CLAUSAL RECURSION, PREDICATE RAISING AND HEAD-FINALITY IN TENETEHÁRA

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1. Introduction[1]

Tenetehára is a language spoken by two indigenous groups: the Tembé and the Guajajára. The Tembé group lives on the border of the states of Maranhão and Pará, while the Guajajára group lives in the state of Maranhão, in the northern region of Brazil. The Tenetehára language belongs to the Tupí-Guaraní family, Tupí Stock.
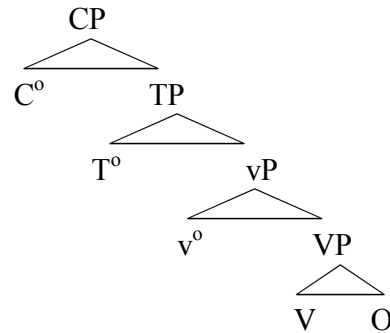
The main goal of this chapter is to present further evidence in favor of the following proposals: (i) Tenetehára is a predicate-fronting language; (ii) verbs do not undergo head movement to the functional layer of the sentences, because there is a general preference for XP rather than X^o movement; (iii) clausal recursion systematically involves predicate-raising to specifier positions of functional projections; (iv) the head C^o is hybrid in the sense that complementizers can occur in either the head-initial or head-final position. The analysis of recursion in clausal constructions will be particularly relevant in that it integrates into the broader goals of this volume, which aims to show that recursion is a syntactic property that is pervasive across human languages (for analyses that follow these same lines of reasoning, see the papers by Viera, Nonato, Seki & Nevins and Rodrigues, Raiane & Sandalo in this volume). As will be demonstrated in the following sections, Tenetehára clausal recursion exhibits the $[[[SOV]-C^o]-T^o]]]$ word order. In line with this assumption, the C^o hybridity must be treated as a surface phenomenon and not as a phenomenon of the base. Therefore, I will assume hereafter that Tenetehára root and embedded CPs are uniformly generated to the left and that the apparent C-final order is the result of the vP fronting. The immediate consequence of this analysis is that clausal recursion involves left-dislocation of the vP to specifier positions of higher projections located in the functional layer of the subordinate sentences. In order to derive the hybrid nature of C, I will assume Kayne´s Linear Correspondence Axiom (LCA), according to which the subject is universally projected to the left of vP. Kayne (1994) argues that the core properties of phrase structure must be determined by hierarchical relations. This theory predicts that a head will always project its specifier on the opposite side of its complement, due to the fact that specifiers asymmetrically c-command the internal arguments in phrase structure. Kayne (1994:36) posits that specifier-head-complement is the universal order to the subcomponents of a phrase so as that, whenever a category X asymmetrically c-commands a category Y, the words dominated by X must precede the words dominated by Y. Based on these assumptions, the main purpose of this article is to examine the derivation of the clauses with the VSO, SVO-Tense, VSO-Tense and SOV-C-Tense orders. Assuming Kayne's antisymmetric theory, I will propose,

hereafter, that all clauses in Tenetehára originate as SVO, as shown in the structure depicted below:

(1)

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                    CP
                   /△\
              C°       TP
                      /△\
                  T°       vP
                          /△\
                      v°       VP
                              /△\
                             V    O
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Another goal of the chapter is to show that Tenetehára SVO-Aux°/T° clauses present a counterexample to the Final-over-Final Constraint (FOFC). One of Biberauer, Holmberg, and Roberts' (2014) claims is that the VO-Aux order is not attested to in the world's languages. According to this view, the alleged absence of the SVO-Aux order is one piece of empirical evidence that led Biberauer, Holmberg, and Roberts (henceforth BHR) to state the Final-over-Final Constraint (= FOFC), as follows:

(2) The Final-over-Final Constraint (FOFC)

If α is a head-initial phrase and β is a phrase immediately dominating α, then β must be head-initial. If α is a head-final phrase, and β is a phrase immediately dominating α, then β can be head-initial or head-final.

However, the Tenetehára sentences below clearly indicate that a head-final T can c-select a head-initial vP, as follows:

(3) *ma'e*[2] *pe* *Zuze* *w-enu* *tazahu* *ra'e?*
     what   at   John   3-hear   big pig   IPAST
     "Where has John heard the big pig?"

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[2] Considering the phonemic pattern of Tenetehára, we adopt an orthography whose main purpose is to facilitate the reading of the data used in our analysis. The graphemes are as follows:

(i) consonants   p, t, k, ', m, n, g, gw, k, kw, z, x, h, r, w
(ii) vowels: a, e, i, o, u, y, à

The graphemes _g_ and _gw_ correspond, respectively, to the velar phoneme /ŋ/ and the labiovelar /ŋw/; the grapheme z, to the occlusive alveolar /d/ and its variants _[z]_ and _[j]_; the grapheme x, to the alveolar fricative /s/ and its variant _[tʃ]_; and the diacritic ', to the glottal phoneme /ʔ/. Finally, the graphemes y and à correspond, respectively, to the high central vowel /ɨ/ and the middle central vowel /ə/.

(4) *a'e ae*   *u-mu-me'u-putar*   *wa-n-emiapo-kwer*   *nehe.*
     he EMP[3]   3-CAUS-speak-want   3PL-RP -make-PAST   FUT
     "He will tell what they have made."

(5) *awa*   *w-ekar*   *tapi'ir*   *∅-iko*
     man   3-look for   tapir   3-be
     "The man is looking for tapir."

Notice that, in the clauses above, the head-final tense particles are preceded by a head-initial vP. Thus, if one assumes that these particles project a functional category responsible for encoding the temporal and aspectual meaning of the sentence, these examples clearly indicate that the head v° does not force its complement to move to its specifier, which clearly violates FOFC.

The methodology used in this research involved the analysis of oral and written texts, directly produced by the indigenous teachers who participated in our research activities as consultants. The aim was to help in the documentation and linguistic preservation of the Tenetehára language. In this sense, many of the examples presented in this chapter were extracted from real pragmatic contexts, based on these published materials. In addition, the analysis is also based on introspective linguistic data that were collected by means of both direct elicitation and grammatical questionnaires, during which our consultants were asked to translate sentences from Portuguese into Tenetehára. Such sentences usually focus on the strategies of how tense, evidentiality, interrogation and recursion are encoded in the language. Tests of judgments on the co-occurrence of the predicate and the tense and complementizer particles revealed that this language allows the following word order pattern: VSO, VSO/SVO-Tense and SOV-C-Tense. Furthermore, it was observed that the SV-Tense-O and SVO-C-Tense word orders are not grammatically correct.

The paper is organized as follows: section 2 aims to present some relevant data on the word order of the main constituents across clauses; section 3 explores the derivation of the VSO clauses; in section 4, it is proposed that the occurrence of a tense marker in final position is a reflex of predicate-raising to Spec-TP; in section 5, the aim is to demonstrate that Tenetehára clausal recursion may be achieved by means of predicate-raising to the specifier position of either TP or CP. Finally, section 6 concludes the chapter.

