# Complement clauses in Canela[1]

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## 1. Introduction

A clause is more commonly nominalized when it occupies a position/function that is prototypically nominal (subject, DO, IO, or predicate nominal) within another clause. In this sense, a grammatical nominalization (as opposed to a lexical derivation) may be defined as a process by which a finite verbal clause – a complete sentence or a verbal phrase without a subject – is converted into a nominal phrase. Within a nominal phrase, the erstwhile verb assumes the syntactic function of nominal head, while other sentential constituents – subject, object, verbal complements, or adverbs – assume the function of noun modifiers (Givón 2001).

The purpose of this article is to describe nominalizations in subordination contexts of Canela by analyzing the syntactic adjustments of the finite verbal clause prototype into the nominal prototype. In light of this objective, the most common types of subordinate embedding of clauses were observed: verbal complements within the VP, which have generated constructions expressing aspect, modality, and polarity.

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The following characteristics are shared by all adjustments: 1) verbs acquire nonfinite morphology; and 2) the same morphosyntactic expression is given to S and O, the internal VP arguments expressed by absolute prefixes. On the other hand, the external argument A receives oblique marking and is deleted when corefers with the subject/object of the matrix clause. This type of nominalization in subordinate clauses in Canela will be here described in terms of Comrie and Thompson's (1985) proposal for clausal nominalizations.

The Jê family comprises at present the following languages, spoken exclusively in Brazil (Rodrigues 1999): Kaingáng and Xokléng (Southern Jê); Xavante and Xerente (Central Jê); Apinajé, Kayapó, Panará, Suyá (including Tapayúna) and Timbira (Northern Jê). What is commonly known as the Timbira language includes the following varieties: Canela Apãniekrá, Canela Ramkokamekrá, Gavião Pykobjê, Gavião Parkatejê, Krahô, Krejê, Krikatí.

The data presented here are from the Canela Apãniekrá dialect. The term Timbira is avoided in favor of the more specific term Canela, given that the other dialects of Timbira differ in important ways from the one discussed in this article.

## 2. General morphosyntactic properties of Canela

There are three types of main clause constructions in Canela, distinguished by verbal inflection, the presence or absence of auxiliaries, and the treatment of the core arguments A, S and O. These constructions correspond to the alignment systems: agent-patient, ergative-absolutive, and nominative-absolutive (figure 1).

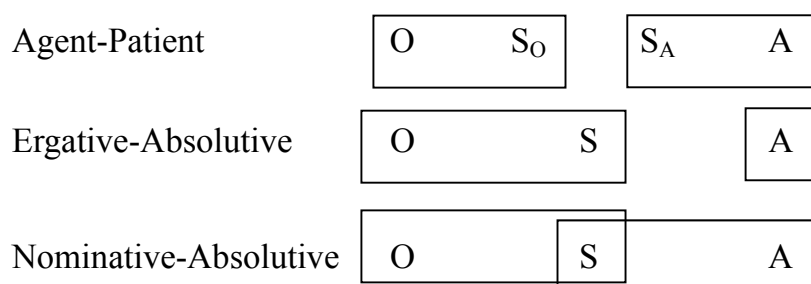| Agent-Patient | O        $S_O$ | $S_A$        A |
|---------------|-----------------|-----------------|
| Ergative-Absolutive | O            S | A |
| Nominative-Absolutive | O      S      A | |

Figure 1: Alignment systems in Canela

In the alignment that Gildea and Castro Alves (2010) propose to call nominative-absolutive, it is possible for S to pattern with both A and O simultaneously. In this alignment, A and O show clearly distinct patterns in grammar, and in intransitive clauses, S shows both the A and the O patterns

simultaneously. As such, S and A (the nominative) pattern together, but at the same time, S and O (the absolutive) also pattern together.

A preliminary characterization of each of the three systems in Canela can be found in Castro Alves (2004). Table 1 summarizes the properties of each of the alignment systems in Canela.Q:

| ALIGNMENT | AGENT-PATIENT | | ERGATIVE-ABSOLUTIVE | | NOMINATIVE-ABSOLUTIVE | |
|---|---|---|---|---|---|---|
| VERB POSITION | clause-final | | clause-final | | verb followed by auxiliary | |
| TRANSITIVE VERB | A | O-V | A ERG | O-V | A | O-V |
| INTRANSITIVE VERB | $S_A$ | V $S_O$-V | | S-V | S | s-V |
| PRONOUN TYPE | Set I | Set II | Set III | Set II | Set I | Set II |
| CONDITIONING CONTEXT | general pattern | | recent past | | certain aspect / modality categories | |
| VERB FORM | finite | | nonfinite | | nonfinite | |

Table 1: Alignment types and their properties in Canela

Table 2 presents the set of pronominal forms in Canela: a series of independent pronouns and two series of pronominal prefixes. Set I encodes the nominative argument of a clause (external argument of VP), whereas set II encodes the absolutive (internal argument of VP), the object of a postposition, and the possessor (directly on inalienable noun stems and with the support of a genitive postposition for alienable noun stems). Set III encodes the complement of the ergative and dative postpositions.

| PERSON | INDEPENDENT PRONOUNS | PERSONAL PREFIXES | |
|---|---|---|---|
| | Set I | Set II | Set III |
| 1 | *wa* | *i-* | *i-* |
| 1 INCL | *ku* | *pa(ʔ)-* | *pa(ʔ)-* |
| 2 | *ka* | *a-* | *a-* |
| 3 | *ke / Ø* | *i(ʔ)- / h- / Ø* | *ku-* |

Table 2: Pronominal forms in Timbira

The grammatical distinction between external and internal arguments is attested, beyond the differences in the pronominal forms.

