Switch-reference and clause chaining in Northern Jê

Rafael Nonato

September 29, 2024

Abstract

This survey investigates the clause chaining grammar of six Northern Jê languages: Kĩsêdjê, Apinajé, Mebengokre, Canela Apãniekrá, Krahô and Parkatêjê. These languages share a core clause chaining grammar. Connectives linking clauses in a chain indicate whether their subjects are identical or different (switch-reference). When different, the connective may agree in person with the subject of the following clause (anticipatory agreement). Connectives that agree with third person also coindex tense. In some of these languages, agreement is blocked when the chain is grammatically embedded (e.g. as a verbal complement). The form employed when agreement is blocked is identical to the one used to agree with third person and coindex non-future tense. All forms are cognate among the surveyed languages except for this last one, creating a split between the Eastern Timbira languages (Canela Apãniekrá, Krahô and Parkatêjê), which share a cognate set in this role, and the other languages, which share a different cognate set.

keywords: Northern Jê; clause chaining; switch-reference; anticipatory agreement; grammatically embedded chains; tense coindexation

Biography: Rafael Nonato is an Assistant Professor with the Language Department at the Federal University of Pernambuco (UFPE, Brazil). He earned his Bachelor's and Master's degrees from Unicamp (Brazil), and his PhD from MIT. He has been working on the documentation of Brazilian Indigenous languages since 2005, having specialized in Brazilian languages Bororo (topic of his Master's thesis) and Kĩsêdjê (topic of his PhD thesis). His main theoretical interests are the argument structure of clauses and the syntax of clause combining. He is currently working on a descriptive grammar of Kĩsêdjê.

1 Introduction

The Northern Jê languages are a branch of the Jê family, Macro-Jê stock (Rodrigues 1999). They are spoken in the Brazilian states of Maranhão, Pará, Tocantins and Mato Grosso. Six out of the seven Northern Jê languages listed by Rodrigues (1999) are surveyed here: Kĩsêdjê, Apinajé, Mebengokre, Canela Apãniekrá, Krahô and Parkatêjê. Due to preferences expressed by the native speakers, the languages known at the time of Rodrigues's overview (1999) as Suyá and Kayapó are currently referred to as Kĩsêdjê and Mebengokre. A close relative of Kĩsêdjê, Tapayuna, is not separately studied here since the existing sources (Camargo 2010, 2015) do not address the language's clause chaining system. Finally, one language classified by Rodrigues (1999) as Northern Jê, Panará, is not included in this survey. Panará has been classified outside the Northern Jê branch in more recent work (Nikulin & Salanova 2019:535) and, in any case, it does not feature a comparable clause chaining system.

Though closely related, the Northern Jê languages are not mutually intelligible. Language boundaries align with ethnic groups, and the number of people in each ethnic group by the time the last census was carried out (the number

of language speakers may be fewer, but not by much, these being vital languages) were: **(i) Kĩsêdjê:** 424 (Siasi/Sesai, 2014); **(ii) Apinajé:** 2277 (Siasi/Sesai, 2014); **(iii) Mebengokre:** 11675 (Siasi/Sesai, 2014); **(iv) Canela Apãniekrá:** 1076 (Siasi/Sesai, 2012); **(v) Krahô:** 2992 (Siasi/Sesai, 2014); and **(vi) Parkatêjê:** 646 (Siasi/Sesai, 2014).[1]

One issue I came across while doing this survey is the fact that the available descriptions focus on clause-internal grammar, with little attention given to clause combining. Many of the complexities I had noticed in Kĩsêdjê's clause chaining grammar during my fieldwork had not been described for the other five languages. It could well be the case that only Kĩsêdjê displayed such an elaborate system, in spite of the fact that the rest of its grammar is very close to that described for the other languages. However, after I carefully examined all the language examples contained in the descriptions, besides any original texts or translations available in the literature, I came to the conclusion that my initial impression was wrong: the other languages do have elaborate clause chaining grammars. The goal of this survey is to complement the original descriptions, arguing, based on the secondary linguistic evidence I found in the literature, for a core unified clause chaining system in the Northern Jê languages.

The references surveyed for each language were: **(i) Kĩsêdjê:** Nonato (2014, 2017), narratives recorded during the ProDocLin project[2] and my unpublished field notes[3]; **(ii) Apinajé:** Callow (1962), Waller (1974), and Oliveira (2005); **(iii) Mebengokre:** Stout & Thomson (1971, 1974), Wiesemann (1986), and Wycliffe Bible Translators (2012); **(iv) Canela Apãniekrá:** Alves (2004); **(v) Krahô:** Melatti (2010) and Miranda (2014); and **(vi) Parkatêjê:** Ferreira (2003). Not all available references were used in this survey. For example, Popjes & Popjes (1986) and Guedes (1993) are more limited in scope than more recent expositions and do not include relevant data that could not be found elsewhere.

The examples I quote from the literature are transcribed here as in the original source (orthographically, phonetically or phonologically). The lack of homogeneity in this respect should not interfere with the present comparison of grammatical systems. On the other hand, I adapted the original glosses to the gloss set employed in this volume. Homogeneity of glosses among the various languages makes the comparison clearer and facilitates understanding the examples. My closer familiarity with Kĩsêdjê might have influenced the adaptation, but it seems to me that the analytical and expository gains that come from the use of a standardized set of glosses outweigh the risk of introducing biases. The original sources are mentioned alongside each example and should be directly consulted for the elucidation of eventual questions, specially those concerning grammatical systems orthogonal to clause chaining and switch-reference marking.

In the Northern Jê languages, boundaries between clauses in a chain are marked with morphemes that indicate whether their subjects must be interpreted as identical (same subject, SS) or disjoint (different subjects, DS) (switch-reference, Jacobsen 1967). DS markers further display anticipatory person agreement (as found in many languages from the Central Highlands of Papua New Guinea, see McCarthy 1965; Reesnik 1983; Vincent & Vincent 1962) and tense coindexation. Clause chaining has a central role in the elaboration of discourse in the Northern Jê languages, and there does not seem to be a limit to the number of clauses that can be thus connected. A typical example is shown in (1) below. Clause chaining morphology and subjects are boldfaced and the subjects' reference is indicated in the free translation line by subscripted indices.