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[3] The following abbreviations are used in glosses: ABS: absolutive Case, usually the Case of the intransitive subject and of the object of transitive clauses; ARG: a DP in syntactic function of subject or object; CAUS: Causative affix; COMP: Complementizer particle; CORR: coreferential prefix; DPAST: distant past; EMP: emphatic marker; EVID: a clitic used when the speaker is not an eyewitness; FUT: future tense; GEN: genitive Case marker; IPAST: immediate past; recent past; LOC: locative phase; NOML: nominalizer; OBLIQ: oblique Case marker; Q: yes/no question marker; PAST: past tense; PL: plural marker; PSP: postposition; SG: singular; REL: relative clause marker; RP: relational prefix; TOP: a verb affix indicating that a core argument of the predicate has been dislocated to the left periphery, usually to a topic or focus position; UDPAST: unattested distant past.

2. The word order of the main constituents[4]

Tenetehára main and root clauses may exhibit both VSO and SVO word order, whereas embedded clauses present a rigid word order in the sense that the core arguments of the predicate must always precede both the verb and the complementizer, thereby giving rise to the SOV-C order.

2.1. Word order in root and independent clauses

Examples of SVO and VSO independent clauses are provided below. Notice that, when an oblique phrase, such as a PP, occurs in a sentence, it must follow the direct object, resulting either in the SVO PP order or the VSO PP order, as follows:

(6) *he* *hy* *u-m-ur* *ma'e r-o'o-kwer ha-we.*
my mother 3-CAUSE-come thing RP-meat-PASS me-DAT
'My mother gave meat to me.'

(7) *o-'ok* *teko* *mani'ok* *'y* *wi* *kury*
3-take people manioc water from now
'The people took the manioc from the water.'

(8) *w-ekar* *teko* *wakari* *ita* *r-ehe*
3-get people catfish stone RP-in
'The people get the catfish in the stone [because this fish usually hides in the stone].'

Tense markers and aspectual auxiliaries are usually placed after the core arguments of the predicate, contexts in which the SVO-Tense and VSO-Tense may occur. Notice that, in such contexts, neither the subject nor the object comes after the tense markers or the auxiliaries, as follows:

VSO-Aux
(9) *w-ekar* *teko* *ka'a* *te* *o-ho.*
3-look for people bush ENF 3-go
'The people will look for bush.'

(10) *u-zuka* *Purutu* *tapi'ir* *u-(u)r*
3-kill Purutu tapir 3-come
'Purutu came to kill the tapir.'

SVO-Aux
(11) *awa* *w-ekar* *tapi'ir* *∅-iko*
man 3-look for tapir 3-be
'The man is looking for tapir.'

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[4] I refer the reader to Duarte (2005, 2007, 2012) for a detailed analysis of the agreement pattern and the word order system in Tenetehára.

SVO-tense

(12) *a'e-ae*   *u-mu-me'u-putar*   *h-emi-apo-kwer*   *a'e*   *nehe*
      3-ENF   3-CAUS-speak-FUT   3-NOML-cause-PAST   he   FUT
      'He will tell about his doing (=that thing that was made by him).'

(13) *teko*   *w-apy*   *ko*   *kwez*   *kury.*
      people   3-burn   farm   IPAST   now
      'The people have just burned the field.'

(14) *a'e-à*   *u-'ar*   *kwez*   *tuzuk-pe*
      she-ARG   3-fall   IPAST   mud-LOC
      "She has just fallen into the mud."

(15) *a'e-à*   *u-ur*   *kwez*   *he*   *∅-hy-ramo*
      he-ARG   3-come   IPAST   my   RL-mother-with
      "He came with my mother (= by means of her)."

On the other hand, the sentence becomes grammatically incorrect if one places the object after the tense/aspectual markers. Thus, the constraint one may postulate is that the object must systematically precede auxiliary verbs and the tense markers, such as *kwez* and *iko*. This rule is evidenced by the grammatical incorrectness of the examples below.

*(16) *teko*   *w-apy*   *kwez*   *ko*   *kury.*
      people   3-burn   IPAST   farm   now
      [Intended: 'The people have just burned the field.']

*(17) *awa*   *w-ekar*   *∅-iko*   *tapi'ir*
      man   3-look for   3-be   tapir
      [Intended: 'The man is looking for tapir.']

Interestingly, the verb never takes the initial position in contexts where the object is dislocated to an A' position. In such contexts, the topicalized object must be indicated on the verb stem by means of the prefix {h- ~ i-}. Moreover, notice that the word order changes from VSO to OSV, as follows:

(18) *w$_i$-exak*   *Fábio$_i$*   *Márcia*
      3-see   Fábio   Márcia
      'Fábio saw Márcia.'

(19) *upaw Márcia$_i$*   *Fábio*   *h$_i$-exak-∅*
      all   Márcia   Fábio   3-see-DISLOC
      'ALL MÁRCIA, Fábio saw.'
      [lit.: It means that Fábio saw Márcia in every detail, and not partially.]

(20) *u_i-'u*   *teko_i*   *pira*
      3-eat   people   fish
      'The people ate (some) fish.'

(21) *upaw pira_i*   *teko*   *i_i-'u-n*
      all   fish   people   3-eat- DISLOC
      'All the fish, the people ate (some).'

In the contexts above, the object receives a contrastive focus reading so that the interpretation in (19) and (21) implies that the event of seeing Márcia and of eating fish was made in its totality, rather than partially. Another context in which the verb cannot occur in an immediate initial position is related to interrogative sentences. In such contexts, wh-words are systematically placed in the sentence-initial position, signaling that the CP projection in the root clause is clearly head-initial, as follows:

(22) *amo*   *te*   *u-pyhyk*   *tapy'yr*   *nehe*
      who   C   3-hunt for   tapir   FUT
      'Who will hunt for tapir?'

(23) *ma'e te*   *awa*   *u-zuka*   *ka'a* *pe?*
      what   C   man   3-kill   forest in
      'What did the man kill in the forest?'

(24) *ma'e mehe te*   *u-zywyr*   *wà*
      what time C   3-return   PL
      'When did they return?'

In contrast to the above contexts, the complementizer particle *te* can be omitted without causing the sentences to be grammatically incorrect, as follows.

(25) *amo*   *u-zuka*   *miar*   *ka'a* *pe?*
      who   3-kill   animal   forest in
      'Who killed the animal in the forest?'

(26) *amo* *iruramo*   *awa*   *u-pyhyk-ràm*   *pira* *o-ho*
      who with   man   3-get-FUT   fish   3-go
      "With whom will the man get (some) fish.'

(27) *ma'e pe*   *awa* *u-zuka*   *miar*   *ka'a* *pe?*
      where in   man   3-kill   animal   forest in
      'Where did the man kill the animal in the forest?'

The next section aims to present the effects of word order in the subordinated clauses. In these clauses, the word order is SOV-C, and complementizers and aspectual/tense particles are all positioned in final sentence position.