Therefore, the S or A external arguments to the VP is encoded by Set I (the nominative), while the O internal argument is encoded by Set II (the absolutive). Besides, the distinction is also marked by the occurrence of a relational prefixes, which indicate dependency relations and syntactic contiguity between internal arguments (both of nominal and pronominal form) and verbs. In Canela, we find the following phonologically conditioned distribution: when the verbal stem begins with a vowel, the prefix takes the form *j- / tʃ-* and, when initiated by a consonant, it is a Ø.

With respect to the verb form, the main morphological characteristic that distinguishes a verb used in agent-patient clauses from that one used in the ergative-absolutive clauses (encoding the recent past) is the opposition *finite* versus *nonfinite*. This property is not shared by descriptive verbs, which display the same form in both clause types. There are no tense, aspect, or modality morphemes affixed to Canela verbs. Nevertheless, a morphophonological rule modifies the end (and sometimes the beginning) of the stem of most transitive and intransitive verbs. These verbs, when ending in a vowel in the finite form, display a lexically-marked consonant in the nonfinite form. A few other verbs present suppletive forms ('cry', 'sleep'), or remain invariable when ending in consonants in the finite form ('roast', 'cut'):

| Intransitives | | | Transitive | | |
|---|---|---|---|---|---|
| finite | nonfinite | | finite | nonfinite | |
| *tʃa* | *tʃãm* | get up | *tʃa* | *tʃãm* | build |
| *ape* | *ʒpen* | work | *kura* | *kuran* | kill |
| *wrə* | *wrək* | descend | *tɔ* | *tɔn* | make/do |
| *aktʃa* | *piktʃar* | laugh | *apro* | *apror* | carry |
| *amti* | *pimtir* | dream | *ŋɔ̃* | *ŋɔ̃r* | give |
| *amrã* | *ŋkwər* | cry | *tʃet* | *tʃet* | roast |
| *ŋɔ̃r* | *õt* | sleep | *akʰɛp* | *akʰɛp* | cut |

Table 3: Verbal forms in Canela

The term 'non-finite' has been chosen because this is the verb form that occurs in the formation of deverbal nouns and in subordinate clauses (a common property in the Northern Jê languages – *cf.* Castro Alves 2010). In subordination contexts, the use of the nonfinite form of the verb is one of the modifications that clauses undergo in order to function as NPs.

The characteristics of complementation will be discussed in the following sections, from both functional and structural viewpoints. With the former I analyze the complementation domain, understood as a complex structure involving a clause that serves as an argument of a main predicate, including constructions which express aspect, modality, and polarity. With the latter I distinguish between complementation types such as subordination embedding, or parataxis (juxtaposition) in order to assess the choice between one or the other in terms of the syntactic properties of the verbs taking clausal complements.

## 3. Complementation

Clausal (or verbal) complements are clauses that function as arguments that are the subject or object of other clauses. Verbs that take clauses as complements, allowing verbal complements or nominal objects, belong to three main classes: verbs of modality, verbs of manipulation, and verbs of perception, cognition, and expression (Givón 2001).

Once the syntactic properties of the verb determine the type of construction they take (subordination embedding, parataxis), complement clauses in Canela will be presented in terms of the main clause verb class in sections 3.1 until 3.3.

### 3.1. Verbs of modality

Modality refers to the status of a proposition. Semantically, the main verb may codify a modal (intentional) or aspectual attitude, or an action or state of its subject in relation to the event/state codified in the complement clause (Givón 2001).

In Canela, the modal attitude of the subject is expressed by means of verbs such as 'want', 'intend', 'try', and has the following morphosyntactic properties:

i.   the subject of the main verb is also the subject of the complement clause;

ii.  the verb of the complement clause is always nonfinite form;

iii. the complement clause is formally analogous to the object of the main clause (OV word-order);

iv.  the complement clause is generally (but not categorically) marked by the postpositions *nã* ('in front of') or *tɔ* ('with'), which function as subordinators.

The following examples illustrate these modal attitudes expressed by the main verb. The internal arguments of the verb phrase, S and O, are expressed by absolutive prefixes (1a, 1c). The external argument, A, does not appear in the nominalization because it is coreferential with the subject of a matrix clause (1b-c). The labels above the examples indicate the syntactic functions of the arguments.[2]

```
          DAT        [s-VINTR    ]O      V
(1) a.  i-mã      [i-ɲɔ̃t       nã]     prãm
        1-DAT     1-sleep.NF   SUB     want
        I want to sleep.

          DAT   [        O            VTR    ]O      V
    b.  iᵢ-mã  [Øᵢ    kro    ɲ-ĩ        krɛ̃r    nã]     prãm
        1-DAT (1)    pig    RP-meat   eat.NF   SUB     want
        I want to eat pork (meat).

          A          [       o-VTR       ]O      V
    c.  kaᵢ    ha    [Øᵢ     h-apror     tɔ]     haʔkʰrɛ
        2      IRR   (2)     3-carry.NF   SUB     try
        You will try to buy it (the fabric).
```

The examples in (2) show that the subordinator nã may not occur with the verb prãm 'want'. They also show that the subject of the main clause may just as well receive the dative case as be expressed by a nominative pronoun.

