partial results of the precedence test seen so far, we arrive at the following hierarchical extract: SFP\(_1\) > SFP\(_2\) > SFP\(_3\) > SFP\(_4\).

(41) SFP\(_4\) no > SFP\(_5\) ty
   a. ✓ a-exak kuzà no ty
       1SG-see woman MNT GNDL
       ‘I saw the woman too (man speaking to another man)’
b. *a-exak kuzà ty no
1SG-see woman GNDL MNT

‘I saw the woman too (man speaking to another man)’

The precedence test applied in (41) shows that no (SFP4) precedes ty (SFP5). Hence, if one combines the partial results seen so far, by transitivity, it is possible to arrive at the following hierarchical order: SFP1 (a’e) > SFP2 (ra’al/nehe) > SFP3 (kury) > SFP4 (ty) > SFP5 (no).

The complete order we arrived at (see the last paragraph), on the basis of the precedence test combined with the transitivity expedient, can be further confirmed by (42) below, which has a representative of each particle group.

(42) SFP1 a’e > SFP2 nehe > SFP3 kury > SFP4 no > SFP5 ma

a. ✓ u-hem-putar Tukàn tàpuz Ø-me a’e nehe kury no ma
3-arrive-PROX Tukàn home RLT-in 3 INT GNDL MNT GNDL

‘Tukàn is arriving home now too (woman speaking to another woman)’


4 On the derivation of the sentences involving SFPs in Tenetehára

As clear from the previous discussions, SFPs in Tenetehára are formed by a set of items which occur in rigid syntactic positions in the right margin of the sentences. By considering their relative distribution, their morphosyntactic constraints and their functional and semantic implications (cfr. section 3), our proposal is that each class of SFPs enter the derivation in a dedicated head (X0) which semantically matches the content of one or more heads of the Cinque hierarchy (1999)—see the description of the SFPs classes in section 2. As SFPs are not AdvPs, there is no reason to believe that they are merged in specifier positions. Thus, by taking as our starting point the initial “explosion” of the projections of the IP/CP in the spirit of the Cartography approach (cfr. Cinque 1999; Kayne 2005; Cinque & Rizzi 2010, a.o.), we understand that the SFPs in Tenetehára are heads of the inflectional domain (namely, heads in the TP/IP domain).
Our proposal is that the linearization of SFPs in the right margin of the sentence in Tenetehára is the result of the movement of a lower particle—from that set of particles which triggers agreement (namely, SFP₁)—to the specifier of the projection that immediately dominates a higher particle in the hierarchy, i.e. SFP₂, SFP₃ etc. An indication that this is the correct derivation is given by the following morphosyntactic properties of Tenetehára: first, the verbal complex, formed by the thematic V plus agglutinating suffixes, is “closed off” by verbal negation (cfr. (43) in the sequence). Curiously, according to Cinque (1999: chapter 5), negation is a functional category that does not have a fixed place in the universal hierarchy of functional projections.¹² Secondly, Agreement appears as the first particle in the beginning of the new phase. Once it enters the derivation, it becomes the “engine” of movements (Cinque 2005, 2014). Hence, it will continue the derivation. In this regard, see the data where negation “closes off” the thematic V.

(43) n-u-mu-zahak-kwaw kuzà he=∅-memyr a’e wà
    NEG-3-CAUS-bathe-NEG woman 1SG=RLT-child 3 PL

‘The woman did not bathe my children’

According to Cinque’s (1999) study, which took into account a large number of languages of different families, Agreement and Negation do not have fixed positions in the hierarchy of functional categories of the clause. However, we have interesting clues to propose that in Tenetehára Negation marks the left edge of the low phase (vP) and that Agreement marks its beginning (i.e. the inflectional domain (TP) of the “zone” (in the Cinque hierarchy) which corresponds to the high phase (CP)). This is corroborated by the fact that Negation and SFP₁s appear to the immediate right of the verbal complex. (44) illustrates that zo, the imperative verbal unit, appears to the immediate right of the verbal stem.