(1) Kĩsêdjê

    a. [**Aj-i-kwâjê**   **thõ =ra**   k⟨h⟩asák   ] **=ne**
         PL-1.ABS-relative   one =NOM   ⟨3.ABS⟩be.bad   =&.SS
        '**A relative$_i$ of ours** was bad **and.ss**'

    b. [**∅**   anhi-khĩn-∅   khêt-∅   kanga   ] **=nhy**
         3.NOM   REFL-like-NOMZ   not.be-NOMZ   be.exhaustive   =&.DS.3.NFUT
        '**he$_i$** never had fun **and.ds**'

c. [**sikwãndy-jê** **=ra** ngájhôk mã t⟨h⟩o k⟨h⟩atho] **=n**
     young.men-PL =NOM village.plaza to ⟨3.ABS⟩with ⟨3.ABS⟩come.out =&.SS
     '**the young men**ⱼ brought him out towards the village plaza **and.ss**'

d. [**∅** t⟨h⟩o thẽ] **=n** [**∅** kh-wã k⟨h⟩apẽrẽ] **=nhy**
     3.NOM ⟨3.ABS⟩with go =&.SS 3.NOM 3.ABS-to ⟨3.ABS⟩talk =&.DS.3.NFUT
     '**they**ⱼ arrived with him **and.ss they**ⱼ scolded him **and.DS**'

e. [**∅** anhi-khãm ∅-hwiasám] **=ne** [**∅** ngô khãm atá] **=n**
     3.NOM REFL-in 3.ABS-be.ashamed =&.SS 3.NOM water in enter =&.SS
     '**he**ᵢ felt ashamed **and.ss he**ᵢ went into the river **and.ss**'

f. [**∅** s-ikwã] **=nhy**
     3.NOM 3.ABS-remain.PL =&.DS.3.NFUT
     '**he**ᵢ remained there for a long time **and.DS**'

g. [**mẽ** **=ra** t⟨h⟩o k⟨h⟩atho] **=nhy**
     people =NOM ⟨3.ABS⟩with ⟨3.ABS⟩come.out =&.DS.3.NFUT
     '**people**ₖ/ⱼ brought him out **and.DS**'

h. [**∅** ngõ katwân khãm ndwântxi ro k⟨h⟩atho.]
     3.NOM water bottom in turtle with ⟨3.ABS⟩come.out
     '**he**ᵢ brought a turtle from the river bottom.'

(ProDoclin, KS-20060211-MC-KS-narrativa_da_chegada)

In the Northern Jê languages, any kind of utterance—statements, commands, questions—can feature clause chains, and they are common in both colloquial as well as formal speech. Unlike languages like Korean (Yoon 1994), the form of the connective does not indicate the semantic relation between the connected clauses. As I have noted elsewhere (Nonato 2013), a similar range of semantic relations can be expressed by asymmetric clause coordination in languages like English (Ross 1967; Lakoff 1986; Culicover & Jackendoff 1997) or German (Reich 2008). This is the reason why I usually translate Kĩsêdjê clause chains into English coordinate structures. As we will notice along this survey, the literature on the other languages also tends to translate clause chains into coordinate structures, but nothing hinges on this.

The clause chaining grammars of the Northern Jê languages basically differ in two respects: 1) whether anticipatory agreement is blocked in some grammatical contexts (we find evidence of blocking in Kĩsêdjê, Apinajé and Krahô, evidence that there is never blocking in Mebengokre, and a lack of conclusive evidence either way for the other languages) and 2) the form of the DS connective used to mark agreement with a following third person subject in the non-future tense. Kĩsêdjê, Apinajé and Mebengokre share a cognate set for this function, whereas Canela Apãniekrá, Krahô and Parkatêjê share a different cognate set. Notwithstanding this split, in all the languages where agreement blocking has been found, this form of the DS connective is used in such contexts.

This survey is organized as follows: in section 2, I introduce the structure of the Kĩsêdjê clause, which in its main lines is identical to that of the other Northern Jê languages and will therefore serve to exemplify them. In section 3, I introduce the Kĩsêdjê clause chaining system and, in the following sections, I proceed to a comparative presentation of the systems of the other Northern Jê languages, ranging from the ones the most similar to Kĩsêdjê to the ones the least similar: Apinajé in section 4, Mebengokre in section 5 and the Eastern Timbira languages in section 6—Canela Apãniekrá in section 6.1, Krahô in section 6.2, and Parkatêjê in section 6.3. In section 7, I review the converging and diverging traits among all of these languages' clause chaining systems and point out the gaps still remaining in our understanding.

2 The Kĩsêdjê clause

Clause structure is similar across all the Northern Jê languages. A working understanding of the structure of the Kĩsêdjê clause will provide a foundation for comparing these languages' clause chaining systems. I will focus in particular on the grammatical distinction between embedded clauses (i.e. relative clauses and clauses in verbal or postpositional argument positions) and main clauses. This is a central distinction in these languages' grammars, reflected in the morphology of clause chaining markers, as well as in constituent order, case marking and verbal morphology.

Northern Jê languages are analytic, feature quite rigid constituent order and do not pro-drop. Verbs have a single suffix slot, which must be filled with nominalizing morphemes whenever the verb is used in embedded clauses (2) or embedded clause chains (3). Four different nominalizing suffixes (*-n*, *-∅*, *-m*, *-rV*) are illustrated in these examples.

(2)　… kôt　　　=ka　　[s-　　õmu-n　　] khêrê?
　　　INFER.FUT =2.NOM　　3.ABS-see-NOMZ　not.be

'… can't you see it?'　　　　　　　　　　　　　　　　　　　　(Nonato 2017:380, ex. 94)

(3)　a.　[[wa-khra-jê=re　　　∅-hrãm-∅　　　khãm s-　　ã-m　　　　　　] =nhy
　　　　　　1inc.ABS-child-PL=ERG 3.ABS-desire-NOMZ in　3.ABS-be.standing.SG-NOMZ　=&.DS
　　　　　　S　　　　　　　　　　　*adjunct*　　　　*S-*　*INTR.V*

　　　b.　[ire　　i-　　thẽ-m　　] =ne
　　　　　　1.ERG　1.ABS-go.SG-NOMZ　=&.SS
　　　　　　S　　*S-*　*INTR.V*

　　　c.　[ire　　ngry-txi　pĩ-rĩ　　　] =ne
　　　　　　1.ERG　beast-big　kill.SG-NOMZ　=&.SS
　　　　　　A　　*O*　　*TR.V*

　　　d.　[t⟨h⟩o　　i-　　mo-rõ　　]] wyráká
　　　　　　⟨3.ABS⟩with　1.ABS-go.PL-NOMZ　happen
　　　　　　OBL　　*S-*　*INTR.V*

'What happened was: our children were hungry, I went, killed this game and brought it here.'
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(Nonato 2017:381, ex. 99)

Verbs can host a single prefix slot, filled by person morphemes indexing the O argument of transitive verbs (whether nominalized or not) and the S argument of nominalized intransitive verbs. Postpositions and possessed nouns also include a person prefix slot, filled with morphemes from the absolutive set, that being the reason why I also gloss them as absolutive. There are no other inflectional affixes.