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          A    [s-VINTR]O     V
(2) a.  wa   [i-ɲɔ̃t]         prãm
        1    1-sleep.NF      want
        I want to sleep.

          A            [     OI            O     VTR]O      V
    b.  waᵢ   mɛ̃   [Øᵢ   rosane    mã    kuhe   ɲ-ɔ̃r]       prãm
        1     PL    (1)   Rosane    DAT   bow    RP-give.NF   want
        We want to give the bow to Rosane.
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In structural terms, the examples above make use of subordination embedding. That the constructions in square brackets are structurally subordinated to the main verbs is shown by 1) the absence of TAM

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2 The notional terms S,A,O refer, respectively, to the unique participants (agent or patient) of an intransitive verb (S), and to the participants that are semantically agent or experiencer (A) and patient (O) of a transitive verb. When S is not a unified category, such opposition is represented by the terms $S_A$ e $S_O$ referring respectively to the unique agent participant (S as A) and patient (S as O) of an intransitive verb.

morphemes, and 2) the fact that the complement clause is formally analogous to the object of the main clause (word-order OV).

The kind of nominalization found in the examples above can be described on the basis of the proposal by Comrie and Thompson (1985) regarding clausal nominalization (a nominalization without a lexically derived noun). The characteristic feature of this structure is that there is no evidence in favor of its nucleus being a lexical noun. Nevertheless, the morphosyntactic properties of these clauses (such as the person category) suggest that it is more appropriate to see them as undergoing certain modifications that permit them to function as NPs, instead of assuming that the verb transforms itself into a noun in such nominalizations. The arguments that corroborate this analysis are (1) the deletion of the external argument A of the coreferring subordinate clause (1b-c, 3b); and (2) the fact that nonfinite forms cannot be taken as nouns in synchrony (*cf.* Castro Alves 2010).

The rest of the verb types that take clausal complements – verbs of manipulation and verbs of perception, cognition, and expression – will be discussed in sections 3.2 and 3.3, respectively. Before this, however, constructions that express modality and polarity (3.1.1) and aspectuality (3.1.2) will be presented. These constructions will be discussed separately because they exhibit a different structure. Synchronically, they are simple predicates, with modality, polarity, and aspectuality being expressed by means of auxiliaries.

In future research I intend to expand the understanding of the distinction between auxiliaries versus complement-taking verbs presented in section 3.1.2, but there is no likelihood that future analyses will question the existence of at least two categories of auxiliaries that condition nominative-absolutive alignment: the negative and evaluative modes, which condition ergative-absolutive in past tenses and nominative-absolutive in non-past tenses, presented in 3.1.1.

### 3.1.1. The expression of other modal categories and of negative polarity

A series of 'function words' may occur at the end of a clause, codifying the modality here referred to as 'evaluative'. They are operators,[3] indicated lexically by the use of certain verbs ('be good', 'be bad', 'be much', 'be little'), which follow the main verb in its nonfinite form.

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[3] "T-A-M morphemes arise almost universally from modal-aspectual main verbs that grammaticalize – become 'operators' on – and eventually cliticize to their complement – 'operand' – verbs" (Givón 2001: 340).

The following examples illustrate these categories in intransitive clauses (3a-b) and in transitive clauses (3c):

(3) a.
|  | [ S | s-V | Aux] |
|---|---|---|---|
|  | *pe* | *wa* | *i-j-õt* | ***ŋkrirɛ=ne*** |
|  | DP | 1 | 1-RP-sleep.NF | be.few |

I sleep very little.

b.
|  | [S | s-V | Aux] |
|---|---|---|---|
|  | *(iʔ-ŋkrɛr=kate)* | *iʔ-ŋkrɛr* | ***mpɛj*** |
|  | 3-sing.NF=NMZ | 3-sing.NF | be.good |

(The singer) sings well.

c.
|  | [A | O | V | Aux] |
|---|---|---|---|---|
|  | *paʔ-prõ* | *apu* | *ampɔ* | *j-əmĩr* | ***tɔʔhi*** |
|  | 1INCL-wife | PRG | something | RP-roast.NF | be.much |

Our wives are roasting a lot (of meat).

The denomination 'evaluative mood' is based on considerations regarding the 'Evaluative Schema' found in Heine. An event schema, according to this author, corresponds to a simple semantic unit and consists of a predicate and its associated variables:

> The **Evaluative Schema**, which is based on ethic or other judgments that are interpreted as introducing a modal notion, with the "main predication" being presented in the form of a complement, either as an infinitival or a clausal complement of that notion. This schema is employed mostly for the agent-oriented ("deontic") concepts of requirement, obligation, and permission, but its use may be extended to also express the corresponding epistemic concepts of certainty, probability, and possibility. Typically it has the form "It is X to/that Y," where "X" is a verb of state, an adjective, or a nominal expressing the evaluative concept, for example, "good", "useful", "important"; that is, "X" is the item that is going to be grammaticalized to a modal category (Heine 1993: 39).