2.2. Word order in the embedded clauses

Subordinated clauses present a rigid SOV-C-T order so that the core arguments of the predicate must systematically precede the complementizer particles. Based on this, the VO order is prohibited in the embedded clauses below:

[SENTENCE-FINAL COMPLEMENTIZERS]
(28) *a-ha* [*ka'i* *h-exak* *pà*] *kury*
     1-go   monkey   3-see   COMP then
     '(I) went to see the monkey then.'

(29) *Sérgio* *w-exak* [*Pedro* *tapi'ir* *h-aro* *mehe*]
     Sérgio   3-see   Pedro   tapir   3-wait   COMP
     'Sérgio saw Pedro waiting for the tapir.'

Furthermore, the predicate and the complementizer particles must precede the tense particles, thereby giving rise to the head-final constructions: [SOV[-C^o[-T^o]]], as follows:

(30) *w-exak* *awa* [[*ure-∅-zur*] **mehe**] **kwez**]
     3-see   man   we$_{exclusive}$-RP-come   COMP   IPAST
     'The man has seen that we have just come.'

(31) *e-pyhyk* *ne-∅-takihe* [[*aguza* *i-zuka* **pà**] **nehe**]]
     2SG-get   your- RP-knife   rat   3-kill   COMP FUT
     'Get your knife in order to kill the rat.'

(32) *Purutu* *w-exak* [[*zawar$_i$* *tapi'ir* *i_i-zuka* **mehe**] *∅-iko*]]
     Purutu   3-see   jaguar $_i$ tapir   3$_i$-kill COMP 3-be
     'Purutu saw that/when the jaguar was killing the tapir'.

The next section aims to discuss in detail the derivation of each of the clausal patterns shown in this section. The proposal that will be articulated is that the Tenetehára head finality is a reflection of the fact that there is a general preference for movement of the vP/VP to the specifier position of either CP or TP, rather than dedicated v^o movement to the heads C^o and T^o.

3. VSO is the result of VP remnant movement[5]

In root VSO clauses, it is common for a set of second position particles, such as *zekaipo*, *zekwehe*, and *kakwez*, to appear between the verb and the subject. In Tenetehára, speakers usually distinguish between attested and unattested past. Compare the examples below:

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[5] Within generative theory, there have been different approaches as to the way the VSO order is derived. McCloskey (1996), Carnie et alii (2000) and Doron (2000), for example, posit that the V-initial order is achieved by means of head movement of the verb to the C/TP domain in languages such as Irish and Hebrew. However, these approaches differ from the ones that assume predicate-raising to derive the V-initial order in languages such as Chol (Coon, 2010), Niuean (Massam, 2000; 2005) and Tenetehára (Duarte, 2012), among others.

unattested distant past

(33) w-exak   ze-kwehe   zawar-uhu   tapixi memyr   a'e   pe   no
3-see   EVID-UDPAST jaguar-big rabbit son   there at   also
'(They say that) the big jaguar also saw the rabbit's son there.'

(34) u_i-m-ur   ze-kaipo i_j-hy_i i_j-zupe
3_i-CAUS-come EVID-UDPAST his_j-$mother_i$ him_j-to
'(They say that) his mother apparently gave (it) to him.'

attested distant past

(35) u'u   kakwez   Pedro pira   ke'e
3-eat   DPAST.ATTESTED   Pedro fish   grilled
'Pedro ate grilled fish [The speaker attested it in a past event].'

The particles *zekwehe and zekaipo* in the examples above are composed of three subparts: (i) the evidential clitic [ze.], (ii) the particle aipo and (iii) the particle kwehe. Notice that *aipo* is only used when the speaker is not sure about whether the event has really happened.[6] This is the reason why it is often used in yes or no questions, as follows:

(36a) aipo   Zuze   u-'u   uha?
Q   John   3-eat   crab
"Did John eat crab?"

(36b) he'e, u-'u   uha
yes   3-eat crab
"Yes, he ate crab."

Based on the empirical facts presented above, it seems reasonable to propose that these particles head a functional projection located in the CP domain, inasmuch as they encode notions such as tense, evidentiality and inference. Pursuing this line of reasoning, I will contend that in the sentences above, there occurs VP-remnant movement to the Spec-CP, as shown in the derivation below:

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[6] For analysis of evidentiality in other indigenous Brazilian languages, see the papers by Stenzel and Sauerland in this volume.

(37)
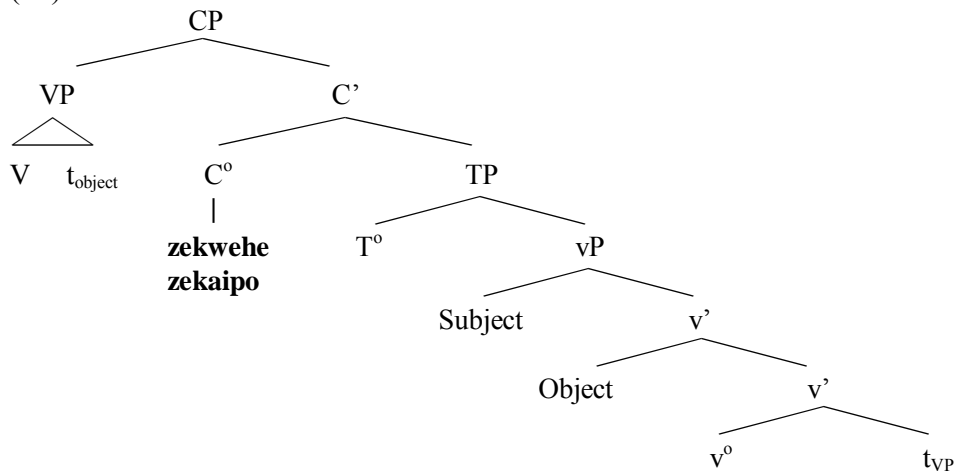
Based on the structure depicted above, I will assume that *v*Ps, as well as other XPs, compete for the specifier position of CP. The immediate consequence of this generalization is that when an XP is moved to the left periphery, the VP cannot front. For this reason, the generalization that one can propose is that the verb precedes the subject only if nothing else is topicalized to the CP domain.

Under this assumption, one way to give a more theoretical account for this restriction is to postulate that the VSO clauses must involve remnant movement of the VP to Spec-CP, while the subject and the object are left behind. This proposal indicates that verbs do not undergo head movement to the higher functional layer of the sentences due to the fact that they fit a pattern of maximal projections (DP and wh-pronouns) in their ability to undergo phrasal movement to Spec-CP. Moreover, the derivation above presupposes that the object moves to a higher position before the VP is raised to Spec-CP. One way to account for this is to assume the hypothesis by Diesing (1992, 1996, 1997), according to which, when the object is definite, it rises out of the VP. In literature, it is normally posited that this contrast has to do with the mapping from syntax to semantics, so that object shift usually depends on informational structure, in particular something like the contrast between specific and nonspecific[7]. Evidence that definite and specific objects can really move to a higher position comes from contexts where they are quantified. In such syntactic contexts, the object shift is obligatory, the word order changes from VO to OV and the verb must agree with the quantified objects. That the object really moves to Spec-*v*P is evidenced by the fact that it can sit in an intermediate position between the subject and verb, a context in which it triggers the object agreement on the verb stem by means of the prefix: {i-}, as follows:

(38) *upaw Fábio$_i$ pira   i'un   a'e$_i$ ra'a*
       all   Fábio   fish   3-eat   he   PART
      'The whole fish, he, Fábio ate.'