There is a closed set of TM (Tense/Modality) particles that appear in first or second position in main clauses or free clause chains and are absent from embedded clauses and embedded clause chains. I call a clause chain free when it is not embedded within a larger clause.

Many notions that we might expect to be expressed through verbal inflection or clause particles, such as negation or perfectivity, are expressed through impersonal verbs which can glossed as 'it is not the case that' (2) or 'it happened that' (3). Those verbs embed a clause (or clause chain) as their single argument, as can be seen from the use of the nominalizing suffix and change in case frame. A more familiar example of a clause chain complement is seen in (31), where the verb *wymba* 'fear' takes a 2-clause chain as its object.

Every syntactic position that can embed a single clause can embed a clause chain. Besides (3), in which the verb *wyráká* 'it happened that' takes a 4-clause chain as its complement, some other examples are (30), in which the impersonal verb *khêrê* 'it is not the case that' takes a 3-clause chain as its complement, and (25), in which the postposition *khãm* takes a 2-clause chain as its locative complement.

The notions of dependent and independent clauses in a chain do not seem to apply to the highly analytical Northern Jê languages. SR markers appear between clauses in a chain. TM particles appear in the left periphery of sentences, preceding a free clause chain and semantically scoping over it. Nominalizing suffixes are thoroughly applied to all the verbs in a grammatically embedded clause chain, such as the one in 3, with the head that embeds the chain linearly following it and semantically scoping over it. These facts follow from the constituent ordering rules of the language, and there is little sense in saying that the contiguity between a TM particle and the first clause in a free chain would make it the independent clause, or that the contiguity between an embedding head and the last clause in an embedded chain would make it the independent clause, or that the first clause in a chain would be the independent one for not being preceded by an SR marker, or the last one would be the independent one, for not being followed by an SR marker.

2.1 The main clause

Kĩsêdjê is strictly head-final with the exception of TM particles, which appear in initial or in second position. Verbs are always clause-final and, in the neutral order, are immediately preceded by any internal arguments they might have, whether a noun phrase, an embedded clause or a postpositional phrase (oblique argument). Oblique arguments must come immediately before direct objects. Any adjuncts, whether adverbs or postpositional phrases, must come before verbal arguments. The subject precedes all the aforementioned categories.

These observations are summarized in (4), which will be expanded after we discuss TM particles. The order *adjunct + direct object + verb* is seen in (5), the order *adjunct + oblique argument + verb* is seen in (6), the order *adjunct + oblique argument + direct object + verb* is seen in (7) and the order *subject + adjunct + direct object + verb* is seen in (8).

(4) Constituent order in the clausal domain (to be expanded)
     A/S (adjunct(s)) (OBL(s)) [(O) V]

(5) [∅   khyj=wê   khukwâj sak   ] =nhy   [∅   jêt   ]
        3.NOM above=from   monkey   pierce   =&.DS.3.NFUT   3.NOM   hang.SG
        adjunct   *O*   *V*
     'He shot a monkey (with an arrow) and the monkey got stuck up there.'   (Nonato 2017:361, ex. 11)

(6) [∅   kh-wã   hry=ro   thẽ   ] =n   [∅   s-ĩthep   ] =ne   …
        3.NOM 3.ABS-to trail=with go.SG   =&.SS   3.NOM   3.ABS-stop   =&.SS
        adjunct *OBL*   *V*
     'He would be opening a trail for them for a while and then stop, …'   (Nonato 2017:365, ex. 26)

(7) … =nhy [∅   ∅-hondo   i-mã   ngôrêntá ngõ]
        =&.DS   3.NOM   3.ABS-in.exchange 1.ABS-to   oar   give
               adjunct   *OBL*   *O*   *V*
     '… and he will give me the oar in exchange for it.'   (Field Notes, 15.11.07jt.015)

(8) [[amty s-amdep-∅   =ta   ] ∅-khambrô=khôt khu- nta] =nhy …
          wasp 3.ABS-be.hungry-NOMZ =NOM   3.ABS-blood=after 3.ACC-bite   =&.DS
          A   *adjunct*   *O-*   *V*
     'A wasp of the *amtysamdep* species bit him to suck his his blood and …'   (Nonato 2017:368, ex. 37)

Main clauses must have one TM particle, and TM particles are never found in embedded clauses or embedded clause chains. All TM particles can appear in first position, and three (factual non-future *hẽn*, counterfactual *arân*, and

inferential future *kôt*) can also appear in second position in the clause. When they are in second position, the first position is occupied by a constituent with the role of topic, focus or 'counterfactual restriction' (see Table 1).

form	meaning	role of preceding position
man	witnessed	*n/a*
hẽn / =n(a) / ∅	factual non-future	topic/focus
waj	inferential non-future	*n/a*
arân	counterfactual	counterfactual restriction
kê / ∅	factual future	*n/a*
kôt	inferential future	focus

Table 1: Tense/Modality particles

Factual future particles and factual non-future particles can be omitted—the latter only when not preceded by a topic/focus constituent in first position. The meaning of these dropped TM particles can more often than not be recovered from grammatical context. The factual future particle *kê* must be dropped if it would otherwise be followed by a 1st (exclusive or inclusive) or 2nd person pronoun, in which context the factual non-future particle *hẽn* tends to be overt. Both particles can be dropped when the subject is 3rd person, but since DS connectives coindex tense when followed by 3rd person subjects, DS connective forms often reveal which TM particle was dropped, whether the future or the non-future one. Compare the minimal pairs (9) and (10), where the meaning of the dropped particle can be recovered from the boldfaced connective enclitics.