In Canela, the evaluative mood expresses the evaluative concepts 'be good', 'be bad', 'be few', and is codified periphrastically by the combination of verbs of modality (the auxiliaries) plus the lexical verb (the main verb). These verbs of modality are also found in independent clauses (4a-b):

(4) a.
| *pap* | ***mpɛj*** |
|---|---|
| rack | be.good |

The rack is good (was repaired).

b.
| *iʔ-kʰen* |
|---|
| 3-be.bad |

It is not good (the motor).

Nevertheless, in examples (3a-c) constructions that were etymologically the arguments of intransitive verbs were reanalyzed in Canela (Castro Alves 2008). As a consequence, the clause assumes a different structure: the complement verb, in its nonfinite form, was reanalyzed as the

main verb, while the etymologically main verb, in final position, was reanalyzed as an auxiliary. The asterisk indicates reconstructed form.

(5) a.  $*((Pro)noun_{Topic})$  [(A-tɛ) S/O-$V_{2 \text{ Nonfinite}}$]  $V_1$

  ↓  ↓  ↓  ↓

  b.  $((Pro)noun_{Topic})$  (A-tɛ) S/O-$V_{\text{ Nonfinite}}$  **AUX**

For this reason, in the expression of evaluative modality, the clause is analyzed synchronically as a simple predicate, in which the etymological subordinate verb provides the lexical head for the new main clause, and the etymological main verb gives birth to a mood distinction.[4] The functional words that codify modality categories are analyzed as auxiliaries. This analysis finds theoretical support in the work of Heine (1993: 40), at the end of the passage cited above: " 'X' is the item that is going to be grammaticalized to a modal category."

The same structure occurs in clauses which express negative polarity. These are also biclausal grammaticalized constructions which are simple predicates (Castro Alves 2010).

|  | [S | s-V | Aux] |
|---|---|---|---|
| (6) a. | *ka* *ha* | *a-wrɨk* | ***narɛ*** |
|  | 2  IRR | 2-descend.NF | NEG |

You are not coming down.

|  | [A | O | V | AUX] |
|---|---|---|---|---|
| b. | *wa* *ha* | *wak$^h$ə* | *pɨr* | ***narɛ*** |
|  | 1  IRR | knife | take.NF | NEG |

I am not going to take the knife.

With regard to the morphosyntax of the constructions in (3a-c) and (6a-b), the occurrence of these auxiliaries conditions the nominative-absolutive alignment (Gildea and Castro Alves 2010). As demonstrated earlier, in these constructions the absolutive argument is expressed by verbal prefixation, while the nominative argument is expressed by a free pronoun or a nominal (*cf.* Table 2).

The table below summarizes the expression of categories of modality and polarity in Canela.

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[4] The ergative was later lost – *cf.* Castro Alves 2010.

|                | **Evaluative Modality** |        | **Polarity** |     |
|----------------|-------------------------|--------|--------------|-----|
| *mpɛj*         | 'be.good'               | *narɛ* | NEG          |     |
| *kʰeat*        | 'be.bad'                |        |              |     |
| *tɔʔhi*        | 'be.much'               |        |              |     |
| *ŋkrirɛ*       | 'be.few'                |        |              |     |

Table 4: Categories of modality and polarity in Canela

The structure found in examples (3) and (6), a simple predicate, is therefore different from the structure found in the constructions in (1-2), a complex structure involving a clause that serves as argument of a matrix verb. Although the verb acquires nonfinite verbal morphology and the same morphosyntactic treatment is given to the internal arguments of VP, S, and O (differently from the external argument, A), there is no reason to describe the type of nominalization in (3) and (6), simply because, in these constructions, there are no subordinate clauses.

In what follows, other cases of apparent nominalization are described, but these are also configured as simple predicates.

### 3.1.2. Aspectual categories expressed periphrastically

Although modality refers to the status of a proposition, aspect is more closely related to the internal temporal constituency of a given situation (Comrie 1976).

The aspectual categories expressed periphrastically by the combination of verbs in Canela are six in number: four imperfectives (progressive, continuative, ingressive, iterative) and two perfectives (completive, terminative), illustrated below.

Verbs of movement are widely used in Canela to indicate that an event is in progress in the time referred to.[5] Such an aspect may be codified periphrastically by the combination of verbs *mɔ̃* or *tɛ̃* plus the postposition *tɔ*.

(7) a.
| [S-V | AUX] |
|------|------|
| *iʔ-ŋkrə* | ***tɔ=mɔ̃***[6] |
| 3-dry | POSTP=go |

It is drying (the cajú tree).

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[5] The aspectual category 'progressive' is also expressed in Canela by means of the particle *apu* (in second position in the clause).