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[7] For a detailed analysis on object shift in other languages, I refer the reader to the work of Bobaljik and Thráinsson (1998) and that of Rackowski and Travis (2000:126).

Evidence that the VP and XPs compete for the same syntactic position comes from the fact that, when the XPs are topicalized to Spec-CP, the verb must appear after the temporal particles *zekwehe/zekaipo/kakwez*. In such contexts, the verb usually follows the subject, leading to the emergence of the [XP [**zekwehe** SVO] order. In this sense, when the object is topicalized, the verb cannot occur in the initial position, so the word order changes from VSO to OSV, as follows:

(39) u_i-'u   tenetehára$_i$ pira
      3-eat   tenetehára   fish
      "The Tenetehára people ate the fish (a specific one)."

(40) upaw pira$_i$ tenetehára i_i-'u-n
      all   fish   tenetehára   3-eat-TOP
      'The Tenetehára people ate all the fish.'
      [lit.: It means that everything was eaten. There are no leftovers.]

Notice that, if we add the temporal particles in the OSV sentence above, they must occur immediately after the topicalized object, signaling that the quantified object moves to Spec-CP, as follows:

(41) upaw pira$_i$ ze-kwehe   tenetehára i_i-'u-n
      all   fish   EVID-UDPAST   tenetehára   3-eat-TOP
      '(They say that) the Tenetehára people ate all the fish a long time ago.'
      [lit.: It means that everything was eaten. There are no leftovers.]

4. Predicate-raising and head-finality in independent clauses

Tenetehára presents a set of final particles related to the aspectual and temporal meaning of the sentence. They systematically occur after the predicate (i.e., the verb and its core arguments), thus giving rise to the [[SVO]-Tense]] constructions. For example, the particles *kwez* and *ra'e* indicate that the action has just recently been completed. Interestingly, the particle *ra'e*[8] is generally employed in interrogative sentences, while the particle *kwez* appears in affirmative clauses. Based on the fact that they remain in a fixed position within the sentences, I will assume that they are phonological realizations of functional categories related to the clausal inflectional domain. For this reason, I will gloss them as IPAST, which indicates that they are particles related to the aspectual and temporal reference of the sentence, as follows:

(42) amo   u-màno   **kwez**
      somebody   3-die   IPAST
      'Somebody has just died (= the death was recent).'

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[8] One of the reviewers asked me whether *ra'e* and *kwez* should be located in a higher functional position than T°, owing to the fact that they encode not only tense but also affirmative/interrogative information. Due to limitations of time and space, I will leave this discussion for future research.

(43) | *teko* | *w-apy* | *ko* | **kwez** | *kury.* |
|---|---|---|---|---|
| people | 3-burn | farm | IPAST | now |

'The people have just burned the field.'

(44) | *ma'e* | *pe* | *Zuze* | *w-enu* | *tazahu* | **ra'e?** |
|---|---|---|---|---|---|
| what | at | John | 3-hear | big pig | IPAST |

'Where has John heard the big pig?'

Additionally, two other final particles can appear to convey the temporal meaning of the sentence, such as the particle *nehe* and the auxiliary *iko*. The latter conveys the imperfective aspectual meaning, while the former encodes the future time. Both of them are systematically placed after the predicate, as follows:

(45) | *a'e ae* | *u-mu-me'u-putar* | *wa-n-emiapo-kwer* | **nehe**. |
|---|---|---|---|
| he EMP | 3-CAUS-speak-want | 3PL-RP -make-PAST | FUT |

'He will tell what they have made.'

(46) | *awa* | *w-ekar* | *tapi'ir* | ∅**-iko** |
|---|---|---|---|
| man | 3-look for | tapir | 3-be |

'The man is looking for tapir.'

One way of accounting for the occurrence of these particles in final sentence position is to posit that they are syntactic heads that are base-generated in the head T^o. In line with this view, I will argue that the [[SVO]-**Tense**]] constructions are achieved by means of predicate-fronting to Spec-TP.[9] Evidence in favor of this analysis comes from the fact that the tense marker particles have a fixed position in the linear order. For example, the particle *kwez* cannot be topicalized, as in (47), nor can it occur in medial position, separating the subject from its verb, as in (48).

(47) | **kwez* | *teko* | *w-apy* | *ko* | *kury.* |
|---|---|---|---|---|
| IPAST | people | 3-burn | farm | now |

[Intended: 'The people have just burned the farm.']

(48) | **teko* | *kwez* | *w-apy* | *ko* | *kury.* |
|---|---|---|---|---|
| people | IPAST | 3-burn | farm | now |

[Intended: 'The people have just burned the farm.']

A second piece of evidence, demonstrating that what moves around T is a constituent, comes from the syntactic behavior of the particles *ra'e* and *nehe*. Both of them have the same syntactic distribution as the particle *kwez*. This hypothesis is reinforced by the fact that they cannot occur between the verb and its object, nor can they be topicalized to the left, nor can they come after the subject, as the examples below demonstrate:

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[9] I refer the reader to Aboh's (2004) work, in which similar arguments are presented to derive sentence final particles. According to Aboh, these particles are often the result of high elements that have lower phrases fronted around them.
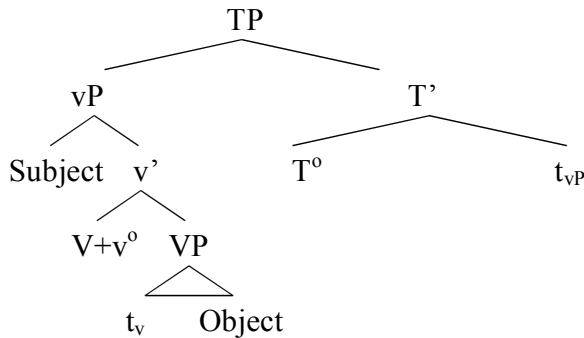
(49) *ma'e pe   Zuze   w-enu   ra'e   tazahu
      what at   John   3-hear   IPAST   big pig
      [Intended: 'Where has John heard the big pig?']

(50) *ma'e pe   Zuze   ra'e   w-enu   tazahu
      what at   John   IPAST 3-hear   big pig
      [Intended: 'Where has John heard the big pig?']

(51) *a'e ae   u-mu-me'u-putar   nehe   wa-n-emiapo-kwer
      he EMP   3-CAUS-speak-want   FUT   PL-RP-make-PAST
      [Intended: 'He will tell what they have made.']

(52) *nehe a'e ae   u-mu-me'u-putar   wa-n-emiapo-kwer
      FUT   he EMP   3-CAUS-speak-want   PL-RP -make-PAST
      [Intended: 'He will tell what they have made.']

(53) *a'e ae   nehe   u-mu-me'u-putar   wa-n-emiapo-kwer
      he EMP   FUT   3-CAUS-speak-want   PL-RP-make-PAST
      [Intended: 'He will tell what they have made.']