(9) ∅   Akatxikhêt **=kê**   Khupyt   =ta   i-thõ   thok   =ne   t⟨h⟩o   thẽ
     FUT   dawn   =&.DS.3.FUT   Howler.Monkey =NOM 1.ABS-brother wake.up =&.SS ⟨3.ABS⟩with go

     =kê   thep jariri
     =&.DS.3.FUT   fish look.for

     'It will dawn, Howler Monkey will wake my brother up, will bring him along and they'll look for fish'

     (Field Notes, `11.06.09mkw.029`)

(10) ∅   Akatxikhêt **=nhy**   Khupyt   =ta   i-thõ   thok   =ne   t⟨h⟩o   thẽ
      NFUT   dawn   =&.DS.3.NFUT Howler.Monkey =NOM 1.ABS-brother wake.up =&.SS ⟨3.ABS⟩with go

      =nhy   thep jariri
      =&.DS.3.NFUT fish look.for

      'It dawned, Howler Monkey woke my brother up, brought him along and they fished.'

      (Field Notes, `11.06.09mkw.030`)

Scheme (4) is extended in (11) below in order to incorporate these observations. This scheme will be expanded one final time when we discuss clause embedding and case marking. TM particles in initial position are shown in (12) and (13), and TM particles in second position are shown in (14), (15) and (16). Ellipses stand for extra clauses in the original examples and TM particles are boldfaced.

(11) Constituent order in the clausal domain (still to be expanded)
      (topic/counterfactual restriction) [TM [A/S (adjunct(s)) (OBL(s)) [(O) V]]]

(12) [=2]
      … **kôt**   =ka   [s-   õmu-n   ] khêrê?
         INFER.FUT   =2.NOM   3.ABS-see-NOMZ   not.be
         TM   =*A*   *O*   *V*   *V*

      '… can't you see it?'   (Nonato 2017:380, ex. 94)

(13) … **waj**   [turê=ra   ngry-txi pĩ   ] =n   [∅   t⟨h⟩o   mo   ] …
        INFER.NFUT Dad=NOM beast-big kill.SG =&.SS 3.NOM ⟨3.ABS⟩with go.PL
        TM   *A*   *O*   *V*   *S*   *OBL*   *V*

      '… Dad must have killed a big beast and brought it all the way here. …'   (Nonato 2017:378, ex. 81)

(14) athaj **=na**   [=wa   ngry-txi pĩ   ] =n   [~~=wa~~ t⟨h⟩o   mo   ]
      there =NFUT =1.NOM beast-big kill.SG =&.SS =1.NOM ⟨3.ABS⟩with go.PL
      TOP *=TM*   *=A*   *O*   *V*   *=S*   *OBL*   *V*

      'I killed a big beast and brought it all the way there.'   (Nonato 2017:380, ex. 93)

(15) … [∅   s-arẽ-n   wit] **=na** =wa   khu-mba
        3.NOM 3.ABS-talk.about-NOMZ only   =NFUT =1.NOM 3.ACC-know
                                               =TM   *=A*   *O-V*

      '… [Only what they said] do I know.'   (Nonato 2017:384, ex. 110)

(16) i-hrõ   **arân** =wa   i-kĩni
      1.ABS-wife CNTF =1.NOM 1.ABS-be.happy
             TM   *=S*   *S-V*

      'If I had a wife, I'd be happy.'   (Field Notes, 09.12.18kw.082)

2.2 The noun phrase

In the Northern Jê languages, single clauses and clause chains can be embedded in the same positions as noun phrases. For that reason, it is important in a survey on clause chaining to describe the syntactic behavior of noun phrases.

    Kĩsêdjê is consistently head-final in the nominal domain. Possessed nouns follow their possessors, articles and demonstratives follow the noun and postpositions and case enclitics follow the noun phrase. The scheme in (17) summarizes that observation. The order *possessor + noun + article + case* is exemplified in (18).[4]

(17)   Constituent order in the sub-clausal domain
        [[(possessor) N] (ART/DEM)] (P/case)

(18)   ne=nhy   aj=i-   pãm=jê   =thõ =ra pá   khôt thẽ
        be.so=&.DS PL=1.ABS- father=PL =one =NOM forest along go.SG
               possessor-N   *=ART =case*
        'And so one of our forefathers went hunting in the forest.'   (Nonato 2017:361, ex. 9)

Relative clauses are internally headed in Kĩsêdjê, as we see in (19) and (20), in which they are bracketed and their heads boldfaced. A relative clause chain is found in (26).

(19)   ne=nhy   [kôt   hwĩ   khrakhrak-∅ khôt **hry** ro   thẽ-m   ] =nda ro thẽ   =n   …
        be.so=&.DS   3.ERG branch break-NOMZ along trail with go.SG-NOMZ =DEF at go.SG =&.SS
        'then he finished walking [the **trail** that he had built along the broken branches] …'
                                         (Nonato 2017:368, ex. 40)

(20) wa-pãm-jê   =thõ =wê   s-ĩmbry   wê [kôt   **khukwâj** hwa-j   ] =ta
      1inc.ABS-father-PL =one =from 3.ABS-game COP   3.ERG monkey kill.PL-NOMZ   =DEF
      'The game from our forefather was [the **monkeys** that he had killed] …'   (Nonato 2017:380, ex. 90)

Kĩsêdjê is an almost strictly dependent-marking language, with a single phenomenon reminiscent of agreement: when a head's absolutive or accusative argument is displaced, either to the first position for topic/focus purposes, or to the left periphery of embedded clauses (for discourse reasons not entirely clear to me), a resumptive pronoun is seen at the argument's base position immediately to the left of the head that selects for it. In (21), the object of the verb *pĩ* 'kill', an internally-headed relative clause, is directly to its left. In (22), the object is displaced to the sentence-initial position and, as a consequence, a resumptive pronoun (boldfaced) is seen at the object's base position to the left of the verb. Another example of resumption due to displacement of the verbal object to a sentence-initial position is seen in (15).