[6] = indicates the boundary between the elements of a compound that is morphologically complex but syntactically a simple verb.

```
          [A          O      V          AUX]
   b.  ku-tɛ    amjĩ   par   kuʔhõn     tɔ=mɔ̃
       3-ERG    RFL    foot  dry        POSTP=go
       He is drying his feet.


          [S    s-V                AUX]
   c.  wa    i-j-u-j-akʰor         tɔ=tɛ̃
       1     1-RP-INTR-RP-smoke    POSTP=go
       He left smoking.
```

The structure found in these constructions is analyzed by Gildea and Castro Alves (2010) as a simple predicate. The explanation defended there is a historical one: the biclausal construction, including matrix and subordinate clauses, was reanalyzed; the etymological subordinate verb supplied the lexical head for the new main clause (*ŋkrə, kuʔhõn, (ju)jakʰor*), and the etymological main verb gave birth to an aspectual distinction (*tɔ = mɔ̃, tɔ = tɛ̃*). The main syntactic argument that supports this analysis is the absence of a nonfinite form in (7b-c), required by the main verb in the ergative alignment (*mɔ̃r; tɛ̃m*).

The structure found in (7), a simple predicate, is similar to that found in (3) and (6). As in the latter two cases, there is no reason to describe the type of nominalization in (7) because, in these constructions, there are also no subordinate clauses.

In addition, another series of 'function words' can occur at the end of a clause. They are operators that express aspectual categories indicated lexically by the use of verbs such as 'finish', 'give up', 'live', 'be.much', etc., which follow the main verb in its nonfinite form.