The only acceptable order in all the examples examined above, therefore, is with the tense marker particles placed after the verb and its core arguments, which in turn gives rise to the consistent SVO-**Tense** constructions. Given Kayne's antisymmetry theory, in which all movement occurs to the left, and given the internal subject hypothesis, one can postulate that the SVO-**Tense** order is derived from the basic order [**Tense** [SVO]]. Therefore, to derive the conclusion that T^{o} is truly head-initial in these constructions, I will assume that the predicate, represented by the v-VP complex, moves to the specifier of TP. That this movement is really to Spec-TP, and not to a higher head, becomes evident due to the fact that all the particles above are directly related to the temporal and aspectual meaning of the sentence. The derivation depicted in the syntactic tree below aims to demonstrate this analysis.[10]

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[10] Notice that this derivation corroborates Holmer's (2005) typological prediction, according to which head-final particles tend to appear only in predicate-fronting languages, rather than in head-raising languages, such as Irish. Therefore, Tenetehára's head-finality characteristics lend further support to this prediction, as they allow syntactic heads to be stranded in clause-final position. Holmer (2005:186) predicts that the existence of final particles must be connected with basic order. In line with this view, he argues that one would expect final particles in VOS languages, but not in VSO languages that present head-raising. Thus, VSO languages, such as Irish, which are not predicate-raising, do not strand syntactic heads in clause-final position. To capture these facts, he proposes the following correlation:

(i)   Movement type   XP-raising   X^{o}-raising
      Basic word orders   VOS, SOV, (some) VSO   (some) VSO
      Final particles   likely   unlikely

(54)

```
                        TP
              ┌──────────┴──────────┐
             vP                     T'
           ┌──┴──┐          ┌───────┴───────┐
       Subject   v'        T°              t_vP
              ┌───┴───┐
           V+v°       VP
                    ┌──┴──┐
                   t_v   Object
```

Similar distribution also holds for the auxiliary *iko*, which can only be positioned after the predicate, and not the other way around. This constraint explains why the auxiliary *iko* cannot occur in medial position between the subject and the verb, nor can it be topicalized to initial position. Evidence in favor of this analysis comes from the fact that the auxiliary *iko* 'be' can only be positioned after the predicate, and not vice versa. This fact explains the reason why sentences (56) and (57) are grammatically incorrect.

(55)   *awa*   *w-ekar*   *tapi'ir*   *∅-iko*
       man   3-look for   tapir   3-be
       'The man is looking for tapir.'

(56)   **awa*   *w-ekar*   *∅-iko*   ***tapi'ir***
       man   3-look for   3-be   tapir
       [Intended: 'The man is looking for tapir.']

(57)   * *∅-iko*   *awa*   *w-ekar*   *tapi'ir*
       3-be   man   3-look for   tapir
       [Intended: 'The man is looking for tapir.']

Thus, the only possible word order is the one in which the verb and its core arguments precede the auxiliary *iko*. Therefore, the [[SVO]-T]] order shown above constitutes strong evidence that the head-initial vP predicate really does rise to Spec-TP. Given this fact, and theories such as the antisymmetry theory, in which all movement is assumed to occur to the left, one can postulate that the CFA in Tenetehára is derived from the basic [T [SVO]] order. Thus, to derive the SVO-T order, one must postulate that the vP is moved to the specifier of TP. This analysis is based on Biberauer, Holmberg, and Roberts' (2014) assumption, according to which the head-final order may, in principle, be associated with the c-selection features of a head. Thus, the vP-raising analysis in CFAs is a type of linearization-movement (L-movement). According to Biberauer, Holmberg, and Roberts (2014), L-movement is a property of Extended Projections, and may be projected up the tree through the Extended Projection of the lexical head. Based on this viewpoint, BHR (2014) argue that each occurrence of the movement trigger on a given head requires movement of the structural complement of that head into its specifier. Thus, I will argue that sentence (55) must start the derivation as in (58a) and the [[SVO]-T] word of (58b) is achieved by raising the head-initial vP to Spec-TP, due to a selection feature of the head T°.

(58) a. $[_{TP} [_T$ iko $[_{vP}$ awa $[_v$ wekar $[_{VP}$ t$_{verb}$ tapi'ir $]]]]]$

 b. $[_{TP} [_{vP}$ awa $[_v$ wekar $[_{VP}$ t$_{verb}$ tapi'ir $]]] [_T$ iko $[$ t$_{vP}]]]]]$

Based on the derivation in (58b), I will assume that the movement of the vP is imposed by two different formal features on T^o: the uninterpretable φ-features and the c-selection feature. Suppose that the uninterpretable φ-features are checked by the subject and, as a direct consequence, the nominative Case of this subject is checked off by the head T^o, even though this argument remains in the specifier position of the moved vP. With regard to the c-selection feature on T^o, I will argue that it corresponds to a [+PRED] feature. Then, following Massam's (2000) account, I will propose that the vP must rise to Spec-TP, due to the EPP feature on TP. Given the data shown above, one may conclude that Tenetehára exhibits a disharmony at the clause-level syntax, as final auxiliaries c-select initial head vPs, giving rise to the [VO-Aux] order. This fact contradicts one of Biberauer, Holmberg, and Roberts' (2010) claims that the VO-Aux order is not attested to in the world's languages. According to BHR (2010:5), the main aspect of the formulation of FOFC is that it rules out structures, where αP is the complement of β and γP is the complement of α, as follows:

(59) *$[βP [αP α γP] β]$

However, the Tenetehára final auxiliary constructions do not conform to the claim that configurations instantiating the schema in (59) are not found in the world's languages. As such, Tenetehára SVO-Aux order violates the constraint in (59), since the vP, which is selected by the final auxiliary, is clearly head initial. Hence, I will argue that the reason why Tenetehára violates (59) has to do with the fact that, while the superordinate head T^o triggers movement of its complement, the complement of this same head, more precisely the head v^o, does not trigger the raising of its complement. In sum, as shown here, only T^o has the property of moving its complement, whereas the head v^o does not, at least in the CFAs, which is a pattern that signals that there is indeed violation of FOFC.

4.1. The derivation of VSO-Tense orders

The reader might wonder how to derive the VSO predicates that co-occur with final auxiliaries and tense markers. In such contexts, the word order is VSO-Tense/Aux and the auxiliary and the lexical verb can both control the subject agreement, as the sentences below demonstrate.

(60) *u-zemumikahy zekaipo a'e kuzà ∅-iko a'e kury*
 3-feel sad EVID-UDPAST she woman 3-be she now
 '(They said that) she, the woman, was feeling sad.'

(61) *u-haw zekaipo i-hy amo ma'eputyr o-ho*
 3-get EVID-UDPAST 3-mother a flower 3-go
 '(They said that) his mother went to get a flower.'

(62)　*w-ekar*　　*teko*　　*ka'a*　*te*　　　*o-ho*
　　　　3-look for　people　bush[11] true　　　3-go
　　　　'The people go to look for fertile lands.'