(44) e-ze’eg zo ta’e kwarer u-zeapyaka wa-iko wà xe
    2IMP-speak NEG because boy 3-listen 3PL-PROG PL GNDL

‘Don’t speak now, because the children are listening’ (man speaking)

¹²We conjecture that Negation enters the derivation in the edge of the low phase, namely, in the edge of vP. There are reasons to suppose that this phase corresponds, in Tenetehára, to a relatively high position of the Middlefield, i.e. TP (T_Past or T_Future), since verbal negation appears to the immediate right of a verbal suffix of tense (past/future). SFPs cannot be directly attached to the verbal stem, as tense particles—by hypothesis, the categories of the “low phase” in Tenetehára—often does.
As seen in the previous sections, SFPs are linearized as “free morphemes” in the end of the sentence. That would suggest a derivation involving the (phrasal, not head) movement of the lowest SFP, namely, SPF₁. Given the examples presented in the previous sections, the “place” where these particles are merged is just above the low phase, vP. Once the cycle of the (lowest) phase (namely, the vP phase) is closed with Negation (if present), an agreement morpheme becomes the “engine” (Cinque 2009, 2010, 2014) of the movement already started by the lexical stem which has been previously attached to the categories of the low phase (namely, Tense, Aspect, etc). This derivational mechanism is illustrated by (27) and (30b), reproduced as (45) and (46), respectively, in the sequence. Agreement (Agr)—morphophonologically realized by ne in (45) and by a’e in (46)—plays an important role in the derivation of these sentences, by marking the “low” frontier—the “TP” in Tenetehára—of the high phase (CP). As such, Agr becomes the engine/the driving force of the movement.

(45) màràn t-eko-haw Ø-pe re-ata ne kury
how many 3G-to.be-NMLZ RLT-in 2SG-walk 2SG CHNG

‘In how many villages have you been?’

(46) na’e w-ixe o-ho wywykwar Ø-pupe a’e wà no
so 3-enter 3-go hole RLT-inside 3 PL MNT

‘So, they (the first preys) also entered the hole’

Having in mind the description of the SFPs system made in the previous sections, one would propose a derivation for the Tenetehára sentences involving SFPs, in the spirit of Cinque (1999, 2009, 2013, 2017)—coupled with some key elements from Kayne (2005: section 5) and Koopman & Szabolcsi (2000).

In the course of the derivation, each SFP would be merged in a dedicated head matching the corresponding semantic content in the Cinque hierarchy. Thus, a SFP (take, for instance, the epistemic ra’a, which indicates doubt and is classified as SFP₂ here) would be merged in the head of Cinque’s epistemic modality, the projection that immediately dominates TPₚₒₛₜ. The example (12), reproduced below as (47), illustrates that ra’a appears to the right of the Agr morpheme a’e.
(47) \textit{o-ho-putar} Hikar Amarante \textit{∅-pe a’e ra’a}  \\
3-go-PROX Hikar Amarante RLT-to 3 DBT  \\
‘(I don’t know if) Hikar will go to Amarante’

To derive (47), the VP, headed by the verbal lexeme \textit{ho} ‘to go’, moves to the specifier above the projection headed by the projective aspect \textit{putar}, pied-piping (in the PICTURES-OF-WHOM mode (Cinque 2005, 2009)) the morpheme \{\textit{o-}\} that heads the external argument projection. So, AgentP (mnemonic to the Agent projection) is carried along with the VP to a specifier above the proximative aspect projection, as soon as \textit{putar} enters the derivation (in the head of AspProximative). In the lack of higher TP categories, the low phase is closed with the merge of \textit{putar}. These steps of the derivational history of (47) are represented in the tree diagram in (48)\textsuperscript{13}.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{tree_diagram.png}
\caption{Derivation tree for (47).}
\end{figure}

Once the low phase cycle is closed, the derivation continues, now with the merge of the 3rd person agreement morpheme \textit{a’e} just above the edge of the vP. Hence, \textit{a’e} will become the engine of movement; as such, it will carry the SFPs to higher positions\textsuperscript{14}. Once this morpheme becomes the driving force, as soon as it enters