The examples below illustrate this pattern (intransitive clauses in (8a-b, 8e), and transitive clauses in (8c-d)).

```
              [S          s-V              AUX]
(8) a.  ka    apu     a-j-ʒpen        tɔ= h-amrɛ              Terminative Aspect
        2     PRG     2-RP-work.NF    POSTP=3-finish
        You are finishing (your) working.


              [S          s-V          AUX]
   b.  ka    ha    a-j-ʒpən      tɔ= h-iku               Terminative Aspect
       2     IRR   2-RP-eat.NF   POSTP=3-stop
       You are going to stop eating.
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        [S     O              V             AUX]

c.   *wa*   *kupɛ̃ʔ=kʰȝ*   *j-apror*       **tɔ = i-ŋkrȝ**       *Continuative Aspect*

     1     cloth           RP-carry.NF   POSTP=1-live

     I continue buying cloth.

        [S              s-V            AUX]

d.   *kahãj*   *apu*   *h-ȝʔkukʰrɛ̃n*   **j-ȝʔtɔ**       *Iterative Aspect*

     woman   PRG   3-run.competing.NF   RP-be.many

     The woman is racing many times.

The operators may occur without the postposition *tɔ* (8d, 9a-b):

        [S            s-V         AUX]

(9) a.   *ka*   *apu*   *a-j-ȝpen*    **j-amrɛ**

     2     PRG   2-RP-work.NF   RP-finish

     You are finishing working.

        [S            s-V       AUX]

   b.   *ka*   *ha*   *a-j-ȝpən*    **j-iku**

     2     IRR   2-RP-eat.NF   RP-stop

     You are going to stop eating.

     With reference to the morphosyntax of the constructions in (9a-d), as well as of (6a-b), (7a-b), and (8a-c), the occurrence of these auxiliaries conditions the nominative-absolutive alignment (Gildea and Castro Alves 2010). In these constructions, as mentioned earlier, the absolutive argument is expressed by verbal prefixation, using the same set of prefixes that mark the possessor of inalienable nouns and the objects of some postpositions. The nominative argument is expressed by a nominal or free pronoun (which may sometimes be deleted) at the beginning of the clause or immediately following a time-aspect-modality marker.

     Finally, the other operators that occur in final position and express aspectual categories are the numerals *pitʃet* 'one', *aj- ~ pja-kʰrut* 'two', *ŋkrɛ* 'three', codifying the iterative aspect, and the particle *par(tu)* 'all, completely', and the expressions *kʰãm = tɔ = tɛ̃* (literally locative = instrumental = go) 'begin', and *iʔ-kʰrã = kura* (literally 3-head = kill) 'kill, completely finish off', codifying the ingressive and completive aspects, respectively. All these operators also trigger the nominative-absolutive alignment.

           [A      O              V                 OPERATOR]

(10)  a. *pe*   *kahãj*   *kupɛ̃ʔ=kʰɜ*   *j-apror*    **ŋkrɛ**         *Iterative Aspect*
           DP    woman cloth             RP-carry.NF   three
           The woman bought cloth three times.

           [S        o-V       Operator]

      b. *ku- tɛ*   *iʔ-kʰrẽn*   **par**            *Completive Aspect*
           3-ERG   3-eat.NF    completely
           He ate everything up.

           [S        o-V       OPERATOR]

      c. *ku-tɛ*    **iʔ-kʰur**    **kʰãm=tɔ=iʔ-tẽm**       *Ingressive Aspect*
           3-ERG     3-eat.NF    POSTP=POSTP=3-go
           He began to eat (meat).

           [S              o-V        OPERATOR]

      d. *paʔ-prõ*    *apu*   *h-əmĩr*    **tɔ=iʔ-kʰrã=kura**    *Completive Aspect*
           1INCL-wife  PRG  3-roast.NF   POSTP=3-head=kill
           Our wives are roasting (some meat) completely.

The syntactically ambiguous constructions in (8-10) are preliminarily analyzed as simple structures, composed of an auxiliary verb (in final position) plus a main verb (*cf.* the label on the constituents). I have chosen this classification because these are constructions that are analogous to the ones described in (7). The reader should keep in mind that the understanding of the distinction between auxiliaries versus complement-taking verbs in these constructions is theme of future research.

The expression of aspect in Canela may be systematized as follows:

| *Imperfective Aspects* | | *Perfective Aspects* |
|---|---|---|
| **Progressive** | **Iterative** | **Terminative** |
| *tɔ=mɔ̃* | *(tɔ=)pitʃet* | *(tɔ=h- ~ j-) amrɛ* |
| *tɔ=tɛ̃* | *(tɔ=aj- ~ pja-) kʰrut* | *(tɔ=h- ~ j-) ipej* |
| | *(tɔ=)ŋkrɛ* | *(tɔ=h- ~ j-) iku* |
| | *(tɔ=h- ~ j-)ɜʔtɔ* | |
| **Continuative** | **Ingressive** | **Completive** |
| *ŋkrɜ* | *kʰãm=tɔ=tɛ̃* | *par(tu)* |
| | | *iʔ-kʰrã=kura* |

Table 5: Aspect categories expressed by means of auxiliaries and other operators

The structure found in examples (8)-(10), is similar to that found in (3) and (6), once all of them are simple predicates. As in the latter two cases, there is no reason to describe the type of nominalization in (8)-(10) because, in these constructions, there are also no subordinate clauses.

## 3.2. Verbs of manipulation

Semantically, the agent of a verb of manipulation manipulates the behavior of the manipulee, a potential agent. The manipulee of this main verb is coreferent with the agent of the verbal complement. The complement clause codifies the target event being realized by the manipulee (Givón 2001).

The manipulator attitude of the subject in Canela is expressed by means of verbs such as 'want', 'do', 'let', 'ask', and 'speak', and has the following morphosyntactic properties:

i.   the manipulator-agent of the main verb is the subject of the main clause;

ii.  the manipulee of the main verb is the direct object of the main clause;

iii. the subject-manipulee of the complement clause may either be codified as zero in the complement clause or be indicated by a pronominal prefix in the verb;

iv   the verb of the sentence complement presents either nonfinite or finite morphology, depending on the verb of manipulation;

v.   the complement clause is generally (but not categorically) marked by the postposition *nã* ('in front of'), which functions as a subordinator.