In order to derive the word order above, I will henceforth assume that an interaction of two different movements occurs: first, the remnant-VP moves to Spec-CP, and second, the vP fronts to Spec-AuxP/TP. This analysis is reinforced by the fact that the verb can appear before the particles *zekwehe/zekaipo*, just like any other (emphasized) constituent. In this view, sentence (63) must have the derivation depicted in (64):

(63)　*u-haw*　　　*zekaipo*　　*i-hy*　　*amo*　*ma'eputyr*　*o-ho*
　　　　3-get　　　EVID-UDPAST　3-mother　a　　flower　　　3-go
　　　　'(They said that) his mother went to get a flower.'

(64)　[$_{CP}$ [$_{VP}$ uhaw] [$_{C}$ zekaipo [$_{TP}$ [$_{vP}$ ihy [$_{v'}$ amo　ma'eputyr t$_{VP}$] [$_{T}$ o-ho [t$_{vP}$]]]]]]

Evidence that the analysis above is really on the right track comes from the contexts in which emphasized XPs, such as interrogative pronouns, are moved to the left-peripheral position. In such syntactic environments, the VP cannot move because the interrogative pronoun *ma'e te* already occupies the specifier position of CP, as follows:

(65)　*ma'e*　***te***　　*Siba*　*u-pyhyk*　　　*o-ho.*
　　　　What　that　　Siba　3-catch　　　　3-go
　　　　'What will Siba go to catch?'

Consequently, there cannot be a situation in which both the wh-pronoun and the VP appear in Spec-CP. This is why the sentence below is grammatically incorrect.

(66)　*ma'e*　***te***　　　*u-pyhyk*　　*Siba*　*o-ho.*
　　　　What　that　　　3-catch　　Siba　3-go
　　　　[Intended:*'What will Siba go to catch?']

In the next section, I extend the same predicate fronting analysis developed thus far to explain the reason why Tenetehára clausal recursion allows tense and complementizer particles to be stranded after the core constituents of the predicate, thereby causing the [[SOV]-C-T]] order to emerge.

5. Clausal recursion as a result of predicate fronting

According to the descriptive data presented thus far, one is led to assume that, in Tenetehára, subordinators are of two types: head-initial or head-final. When they are of the head-initial type, the word order is C^{o}-[SVO]-Tense, with the predicate (that is, the vP) remaining between the complementizer and the tense markers, as shown in the example below.

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[11] The word *ka'a* "bush" here refers to those areas (= the fertile lands) that are particularly adequate for planting mani'ok and corn.

(67) **_aze_**   *zawar*   **_u_-*zuka***   *ka'i*   **_nehe_**
      if   jaguar   3-kill   monkey   FUT

      Siba   *u-pyhyk-ràm*   *ka'i*   *o-ho*   *i-zuwi*
      Siba   3-take-FUT   monkey   3-go   3-for
      "If the jaguar kills the monkey, Siba will take the monkey for himself."

However, if we place the subordinator **_aze_** in head-final position, the result is a grammatically incorrect construction. Hence, the impossibility of placing the predicate before the complementizer **_aze_** constitutes important evidence that this particle is truly head-initial, as follows.

(68) **zawar*   *ka'i*   **_u_-*zuka***   **_aze_**   **_nehe_**   (….)
      jaguar   monkey   3-kill   if   FUT
      [Intended: 'If the jaguar kills the monkey (….)'.]

Moreover, the CP can also be C-initial in root-interrogative clauses, thereby exhibiting the same head-initial structure as the one shown above.

(69) *ma'e*   **_te_**   *awa*   *u-pyhyk*   *o-ho.*
      What   C   man   3-catch   3-go
      'What will Siba catch?'

(70) *ma'e*   **_te_**   *ze-kwehe*   *Fábio$_i$*   *u-'u-paw*   *a'e$_i$?*
      what   C   EVID-UDPAST   Fábio   3-eat-all   he
      'What did they say that Fábio ate all of?'

Another piece of evidence that C can be head-initial comes from contexts in which the specifier position of CP is filled by means of the adjoined particles *na'e* and *ta'e*.[12] These particles indicate that the sentence is not subordinate, but a root one. In line with this view, my proposal is that they are syntactically merged directly into the specifier position of the CP projection, since they occur before the temporal/evidential particles *zekwehe/zekaipo*. Hence, the derivations proposed in (71b) and (72b) aim to show that neither VP-remnant nor vP-fronting occur in such sentences.

(71a) *na'e*   *ze-kaipo*   *miar*[13]   *u-ze'eg*   *i-zupe*   *a'e*   *wà*
       then   they say-DPASTU   the animal$_i$ 3$_i$-speak   him$_j$-to   he$_i$ PL
       '(They said that) then they$_i$, the animals$_i$, spoke to him$_j$.'

(71b) [$_{CP}$ na'e [$_{C^o}$ [$_{TP}$ ze-kaipo   [$_{TP}$ miar [$_T$ uze'eg [$_{vP}$ i-zupe [… a'e wà …]]]]]]]]

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[12] Observe that *na'e* conveys the idea of conclusion, whereas *ta'e* expresses the cause of an event or situation.
[13] Here, *miar* refers to those animals that are chased by men when they go hunting.

(72a)　*ta'e*　　　*i-hy*　　　　　*o-ho*　*wa*　*n-uwi*　　　　*a'e*　*kury*
　　　because of　their$_j$-mother$_i$　　3$_i$-ir　them$_j$　RP-away from　　she$_i$　now
　　　'Because of this, she$_i$, their$_j$ mother$_i$, went away from them$_j$.'

(72b) [$_{CP}$ **ta'e** [$_{C^o}$ [$_{TP}$ ihy　　[$_T$ oho [$_{VP}$ wa nuwi　[…a'e …　　kury]]]]]

　　In sum, in the latter example, the occurrence of *na'e* and *ta'e* in Spec-CP blocks the movement of the predicate to the left. This restriction becomes particularly clear in sentence (73a), in which both a topicalized and a focalized XP co-occur in the same clause. In such a context, the predicate remains in a low position, as the derivation in (73b) shows.

(73a)　*se-ze*　　　*pako$_i$*　　*Ana*　*i$_i$-'u-n*
　　　here-they say　banana$_i$　　Ana　3$_i$-eat-TOP
　　　"They said that it was a banana that Ana ate here (and not something else)."

(73b) [$_{TopP}$ se-ze …　　[$_{FocP}$ pako$_i$ …　[$_{TP}$ Ana … [$_{vP}$ t$_{subject}$　i$_i$-'u-n　t$_{object}$]]]]

　　In sharp contrast to the contexts examined above, a different clausal pattern emerges when the complementizer is of the head-final type. In such contexts, the object systematically precedes the verb and the whole predicate must appear to the left, giving rise to the word order [[SOV]-C^o], as follows:

(74)　*w-exak*　　*awa*　　[*zawar*　*ka'i*　　*h-aro*　　*mehe*]
　　　3-see　　　man　　　jaguar　　monkey　　3-wait　　COMP
　　　'The man saw that/when the jaguar was waiting for the monkey.'