\textsuperscript{14}Cinque (1999: 187) gives the data in (i), from Korean, that would illuminate the general discussion advanced here. Korean is an agglutinating language. In this language, regardless of
the derivation, it triggers the movement of its complement (i.e. the remnant) to the specifier of a head inserted above (an expedient which is similar to Koopman & Szabolcsi’s (2000) PUSHING UP procedure—details represented in (49). Now, once segregated from the other constituents, Agreement can move to a specifier above each SFP (if present in the numeration), in a way quite similar to the raising of the verbal lexeme (whose derivation was represented in (48)). Once there are two SFPs in (47)—one of them is the agreement (SFP1)—, SFP1 (a’e) will start the movement to the specifier above the projection headed by the epistemic SFP ra’a (see (50)).

its agglutinating behavior, there are “free” suffixes, that, once inserted, do not tolerate further affixation. One such example is the suffix {-mos} (a negative modal head) that, in (i), blocks the adjunction of ka, the verbal lexeme. Having in mind the Tenetehára data discussed so far, it is not difficult to conclude that the reason for {-mos} to not tolerate further affixation could be interpreted in light with the derivation by phase approach.

As any other negative morpheme in Tenetehára, {-mos} would “close off” the low phase, thus preventing the verbal lexeme to reach higher positions. If this analysis is on the right track, Korean would opt for the merge of an auxiliary, ha- ‘do.’ This auxiliary would become the driving force of the movement in the already “CP” phase (according to our interpretation). Ha- attaches itself to the suffixes of past and declarative modality {-ess-} and {-ta}, respectively.

(i) Chelswu-nun keki ka-ci mos ha-ess-ta
  Chelswu-TOP there go-ci cannot do-PST-DECL

  (‘Chelswu could not go there’)

Differently from Korean, Tenetehára does not turn to “auxiliaries” once the low phase is closed. Agreement morphemes become the driving force of the movement, thus “supporting” the SFPS that will subsequently enter the derivation.
In the sequence, the complement of *ra’a*, i.e. *o-ho-putar*, moves itself to a specifier above, thus deriving *o-ho-putar...a’e ra’a*. 
Once (47) is derived, it is necessary to explain how the derivational mechanism proposed here can account for some complex cases as those described in section 3, where one finds the co-occurrence of five SFPs, each one belonging to one of the subgroups of SFPs described in section 2. Let us take the sentence (42), repeated below as (51), to illustrate that.

\[(51) \text{SF}P_1 \ a'e \ > \ \text{SF}P_2 \ \text{nehe} \ > \ \text{SF}P_3 \ \text{kury} \ > \ \text{SF}P_4 \ \text{no} \ > \ \text{SF}P_5 \ \text{ma} \ u\text{-hem-putar} \ Tukàn \ tàpuz \ \emptyset\text{-me} \ a'e \ \text{nehe kury} \ \text{no} \ \text{ma} \ 3\text{-arrive-PROX} \ \text{Tukàn home RLT-in} \ 3 \ \text{INT CHNG} \ \text{MNT GNDL} \]

‘Tukàn is arriving home now too (woman speaking to another woman)’

Its derivation first involves the merge of the VP \textit{hem ‘to arrive,’} followed by the merge of the third person affix \(\{u\}\), which is carried along with the VP (in the pictures-of-whom mode of pied-piping (i.e., no inversion)) to a specifier above the projection headed by the proximative aspect \textit{putar}:

\[(52) \]

\[
\begin{array}{c}
\text{AgentP} \\
\text{u-hem-} \\
\text{Asp}_{\text{ProximativeP}} \\
\text{putar} \\
\text{AgentP} \\
\text{u-} \\
\text{VP} \\
\text{-hem}
\end{array}
\]

Irrelevant details aside—concerning the merge of the phrases \textit{Tukàn} and \textit{tàpuz}—, the low phase cycle is “closed.” The derivation now continues with the merge of the SFPs. It starts with the merge of the lower SFP, namely \textit{a‘e}, a \textit{SF}P\_1. This particle heads an agreement projection, inserted right above the edge of the lower phase. The complement of \textit{a‘e}, namely, \textit{u-hem-putar}, which is the remnant, moves to a specifier above. It has the effect of isolating \textit{a‘e}, that will move as a
On the syntax of sentence final particles in Tenetehára

phrase. In the sequence, the SFP$_2$ nehe is merged, triggering the merge of a new head, above. The SFP$_1$ a’e will raise to the specifier of that projection (see (53)). Once more, the complement of SFP$_1$ is moved, as remnant, to the specifier of the dominating projection (54).