The following examples illustrate these manipulator attitudes expressed by means of the main verb. The subordinate verbs are intransitive (11b-c) and transitive (11a, 11d). The internal arguments of the verb phrase, S and O, are expressed by absolutive prefixes (11d, 11b) and nominals (11c, 11a). The external argument, A, does not appear in the nominalization because it is coreferential with the object of the matrix clause (11a).

|   | [   | O | $V_{TR}$]O |   | A | o-$V_{TR}$ |
|---|---|---|---|---|---|---|
| (11) a. | *[Ø$_i$* | *tɛp* | *krɛ̃r* | *nã]* | *wa* | *a$_i$-tɔ=prãm* |
|   | 2 | fish | eat.NF | SUB | 1 | 2-do=want |

I want you to eat fish.

      [s-VINTR]O         A       o-VTR

b. *[aᵢ-ŋkrɛr      nã]     wa    aᵢ-tɔ=prãm*

    2-sing.NF      SUB    1     2-do= want

    I want you to sing.

      A       [S     VINTR]O        o-V

c. *i-tɛ     [aliceᵢ  ɲ-ɔ̃t        nã]    iʔᵢ-tɔn*

    1-ERG   Alice   RP-sleep.NF   SUB    3-make

    I made Alice sleep.

      [A    o-VTR]O      A     OI

d. *[ka   i-pupun   nã]    wa    a-mã*

    2      1-see.NF    SUB   1(DS)  2-DAT

    I (told) you to look at me.

In contrast, the external argument, A, in (11d) is expressed by means of the nominative pronoun *ka*. In this construction there occurs a strategy of non-canonical switch-reference (Castro Alves 2004). There is no use of syntactic operators – what marks the coreference of $S_1$ and $S_2$ is the use of nominative pronouns.

The constructions in square brackets (examples 11) are configured as embedded clauses once they are marked by the postposition nã, which functions as a subordinator.

Examples (12b-c) also require a strategy of switch-reference, by marking of a different subject: The morpheme *nã* does not occur with the verb *katɔr* (12c).

      A   o-VTR         [A     o-VTR]O

(12) a. *ka  Ø-tɔ=tʃa      [ku-tɛ   a-pupun    nã]*

      2   3-POSTP=obligate  3-ERG  2-see.NF    SUB

      You made him look at you.

      A          o-VTR          [A     o-VTR]O

b. *ku    nɛ̃   Ø-tɔ=paʔ-tʃam      [ke    pa-pupun    nã]   narɛ*

    1INCL  NEG  3-POSTP=1INCL-get.up.NF  3(DS)  1INCL-see.NF  SUB  NEG

    We did not make him look at us.

      A       o-VTR     [A   s-VINTR]O

c. *ku-tɛ  i-kujahek   [wa   i-katɔr]*

    3-ERG   1-order     1(DS)  1-sair

    He ordered me to leave.

In structural terms, the examples with verbs of manipulation above make use of subordination embedding. That the constructions in square brackets are structurally subordinated to the main verbs is shown by 1) the absence of TAM morphemes, and 2) the fact that the complement clause generally (but not categorically) is marked by the postposition *nã*.

## 3.3. Verbs of perception, cognition, utterance (PCU)

This verb group is semantically identified by the fact that the verb in the main clause codifies either a mental state or an event of perception, cognition, and expression. The subject of this verb is either an experiencer or an agent. The state or event codified in the complement is analogous to the patient of the verb in the main clause (Givón 2001).

Verbs in Canela such as 'know', 'forget', 'see' and 'say' present the following morphosyntactic properties:

i.   no coreference restrictions hold between main and complement clause;

ii.  the complement clause is more likely to have the normal main clause finite structure;

iii. the two clauses may be separated by a subordinator morpheme (the postposition *nã*).

The following examples illustrate these acts of perception, cognition, and expression, codified by means of the main verb. The subordinate verbs are intransitive (13b), transitive (13c-e) or transitivized (13a). The internal arguments of the verb phrase, S and O, are expressed by absolutive prefixes (13b) and nominals (13a, 13c-e). The external argument, A, does not appear in the subordinate clause because it is coreferential with the subject or object of the matrix clause (13a, 13c; 13d-e).

|  | DAT | [ | O | VTR]O | V |
|---|---|---|---|---|---|
| (13) a. | *i-kra  mã* | *[Øᵢ* | *bisikrɛt* | *tɔ=i ʔ-mprar]* | *j-a ʔkrɛ=pɛj* |
|  | 1-son  DAT | (1) | bicycle | POSTP=3-ride | RP-know=POST |

My son knows how to ride a bicycle.

|  | DAT | [ | s-VINTR |  | ]O | V |
|---|---|---|---|---|---|---|
| b. | *[a-mã* | *[jũri* | *i-tẽm=tʃɜ* | *ita    nã]* | *i-j-a ʔkrɛ* | *pɛj]* |
|  | 2-DAT | where | 1-ir=NMZ | DEM   SUB | 1-RP-know | good |

You don't know where I am going. (Popjes & Popjes 1986: 165)

|  | A | [ | O | VTR]O | s-V |
|---|---|---|---|---|---|
| c. | *i-tɛ* | *[Øᵢ* | *kupɛ̃ʔ=kɜ* | *j-apro]* | *tɔ=i-japak=ket* |
|  | 1-ERG | (1) | cloth | RP-carry | POSTP=1-remember=NEGT |

I forgot to buy cloth.

|  | A | O | VTR | [ | O | VTR | ]O |  |
|---|---|---|---|---|---|---|---|---|
| d. | *i-tɛ* | *iʔtʃẽk$_i$* | *par* | *[Ø$_i$* | *rop* | *j-arẽn* | *nã]* |  |
|  | 1-ERG | Ihxẽc | hear | (3) | jaguar | PR-tell.NF | SUB |  |

I heard Ihxẽc tell the story of the jaguar.

|  | A |  | [ | O | VTR | ]O | o-V |
|---|---|---|---|---|---|---|---|
| e. | *hũmrɛ* | *tɛ* | *[Ø$_i$* | *hĩ* | *k$^h$rẽr* | *nã]* | *a$_i$-pupun* |
|  | man | ERG | (2) | meat | eat.NF | SUB | 2-see |

The man saw you eating meat.

In structural terms, the examples above make use of subordination embedding, as do the completive clauses in (1-2). The reasons that the constructions in square brackets are structurally subordinate to the main verbs are (1) the absence of TAM morphemes, and (2) the fact that the complement clause is analogous to the object of the main clause (OV).

The type of nominalization found in the examples in (13) can be described on the basis of the proposal of Comrie and Thompson (1985) regarding clausal nominalization, afore mentioned in 3.1.

While in (13) the constructions in square brackets have the configuration of embedding clauses, the examples in (14) are configured as paratactic clauses, displaying the very same structure as independent simple clauses, and require a strategy of switch-reference by marking of a different subject. The structural differences depend on the PCU verb.

|  | [s-V] | [ | A | o-V] |
|---|---|---|---|---|