(75)　*o-mo-no*　　[*mani'ok*　*h-ytyk*　　*pà*]　*kury*
　　　3-CAUS-go　　manioc　　3-throw　　COMP　now
　　　'(The people) put the manioc in the water by throwing it.'

　　It is also important to point out that C^o can intervene between the predicate and the head-final tense particles in the embedded clauses, which provides clear evidence that the vP really does front to the specifier position of CP, as follows:

(76)　*i-ma'enukwaw*　　*Joao*　[*Quesler*　　*tapi'ir*　　*h-ekar* **mehe** ∅-*iko* *ka'a*　*pe*]
　　　3-think　　　　　Joao　Quesler　　tapir　　　3-hunt COMP 3-be　forest　in
　　　"John thinks that Quesler is hunting for a tapir in the forest."

　　In conclusion, the mixed structures shown above reflect that the Tenetehára complementizer system is hybrid, in the sense that it presents both final complementizers, henceforth (FC), and initial complementizers, hereafter (IC).[14] Owing to the anti-symmetrical

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[14] I refer the reader to Bayer (1999) for a different approach based on both Indo-Aryan and Dravidian languages, such as Bengali and Malayalam. According to his analysis, these languages seem to allow overt, as well as covert, movement from final-complementizer clauses. Bayer's conclusion is that these languages do not present freezing effects, thus allowing core arguments of the vP to be extracted to Spec-CP.

approach I am assuming in this paper, I thus contend that the structure in (77b) below must be derived from the base structure in (77a). Compare the syntactic representations below.

(77a) [$_{C'}$ C …[$_{TP}$ ….[….$_{vP}$….]]]
⇓
(77b) [$_{C'}$ [$_{vP}$] C [$_{TP}$ .. t$_{vP…}$ [$_T$ … […t$_{vP}$…..]]]]

The analysis above lends further credence to Kayne's anti-symmetry theory, in that the linear order of the terminal elements in a phrase marker is dependent on the anti-symmetric relation of precedence. Hence, if we assume that there is an ordering such that C^o always precedes both TP and vP, and that ordering is fixed as such, then we must admit that precedence will be the ordering that holds once and for all in Tenetehára. Pursuing this line of reasoning, I will claim that, since C must precede both T and v, it thus asymmetrically c-commands T and v. Assuming this theory, I will propose, hereafter, that both root and embedded clauses originate as SVO, as shown in the structure depicted below:

(78)
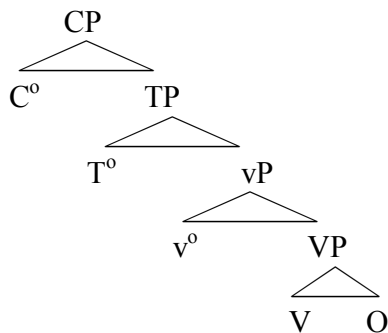
Under the assumption that asymmetric c-command goes hand in hand with linear ordering, I will claim that there are only initial complementizers in Tenetehára. The immediate consequence of this proposal is that one will have to argue that the occurrence of the final complementizers *mehe* and *pà* in Tenetehára clausal recursion is ultimately the result of predicate movement to Spec-CP. This analysis entails that final complementizers should not be seen as primitives but rather as the result of a syntactic operation by which the predicate complement has moved leftwards. For this reason, in head-final languages like Tenetehára, final complementizers and even final auxiliaries have the property of forcing their complements to move to their specifier position. Kayne (1994:53), for instance, assumes that the derivation of the [YX] structure in such languages occurs as follows:

(79) a.   X [$_{\textbf{YP}}$…Y ZP]
                           ↓
       b.   X [$_{\textbf{YP}}$ ZP Y t$_{\textbf{ZP}}$]
                           ↓
       c.   [$_{YP}$ ZP Y t$_{ZP}$] X t$_{YP}$…

Therefore, for the derivation of the structure in (79c) to occur, the interaction of two different movements will be necessary. Firstly, ZP moves to the Spec of YP. Secondly, the YP

maximal projection has to be moved to the Spec-XP. Kayne (1994:53) posits that the derivation of the [YX] order will essentially depend on "both Y and X having the property of forcing their complements to move to their specifier position, and since that kind of property is dominant in the so-called head-final languages, the expectation is that agglutinative YX (where Y originates below X) will primarily be found in strongly head-final languages".

5.1. Pieces of evidence

The first piece of evidence in favor of the proposal that Tenetehára clausal recursion does involve predicate-raising to Spec-CP comes from the syntactic behavior of the tense markers *nehe*, *iko* and *kwez,* which are always positioned after the complementizers *pà* and *mehe*. In general, these complementizer particles must intervene between the predicate and the aforementioned tense markers, as follows:

(80) *e-pyhyk*   *ne-∅-takihe*   [*aguza*   *i-zuka*   ***pà***]   ***nehe***
      2SG-get   your-RP-knife   rat   3-kill   COMP   FUT
      "Get your knife in order to kill the rat."

(81) *Sergio*   *he-r-exak*   [*he.∅-zur*   ***mehe***]   ***kwàz***
      Sérgio   I-RP-see   I-RP-come   COMP   IPAST
      "Sérgio saw me, when I had just come."

Notice that, in the examples above, it is unclear whether or not the head C^o and the head T^o are both part of the same clause, due to the fact that one cannot confirm if the head T^o is part of either the matrix clause or the embedded clause. Fortunately, there are examples where one can clearly identify that the head T^o projects both in embedded and matrix clauses. The examples below show such contexts, in which there is a clear mismatch in the temporal interpretation of the main and embedded clauses, such that we are sure of where each head T^o belongs. This proposal holds true by the fact that, in the example below, the future marker *nehe* is the final head, usually after the main predicate, whereas the tense marker of the embedded clause is morphologically realized by the tense suffix -*kwer*.

(82) *a'e ae*   *u-mu-me'u-putar*   [CP *wa-n-emi-apo-kwer*]   ***nehe***.
      he EMP   3-CAUS-speak-want   3PL-RP-COMP-make-PAST   FUT
      'He will tell what they have made.'

Another example of tense mismatch comes from an example involving the stative verb *ima'enukwaw* 'think'. If one assumes that stative verbs are not normally used in the progressive aspect, then a natural conclusion is to posit that, as in the example below, the progressive auxiliary *iko* 'be' is only within the scope of the event denoted by the embedded verb *hekar* 'hunt', but not within the scope of the stative verb *ima'enukwaw* 'think'. Therefore, this constitutes strong evidence that the auxiliary *iko* is really part of the embedded clause. This in turn gives rise to the expected vP-C-TP order, whose syntactic derivation must proceed by means of the successive cyclic fronting of the vP, first to Spec-TP, followed by vP-movement to Spec-CP.

(83) *i-ma'enukwaw*   *Joao*   [*Quesler*   *tapi'ir*   *h-ekar*   **mehe** $\varnothing$-***iko*** *ka'a*   *pe*]
       3-think   Joao   Quesler   tapir   3-hunt   COMP   3-be   forest   in
       "John thinks that Quesler is hunting for a tapir in the forest."