(21) Hẽn =wa   [ire   rop   j-awê   i-mbra-j   ] =ta pĩ
      NFUT =1.NOM   1.ERG jaguar RP-after 1.ABS-walk-NOMZ   =DEF kill
      'I killed the jaguar I was looking for.'   (Field Notes, 12.07.18kw.008)

(22) [Ire   rop   j-awê   i-mbra-j   ] =ta   =n   =wa   tore   **khu**-pĩ
      1.ERG jaguar RP-after 1.ABS-walk-NOMZ   =DEF =NFUT =1.NOM finally 3.ACC-kill
      'The jaguar I was looking for, I finally killed it.'   (Field Notes, 08.03.29jk.042)

(21) and (22) also display resumption due to displacement *within* the internally-headed relative clauses. In embedded clauses, the base position of S is immediately to the left of the verb. In the relative clauses in (21) and (22) S is seen displaced to a different position, to the left of the adjunct 'after the jaguar' and, as expected, its base position is filled with a resumptive pronoun. The displaced S receives the same morphological marking as ergative subjects. Case morphology is part of what indicates whether a clause is embedded or free, as discussed in the next section.

2.3 The embedded clause and split case

Kĩsêdjê's case system is split according to embedding. A nominative-accusative case system is found in main clauses (and free clause chains) and an ergative-absolutive system in embedded clauses (and embedded clause chains). Such a split is found in all the chaining Northern Jê languages, though the nomenclature varies. (23) shows an intransitive main verb with its nominative subject and (24) shows a transitive main verb with its nominative subject and accusative object. (25) shows an embedded clause chain, with two transitive verbs and their ergative subjects and absolutive objects, and a main clause with an accusative object prefix. (26) shows another embedded clause chain (a headless relative clause) in which the first clause has an ergative phrasal subject and the second clause has an absolutive pronominal subject and oblique argument. Postpositional arguments and possessors of inalienable nouns[5] receive the same morphological marking as absolutive arguments.

(23) … Khátpy=ra arâ   ∅-hwaj=wê   ta
      K.=NOM   already 3.ABS-feet=from stand.SG
      S   *INTR.V*
      '… Khátpy was already standing under him.'   (Nonato 2017:362, ex. 16)

(24) tên   Khátpy=ra khu- thu=n   …
      unexpectedly K.=NOM   3.ACC-load.on.back=&.SS
      A   *O-*   *TR.V*
      'Unexpectedly, Khátpy had loaded it on his back …'   (Nonato 2017:368, ex. 38)

(25) … [kôre hwĩ khrakhrak-∅=ne ~~kôre~~ hry nh-ithep-∅] khãm khu-ta=n
         3.ERG branch break-NOMZ=&.SS 3.ERG trail RP-stop-NOMZ in   3.ACC-put.standing.SG=&.SS
         A   *O*   *TR.V*   *A*   *O*   *TR.V*

     '…he placed it where he broke branches up to and ended the trail at, and …'   (Nonato 2017:366, ex. 29)

(26) [Khátpy=re wa-pam-jê=thõ   thu-ru=n   t⟨h⟩o   ∅-   thẽ-m   ] =nda
       K.=ERG   1inc-father-PL=one load.on.back-NOMZ=&.SS ⟨3.ABS⟩with 3.ABS-go-NOMZ =DEF
       A   *O*   *TR.V*   *OBL*   *S-*   *INTR.V*

     'that (occasion) in which Khátpy loaded a forefather of ours onto his back and carried him away'
                                                                                   (Nonato 2017:356, *story title*)

Case on noun phrases is marked by phrasal enclitics, with distinct ergative and nominative enclitics. The ergative clitic is *=re*, as in (26), and the nominative clitic is *=ra* as in (23) and (24). In colloquial speech, *=ra* can also be used to mark ergative phrasal arguments, which does not imply a change in case alignment, since it still only marks A but not S. Noun phrases in the absolutive and accusative cases are unmarked. Case markers are shown in Table 2. Ergative pronouns are free accented words, nominative pronouns are phonological clitics and accusative and absolutive pronouns are prefixes or the aspiration of a head's initial consonant. Only the 3rd person pronoun has a distinct accusative exponent, used in a subclass of transitive verbs.

	Main Clause		Embedded Clause	
	Nom	Acc	Erg	Abs
1exc	=wa	i-	ˈire	i-
2	=ka	a-	ˈkare	a-
3	∅	ku-/s-/∅-/⟨h⟩	ˈkôre/kôt	s-/∅-/⟨h⟩
1inc	=ku	wa-	ˈware	wa-
DP	=ra	=∅	=re/=ra	=∅

Table 2: Case exponents in Kĩsêdjê

Since TM particles do not occur in embedded clauses, the scheme in (11) must be split in two. In embedded clauses, the absolutive argument occupies the same preverbal position occupied by the accusative object in free clauses. The ergative argument of embedded clauses occupies the same position as the nominative argument of main clauses. The schemes in (27) summarize those observations. Parentheses mark positions that may or may not be filled: in main clauses, we always see a TM particle, the nominative argument and the verb and, in embedded clauses, the absolutive argument and the verb.

(27) Constituent order and case in the clausal domain (complete)
      a. Main clauses
          (1st position) [TM [A/S.NOM (adjunct(s)) (OBL(s)) [(O.ACC) V]]]
      b. Embedded clauses
          (A.ERG) (adjunct(s)) (OBL(s)) [S/O.ABS V.NOMZ]

The sentence in (3) exemplifies many characteristics of embedded clauses with intransitive verbs. In (3d) we see the preverbal slot occupied by an absolutive subject. In (3a) we see that absolutive subjects may be displaced to the left periphery of embedded clauses and, as we learned at the end of the previous section, in such situations the base position of the displaced argument is filled with a resumptive pronoun. The displaced S receives the same morphological marking as an ergative subject; this is also seen in (3b).

3   Kĩsêdjê clause chaining

In Kĩsêdjê, clause chaining markers are enclitics, as can be diagnosed from the fact that they behave like other enclitics in this language (e.g. enclitic nominative pronouns, case enclitics and postpositions). There cannot be a pause between a host and an enclitic, but they do not count as extra syllables as far as stress assignment is concerned (stress falls on a word's last syllable). As the language is strictly verb-final, the word an enclitic chaining marker leans onto is invariably the main verb of the previous clause.

Besides strictly co-referential and strictly disjoint subjects, three other kinds of situations can occur, which in Nonato (2014) I refer to as non-trivial switches (28). In Kĩsêdjê, non-trivial switches of the growing-subject kind are marked as SS if the subjects share grammatical person. All other kinds of non-trivial switches are marked as DS (see Nonato 2014:94). There is unfortunately little discussion of or available relevant data on this phenomenon in the other Northern Jê languages.