(53)

(54)
In the following step, the SFP₃ kury is merged in the head immediately above. The insertion of kury triggers, similar to the merge of SFP₂ nehe, the raising of the engine (headed now by the complex a’e nehe)—see (55). After the raising of a’e nehe, the remnant u-hem-putar raises to the spec of the upper head (56).

(56)...
P
...P
   ...P
   ...P
   ...P
u-hem-putar

The Merge of SFP₄ no, in the sequence, triggers the raising of the complex [SFP₁a’e-[SFP₂ nehe [SFP₃ kury]]] to the Specifier of a head right above, followed by the rising of the remnant u-hem-putar (see the derivations represented in (57) and (58)).
The next and last particle to enter the derivation is the SFP₅ `ma`, of the female gender. Similar to the other SFPs, the merge of `ma` triggers the movement of the complex formed by the particles previously inserted, namely `a’e nehe kury no`, thus inverting the order. The order the five SFPs of (51) which appear in the end of the sentence corresponds to the mirror image of the order of those categories in the Cinque hierarchy (1999). In the sequence, the complex formed by the verbal lexeme and the agglutinating suffixes is moved as remnant (see (59)), thus deriving (51).
The richness of the Tenetehára data, here interpreted in line with these two main theoretical-conceptual ingredients (Cinque’s Cartography and the Derivation by Phases approach), allows a wide comprehension of the complex (“mixed”) grammatical system of the extended projection of the verb in Tenetehára.

The derivational mechanism proposed would have some points in common with Duarte’s (2012) treatment of Tenetehára. Duarte’s analysis of the second position particles and embedded clauses proposes that this language exhibits a predicate movement (possibly vP raising) to [Spec,TP].

The proposal presented here has the merit of harmoniously integrating two recent theoretical developments of the Principles and Parameters Theory, namely, Cinque’s (1999) hierarchy and the derivation by phase approach (Chomsky 2001). Alternative analyses that take Tenetehára SFPs as right adjunctions of AdvPs would be unsustainable for two empirical reasons: (i) adverbs are not linearized to the right in Tenetehára and (ii) SFPs class are in complementary distribution with other particles of the same class.

5 **In guise of conclusion**

We started with a detailed description of the different categories which appear in the sentence-final position in Tenetehára, here called SFPs (sections 1 and 2). In section 3, we showed that these SFPs are rigidly ordered. Their relative order matches the order of the corresponding heads in Cinque’s Universal Hierarchy (1999).

The data analyzed here, interpreted in line with the derivation by phases approach (Chomsky 2001) combined with cartographic ingredients (Cinque 1999),
led us to suggest that Neg e Agr would not have relatively “free” positions within the hierarchy of the clausal grammatical projections, as first interpreted by Cinque (1999). On the contrary, these categories enter the derivation right at the end and at the beginning of a phrase (at least in Tenetehára—see the footnote 14, which presents our conjecture on a Korean data, initially discussed in Cinque (1999)). Then, if present in the derivation, Neg marks the low phase margin (vP), which is very high in Tenetehára (corresponding to T Past). Agr—which belongs to the SFP1 group—enters the derivation in Middlefield positions (i.e. within TP/IP) that already count in the high phase calculation, namely, CP.

Our investigation on the extended projection of the verb in Tenetehára, mainly on the SFPs system in this language, has allowed us to harmoniously unify two major theoretical developments of the Principles and Parameters Theory, namely, Chomsky’s (2001) Derivation by Phases Approach and Cinque’s (1999) Universal Cartographic Hierarchy. This would again suggest, in a way very similar to what has already been proposed by many authors (cfr. Cinque & Rizzi 2010 and references cited there), the compatibility of these two investigation programs of the Principles and Parameters Theory (Cartography and Minimalism).

Additionally, future research still has to determine the relative position of the particles from what we have called SFP2 group. Under this label, we are grouping categories that, judging by the Cinque hierarchy, are expected to co-occur. If such co-occurrence is rejected by the Tenetehára speakers, it will open the doors for a semantic investigation which might explain why certain possible morphosyntactic combinations are rejected by speakers of this language.

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