A third piece of evidence comes from the sentence below, inasmuch as the perfective aspectual marker *kwez* is within the scope of the event denoted by the matrix verb *wexak*, whereas the aspectual auxiliary *iko* modifies the way the action of killing is accomplished. This clearly indicates that the two particles project tense heads in different positions within the sentence. More to the point, the tense marker *kwez* heads a TP projection in the main clause, while the progressive auxiliary *iko* realizes the embedded TP projection.
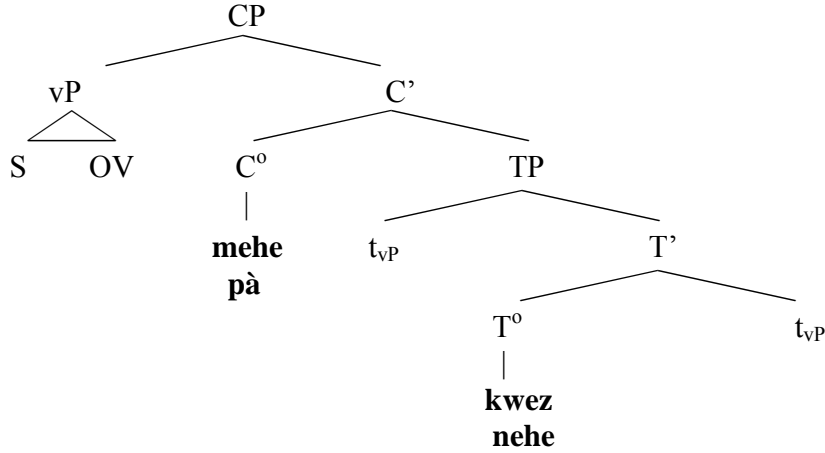
(84) *Purutu*   *w-exak*   [*zawar*   *tapi'ir$_i$*   *i$_i$-zuka*   **mehe**] $\varnothing$-***iko*** *kwez*
       Purutu   3SG-see   jaguar   tapir$_i$ 3SG$_i$-kill   COMP   3-be   IPASS
       'Purutu has just seen that/when the jaguar is killing the tapir.'

In conclusion, the empirical data shown above provides evidence that the head T^o can, in fact, project both in the main clause and in the embedded clause. This in turn lends further support to the hypothesis that the embedded vP may be generated as a complement of the subordinate T^o head. A final piece of evidence comes from what corresponds to relative clauses in Tenetehára. These clauses are structured by adding either the complementizer suffix *-pyr* or the complementizer prefix *emi-* to the verb stem. Notice that, when the past tense suffix {-kwer ~ -(kw)er} is attached to the verb, it must follow the verb and the complementizer affixes, generating the following affix orders: {verb+complementizer+tense}/{complementizer+verb+tense}, as follows:

(85) *a-exak*   *ywyra*   *i-zuhaw-pyr-(kw)er*
       1SG-see   wood   3-chop-REL-PASS
       'I saw the wood that was chopped (by the man).'

(86) *a-exak*   *ywyra*   *awa*   *h-emi-zuhaw-kwer*
       1SG-see   wood   man   3-REL-chop-PAST
       'I saw the wood that was chopped by the man.'

Based on these data, I will henceforth assume that the relative order of the complementizer morphemes {-pyr}/{emi-} and the tense morpheme {-kwer} mirrors the order of the syntactic derivation that occurs in the embedded clause, thereby providing more evidence in favor of the hypothesis that the complementizers may in fact intervene between the vP and TP in embedded clauses. Owing to the fact that Tenetehára has a set of clause-final subordinators followed by tense markers, I will assume that the [[SOV][C^o[T^o]]] order of the subordinate clauses must be derived from the basic [C^o[T^o[SVO]]] order. This proposal, as in Kaynian work more generally, presupposes that the surface head-final order must be derived by successive leftward movement of the vP, first to Spec-TP, then to Spec-CP. The structure proposed below instantiates this syntactic derivation.

(87)

```
                              CP
                   ┌──────────┴──────────┐
                  vP                     C'
                 ╱‾╲            ┌─────────┴─────────┐
               S     OV        Cº                  TP
                                |         ┌─────────┴─────────┐
                              mehe       tᵥₚ                  T'
                               pà                    ┌─────────┴─────────┐
                                                    Tº                  tᵥₚ
                                                     |
                                                   kwez
                                                   nehe
```

The derivation proposed above leads us to conclude that Tenetehára clausal recursion entails the existence of cyclic predicate-raising, giving rise to extremely complicated structures, in which several final particles are stranded in lower positions, such as the final complementizers *mehe/pà*[15] and the tense final particles *kwez/nehe/ra'e/iko*.

6. Final Remarks

In this chapter, I assume that the derivation of the [PRED-Cº-Tº] order is achieved not by head movement of the verb, but rather by predicate-raising. I also propose that the landing site of the predicate can be the specifier position of either the head Cº or the head Tº. Either option depends, of course, on the particular grammatical construction involved in the syntax. In this respect, Tenetehára differs slightly from other predicate-fronting languages, such as Niuean and Chol, regarding the landing site of the predicate. In both of these languages, the vP movement is only up to Spec-TP, not to Spec-CP[16]. Additionally, clausal recursion becomes evident, owing to the fact that inflectional particles related to tense and the aspectual meaning of the sentence can be positioned after the head Cº and the vP projection. Finally, one might question how it is possible for Tenetehára to exhibit complementizers both in initial and final positions. This puzzle might be solved if one assumes that the apparent mixed-headedness of the CP in Tenetehára can be reduced to a difference in the nature of the EPP features associated with the head Cº, both in main and subordinate clauses. Following Massam's[17] (2000:111) analysis, I propose that the head-final Cº carries the uninterpretable feature [*u*PRED], which in turn forces the whole predicate to rise to the left. However, the head-initial Cº lacks such a feature. This explains why

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[15] One of the reviewers asked me to show whether the relevant subject/object extractions would be possible if the vP had not been fronted before 'mehe'. However, I cannot include this discussion here because *mehe* can occur only as a final head, thereby always positioning after the vP. One cannot find this complementizer in an initial syntactic position.

[16] I refer the reader to the proposal by Chung (2005, 2006), Massam (2000, 2005) and Coon (2010), for a detailed analysis on the predicate movement in Niuean and Chol.

[17] Massam (2000:111) argues that "the Niuean head of IP has no [D] feature; thus, the specifier need not be filled by an element checking [D], but instead can be filled by the predicate checking the [PRED] feature. (…) [D] and [PRED] are thus in complementary distribution and can be seen as two reflections of a single EPP predication feature."

this head does not force the predicate to move to the left in clauses with head-initial complementizers.

In sum, a way to find a unified explanation to the reason why different word orders may appear is to set the following correlations: (i) the VSO order is the result of the VP-fronting; (ii) the SVO-T order is derived by means of the vP fronting only to Spec-TP; (iii) the VSO-T is produced by interaction of two different movements: first, the VP is raised to Spec-CP, followed by the vP fronting to Spec-TP; and (iv) the SOV-C-T order is achieved by means of a rolled-up interactive movement of the vP, first to Spec-TP and then to Spec-CP.

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