(28)   Subtypes of non-trivial switch

    a.   **Growing-Subject**: $S_1 \subset S_2$ ($S_1 = \{i\}$; $S_2 = \{i,j\}$)
        $\boxed{\text{I}_i}$ built the house by myself but $\boxed{\text{we}_{i+j}}$ all live in it.

    b.   **Shrinking-Subject**: $S_1 \supset S_2$ ($S_1 = \{i,j\}$; $S_2 = \{i\}$)
        $\boxed{\text{We}_{i+j}}$ built the house together but only $\boxed{\text{I}_i}$ live in it.

    c.   **Strictly-Intersecting-Subjects**:
        $S_1 \cap S_2 \neq \emptyset$, $S_1 \not\subset S_2$, $S_1 \not\supset S_2$ ($S_1 = \{i,j\}$; $S_2 = \{i,k\}$)
        $\boxed{\text{He}_i \text{ and his father-in-law}_j}$ built the house and $\boxed{\text{he}_i \text{ and his wife}_k}$ live in it.

There does not seem to be clause coordination apart from clause chaining in Kĩsêdjê. In fact, Nonato (2014:ch. 3) argues, partly based on Kĩsêdjê data, that clause chaining should be equated with asymmetric clause coordination cross-linguistically. The present survey does not hinge on that conclusion, though. In Kĩsêdjê, clauses can also be loosely connected though adverbial strategies, but such groupings do not behave as grammatical constituents in the same sense as clause chains. For instance, clause chains can be embedded, as we see in (3) and (31), whereas clauses connected through adverbial strategies do not have this property.

3.1   Same-subject

When two consecutive clauses in a chain have identical subjects, they are connected with *=n(e)*. If the phonological host of this enclitic connective ends in a vowel, it is reduced to *=n*. Nominative pronominal subjects never immediately follow *=n(e)*: (29) is an example in which the nominative pronoun does occur because it does not *immediately* follow the chaining marker. Ergative pronominal subjects can follow *=ne*, as in (30).

In Nonato (2014:ch. 4) I derive this deletion pattern from an optimality theory constraint against sequences of clitics, a sort of Obligatory Contour Principle. If the subject following the chaining marker is an absolute pronoun, it is never omitted, which follows from the fact that absolute pronouns are verbal prefixes. As we will learn in the next section, the same deletion pattern occurs after DS connectives.

(29)   [[mẽ   =ra   Kĩsêdjê kapẽrẽ   mba-j   khêt-∅   ] =ta   patá   mã=n   =ka   pâj   ]
          people =ERG K.   language know-NOMZ NEG-NOMZ   =DEF village to=NFUT =2.NOM arrive
        =ne [wâtâ kapẽrẽ=n   =ka   s-arẽ?   ]
        =&.SS what language=NFUT =2.NOM 3-speak
      'You arrived at a village where people do not speak Kĩsêdjê and (then) what language did you speak?'

                                                           (Field Notes, `08.04.25p.010`)

(30) [[nhy-ry   =ra   khôt ire   ∅-khôt   i-mbra-j   kumen-∅   ] **=ne**
       be.so-NOMZ =DEF along 1.ERG 3.ABS-along 1.ABS-walk.SG-NOMZ be.much-NOMZ =&.SS

     [*ire*   i-ndo   ro   s-õmu-n   ] =ne [nhy-ry   ]] khêt thã wa   …
      1.ERG 1.ABS-eye with 3.ABS-see-NOMZ =&.SS be.so-NOMZ   NEG but 1.NOM

     'It is not the case that I followed these issues and saw it with my own eyes, but I …'

                                           (ProDoclin, `KS-20130128-RS-entrevista_mulheres2`)

3.2   Different-subject

When two consecutive clauses in a chain have different subjects, the form of the connective is determined by three factors, as shown in Figure 1. First, it depends on the syntactic context of the clause chain, that is to say, whether it is embedded or free. In free clause chains, the form of the connective depends on the grammatical person of the subject of the following clause (anticipatory agreement, similar to what is found in many languages spoken in the Central Highlands of Papua New Guinea, see McCarthy 1965; Reesnik 1983; Vincent & Vincent 1962). Finally, if the subject of the following clause is 3rd person and the clause chain is free, the connective form covaries with tense.

Different subjects

Embedded chain   Free chain

=nhy   1st   2nd   1[st]inc   3rd

             =wa =ka   =ku   Future tense Non-future tense
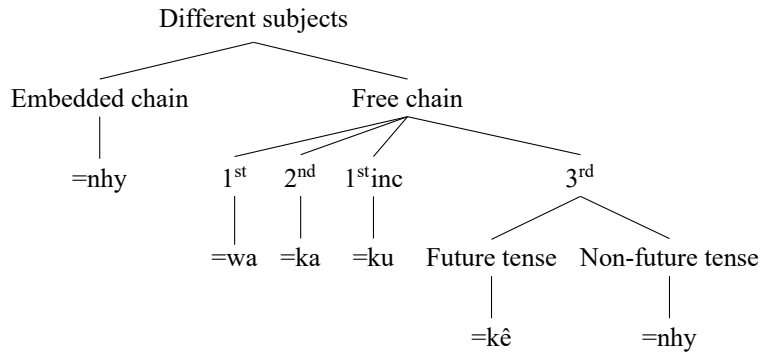
                                =kê   =nhy

Figure 1: Different-subject chaining morphology depends on embedding, person and tense

If you compare Figure 1 and Table 2, you will notice that some of the agreeing connectives are homophonous with nominative pronouns,[6] namely, those that agree with following 1st (exclusive or inclusive) and 2nd person subjects. The exceptionality of the 3rd person is somewhat expected, as its nominative pronoun is phonologically null. On the other hand, we will learn in section 6.1 that Canela Apãniekrá has an overt 3rd person nominative pronoun that is homophonous with the DS form that agrees with 3rd person and coindexes future tense. This suggests a uniform historical account for the origin of the agreeing forms of the DS connective.

Throughout this survey, I assume that chaining connectives are overt. The connective sometimes takes a form homophonous with a nominative pronoun, a context in which an immediately following nominative pronoun must be dropped. In Nonato (2014:ch. 4) I argue that this happens for the same reason why nominative pronouns are dropped following non-homophonous same-subject connectives.