| (14)a. | *h-ĩr* | *wa* | *i-tɛ* | *h-õmpun* |
|  | 3-sit | 1(DS) | 1-ERG | 3-see |

I saw him seated.

|  | [ | A | o-V] |  | [s-V] |
|---|---|---|---|---|---|
| b. | *wa* | *i-tɛ* | *h-õmpun* | *mã* | *h-ĩr* |
|  | 1 | 1-ERG | 3-see | DS | 3-sit |

I saw that he was seated.

|  | [A | OI] | [S |  |  | V] |
|---|---|---|---|---|---|---|
| c. | *ku-tɛ* | *i-mã* | *ke* | *ha* | *ma* | *tẽ* |
|  | 3-ERG | 1-DAT | 3 | IRR | DIR | go |

He (told) me he was going to leave.

|  | [A |  | OI] | [S |  |  | V] |
|---|---|---|---|---|---|---|---|
| d. | *ku-tɛ* | *mẽ* | *a-mã* | *ke* | *ha* | *mẽ* | *awjahe* |
|  | 3-ERG | PL | 2-DAT | 3 | IRR | PL | hunt |

They (told) you they were going to hunt.

The syntax of complementation in Canela may be explained from the perspective of a 'scalar' grammar of integration of underlying events with the complex cognitive-semantic continuum (Givón 2001). The systematic isomorphisms between the semantics and the syntax of complementation in Canela have been the theme of a current study. The hypothesis being investigated is that the greater the integration of verbs in Canela (i.e. those with verbs of modality and manipulation), the greater the relation of syntactic dependence between sentences (i.e. those of perception, cognition and utterance), and vice-versa.

## 4. Summary and conclusions

It was seen that complementation in Canela is expressed by subordination and by paratactic strategies.

The syntactic properties exhibited by complement-taking verbs show that the verb type (verbs of modality, verbs of manipulation, and verbs of perception, cognition, and utterance) determines the type of construction (subordination embedding, parataxis).

Verbs of modality and verbs of manipulation that take clauses as complements make use of subordination embedding: a complex structure involving a clause that serves as argument of a matrix verb. Verbs of perception, cognition and utterance (PCU) show constructions that are configured as embedding clauses and constructions that are paratactic clauses. The choice between one type of construction and the other depends on the verb.

Table 6 systematizes the structural properties exhibited by each verb type that takes clauses as complements:

| | complement clauses of PCU verbs (paratactic strategy) | | complement clauses of verbs of modality, verbs of manipulation, and PCU verbs (subordination strategy) | |
|---|---|---|---|---|
| | free (pro)noun | personal prefix | personal prefix (or noun) + postposition | personal prefix (or noun) |
| V transitive | A | O-V | Ø | **O**-V |
| V intransitive | S$_A$ | V<br>S$_O$-V | | **S**-V |
| verb form | finite | | nonfinite | |

Table 6: Structural properties exhibited by subordination and paratactic strategies

The nominalization found in complement clauses in Canela (subordination strategy) is characterized by the occurrence of the nonfinite form of the verb, and by the same morphosyntactic treatment being given to

the internal arguments of the verb phrase, S and O (expressed by absolutive prefixes). In contrast, the external argument, A, does not appear in the nominalization when it is coreferential with the subject of a matrix clause.

This type of nominalization is described on the basis of the proposal of Comrie and Thompson (1985) regarding clausal nominalization.

However, constructions which express polarity, modality, and certain aspectual categories present a different structure. Synchronically, they are simple predicates, with modality, polarity, and aspectuality being expressed by means of auxiliaries.

Although the verb acquires nonfinite verbal morphology and the same morphosyntactic treatment is given to the internal arguments of VP, S and O (differently from the external argument, A), there is no reason to describe the relevant construction as a type of nominalization, simply because, in these constructions, the re are no subordinate clauses. The verbal morphology found in these constructions results from the diachronic development of the biclausal source constructions, in which the nonfinite verb was the etymologically subordinate verb.

**Abbreviations**: 1=1st person; 2=2nd person; 3=3rd person; = clitic or boundary between elements of a compound; DAT=dative; DEM=demonstrative; DIR=directional; DP=distant past; DS=different subject; ERG=ergative; INCL=inclusive; INTR=intransitive; IRR=irrealis; NEG=negation; NEGT=negative; NF=nonfinite form; NMZ=nominalizer; PL=plural; POSTP=postposition; PRG=progressive; RFL=reflexive; RP=relational prefix; SUB=subordinating particle; TR=transitive.

## References

CASTRO ALVES, Flávia de
    2004 *O Timbira falado pelos Canela Apãniekrá: uma contribuição aos estudos da morfossintaxe de uma língua Jê.* Ph.D. dissertation, Universidade Estadual de Campinas.
    2008 O papel das nominalizações na evolução do alinhamento ergativo nas línguas Jê: dimensões funcionais e estruturais. *Amerindia* 32: 11-25.
    2010 Evolution of case-marking in Timbira. *International Journal of American Linguistics* 76: 439-475.

COMRIE, Bernard
    1976 *Aspect.* Cambridge: Cambridge University Press.

COMRIE, Bernard & THOMPSON, Sandra
    1985 Lexical nominalization. *Language Typology and Syntatic Description*, Shopen T. (ed.), vol. 3: 349-98. Cambridge: Cambridge University Press.

GILDEA, Spike & de CASTRO ALVES, Flávia
    2010 Nominative-Absolutive: Counter-Universal Split Ergativity in Jê and Cariban. *Ergativity in Amazonia*, Gildea S. & Queixalós F. (eds), 159-199. Amsterdam: John Benjamins.

GIVÓN, Talmy
    2001 *Syntax*: *An introduction*. Vol. I, II. Amsterdam: John Benjamins.

HEINE, Bernd
    1993 *Auxiliaries: Cognitive Forces and Grammaticalization.* New York: Oxford University Press.

POPJES, Jack & POPJES Jo
    1986 Canela-Krahô. *Handbook of Amazonian languages*, vol.1, Derbyshire D.C. & Pullum G.K. (eds), 128-99. Berlin: Mouton de Gruyter.

RODRIGUES, Aryon D.
    1999 Macro-Jê. *The Amazonian Languages*, Dixon R. W. & Aikhenvald A. (eds), 164-206. Cambridge: Cambridge University Press.