As I briefly indicate in the relevant sections, the description of some Northern Jê languages assume that the connective is actually absent in those contexts, parataxis taking place of switch-reference marking clause chaining. There is clear evidence against this account. In particular, we saw in the previous section that even though expected[7] adjacency to the non-homophonous SS marker *=n(e)* conditions dropping of nominative pronouns, the pronouns must be overt whenever not immediately adjacent to the marker. Likewise, in section 3.2.2, we will learn that only

nominative pronouns expected to immediately follow homophonous DS markers must be dropped: whenever there is material intervening between the connective and the pronoun, the latter must be overt.

3.2.1 Embedded clause chains

In embedded clause chains, the form of the DS marker is invariably =*nhy*. An example is given in (31). The direct object of the verb *wymba* 'fear' is a two-clause chain marked with DS morphology. In embedded clause chains, the subject following a DS marker may be omitted if it is 3rd person ergative. Absolutive pronominal subjects and 1st or 2nd person ergative subjects must be overt.

(31) hẽn   =wa   i-mã   [[i-hrõ   ty-k   ] **=nhy** [*ire*   ∅-mbajkhêt-∅   khêt-∅   ]]
      NFUT =1.NOM 1.ABS-to   1.ABS-wife die-NOMZ   =&.DS   1.ERG   3.ABS-forget-NOMZ   NEG-NOMZ

    wymba
    fear

    'I am afraid that my wife dies and I can't forget her.'   (Field Notes, 11.06.29jt.032)

3.2.2 Free clause chains

In free chains, the DS connective assumes different forms in anticipatory person agreement with the following subject. If that subject is 1st person, 2nd person or 1st person inclusive, the agreeing form of the marker is homophonous with the equivalent nominative pronoun: =*wa* for 1st person, =*ka* for 2nd person and =*ku* for 1st person inclusive. When the following subject is 3rd person, the marker takes the form =*nhy*—like the isomorphic DS marker used in embedded chains—or =*kê*, if the clause is in the future tense.

    If a pronominal nominative subject is expected to immediately follow a DS marker, it must be dropped. If not immediately adjacent to the connective, it must be overt, as in (32). We learned in section 3.1 that the same dropping pattern occurs following SS markers.

(32) [Ntôn =nda a-mã   a-táktxê-rê   jarẽ] **=ka**
      N.   =NOM 2.ABS-to 2.ABS-sing-NOMZ teach =&.DS.2

    [nhum mã=n   =*ka*   hwĩnkhrã hrãmã?]
      who   to=NFUT =2.NOM shaker   ask
    'Ntôni taught you your shout-song and (then) who did you ask for a shaker to?'
                         (Field Notes, 09.12.13jt.040)

In Kĩsêdjê, anticipatory agreement only occurs in free chains. If we attempted to force agreement between an embedded DS marker and the following subject, the result would be ungrammatical—see the judgment attributed to (33), an ungrammatical counterpart to (31).

(33) *hẽn   =wa   i-mã   [[i-hrõ   ty-k   ] **=wa** [(*ire*) ∅-mbajkhêt-∅   khêt-∅   ]]
     NFUT =1.NOM 1.ABS-to   1.ABS-wife die-NOMZ   =&.DS.1   1.ERG   3.ABS-forget-NOMZ   NEG-NOMZ

    wymba
    fear

    'I am afraid that my wife dies and I can't forget her.'   (Field Notes, 11.06.29jt.032′)

This is one point of variation among Northern Jê languages, at least as far as the available data indicate. Kĩsêdjê patterns with Krahô and Apinajé in that agreement is blocked in some contexts, whereas Mebengokre seems to require anticipatory agreement throughout, that is to say, sentences like (33) are grammatical, as I will discuss in section 5.2

based on examples like (47). As I have not been able to find examples of embedded clause chains in Canela Apãniekrá and Parkatêjê, the matter of whether anticipatory agreement would hold in them is still open.

In section 2.3, we learned that Kĩsêdjê marks subjects of embedded verbs as ergative/absolutive, and in (34) we see examples of ergative/absolutive subjects in free chains. This is not a contradiction. Non-nominative subjects occur in free clause chains whenever one of the chained clauses is headed by an impersonal verb whose single argument is an embedded clause (verbs such as *khêrê* 'it is not the case that' or *mã* 'it must happen that'). The impersonal verbs themselves lack nominal subjects, and the non-nominative subjects we see in those configurations are those of the embedded clauses.

In free chains, dropping of ergative pronominal subjects following agreeing connectives is optional, exhibiting some inter-speaker variation. One speaker I consulted would drop ergative pronominal subjects whenever they were expected to immediately follow DS markers (34a) and would pronounce them whenever non-adjacent to the marker (34b)—the same context for nominative pronouns dropping. Another speaker I consulted judged it grammatical to pronounce ergative pronominal subjects even when adjacent to an agreeing DS marker (35).

(34) a. [i-pãm   =nda i-mã   hỹ ne   ] =**wa**   [[*(*ire)* thep ku-ru   ] wiri   ]
        1.ABS-father =NOM 1.ABS-to yes do.so =&.DS.1   1.ERG fish eat-NOMZ   always.happen
        'My father always lets me eat fish.'
        ('My father says yes to me and I always eat fish.')   (Field Notes, 13.09.16km.001)

     b. [i-pãm   =nda i-mã   hỹ ne   ] =**wa**
        1.ABS-father =NOM 1.ABS-to yes do.so =&.DS.1

        [[*(akatxi khôt) *ire*   thep ku-ru   ] wiri   ]
            days   along 1.ERG fish eat-NOMZ   always.happen
        'My father allows me to eat fish every day.'
        ('My father says yes to me and I eat fish every day.')   (Field Notes, 13.09.16km.002)

(35) [hwĩsô-sôk-∅   jarẽ-n   kandê =ra hwararo i-mã   ne] =**wa**
      paper-paint-NOMZ teach-NOMZ agent =NOM yesterday 1.ABS-to do.so =&.DS.1

      [[*(ire)* mẽsujarẽn ndo sôk-∅   ] mã   ]
          1.ERG story   INST paint-NOMZ   must.happen
      'Yesterday the teacher ordered and I must write the story.' (lit. '… my writing of the story must happen')
                                                                    (Field Notes, 10.08.15kw.013)

We have learned that anticipatory agreement between DS connectives and following nominative subjects is obligatory in free chains and does not occur in embedded chains. Variability is seen when the subject following a DS connective in a free chain is non-nominative (for instance, when the main predicate of the clause following the connective is a clause-embedding impersonal verb such as *mã* 'it must happen that'). One speaker I consulted judged grammatical both (36a), in which the connective agrees with a (dropped) ergative pronominal subject, and (36b), in which the non-agreeing form =*nhy* is used (and the ergative pronominal subject is overt).

(36) a. s-ukande=n   [=wa khu-py   ] =**ka**
        3.ABS-medicine=NFUT   =1.NOM 3.ACC-get.SG   =&.DS.2

        [[*k̶a̶r̶e̶* t⟨h⟩o   i-mã   i-khra   kande-∅] mã   ]
            2.ERG ⟨3.ABS⟩with 1.ABS-to 1.ABS-son treat-NOMZ   must.happen
        'I got this medicine and you must treat my son with it.'
        (lit. '… and your treating my son with it must happen')   (Field Notes, 09.12.14jt.025)

b. s-ukande=n [=wa khu-py] **=nhy**
   3.ABS-medicine=NFUT =1.NOM 3.ACC-get.SG =&.DS

   [[*kare* t⟨h⟩o i-mã i-khra kande-∅] mã]
        2.ERG ⟨3.ABS⟩with 1.ABS-to 1.ABS-son treat-NOMZ must.happen

   'I got this medicine and you must treat my son with it.'
   (lit. '… and your treating my son with it must happen') (Field Notes, 09.12.14jt.024)

Another speaker I consulted did not accept the use of the non-agreeing form of the chaining marker in this context, as seen in (37), where the agreeing form of the marker in (35) has been replaced by the non-agreeing form.

(37) *[hwĩsô-sôk-∅ j-arẽ-n kandê =ra hwararo i-mã ne] **=nhy**
     paper-paint-NOMZ RP-teach-NOMZ agent =NOM yesterday 1.ABS-to do.so =&.DS

   [[*ire* mẽsujarẽn ndo sôk-∅] mã]
        1.ERG story INST paint-NOMZ must.happen

   'Yesterday the teacher ordered and I must write the story.' (lit. '… my writing of the story must happen')
   (Field Notes, 10.08.15kw.014)

In sum, there seems to be idiolectal variation regarding whether DS connectives obligatorily agree with non-nominative subjects in free clause chains (as they must whenever the subject is nominative). As we study the clause chaining system of the other Northern Jê languages, we will notice that anticipatory agreement between chaining connectives and following subjects is an area of variation among them.

Finally, in free chains, when the subject following a DS marker is 3rd person, the marker further assumes one of two forms depending on the tense of the chain: *=nhy* for non-future (38a) and *=kê* for future (38b). Another pair of examples that contrast in the same way are (9) and (10).

(38) a. akatxikhêt khãm =na [=wa i-thõ thok] **=nhy**
        morning in =NFUT =1.NOM 1.ABS-brother wake.up =&.DS.3.NFUT

   [∅ thẽ] =n [∅ thep jariri]
     3.NOM go.SG =&.SS 3.NOM fish look.for

   'In the morning I woke up my brother and he went and looked for fish.'
   (Field Notes, 11.06.09mkw.027)

   b. ∅ [akatxikhêt] =wa [~~=wa~~ i-thõ thok] **=kê**
      FUT dawn =&.DS.1 =1.NOM 1.ABS-brother wake.up =&.DS.3.FUT

   [∅ thẽ] =n [∅ thep jariri]
     3.NOM go.SG =&.SS 3.NOM fish look.for

   'Tomorrow morning I will wake up my brother and he will go and look for fish.'
   (Field Notes, 11.06.09mkw.028)

3.3 Summary and comparison

Before surveying the clause chaining systems of the other Northern Jê languages individually, it will be useful to summarize what we have just learned regarding the Kĩsêdjê system and introduce the differences and similarities between Kĩsêdjê and the other Northern Jê languages, to be discussed in more detail in the coming sections.

I have characterized Kĩsêdjê chaining connectives as enclitics rather than free words or verbal suffixes. The descriptions of the other languages do not take an explicit stance on the matter, other than writing chaining markers separately from verbs. This is a matter for future investigation.

In Kĩsêdjê, a clause chaining marker combining clauses with the same subject assumes the isomorphic form *=ne*. A cognate isomorphic form is found in the other Northern Jê languages. In Kĩsêdjê as well as the other Northern Jê languages, nominative pronominal subjects expected to immediately follow SS markers must be dropped. In Kĩsêdjê, we saw that nominative pronominal subjects must be overt when there is material intervening between the connective and the subject. Besides Kĩsêdjê, I will show evidence for the same dropping pattern in Krahô. For the other languages, no sentence with this kind of intervening material has been found, so the matter is still open.

In Kĩsêdjê, a clause chaining marker combining clauses with different subjects displays anticipatory person agreement with the following subject when the chain is grammatically free, but not when it is grammatically embedded. This is also true of Apinajé and Krahô. In Mebengokre, the evidence we will review shows anticipatory agreement in all grammatical contexts, and in Canela Apãniekrá and Parkatêjê, all the chaining examples I found in the literature I consulted were free chains, so the matter of whether agreement would hold or be blocked in embedded chains stays open.

In all the Northern Jê languages, the agreeing forms of the DS connective are homophonous with the equivalent nominative pronouns, except for the 3rd person. This asymmetry mirrors the asymmetry between the phonologically empty 3rd person nominative pronoun of these languages and the non-empty forms of the other nominative pronouns, see Table 2. Agreement with a following 3rd person subject takes one of two forms, depending on whether the following clause is in the future or not.

In Kĩsêdjê, the form used to agree with a following 3rd person subject in the non-future tense is identical to that employed in non-agreeing contexts, *=nhy*, with cognates used in the same context in Apinajé and Mebengokre. The Eastern Timbira languages use a different form to agree with a following 3rd person subject in a non-future clause, cognate among them, this form also being employed in non-agreeing contexts in Krahô, the one Eastern Timbira language where examples of embedded chains have been found.

In Kĩsêdjê, the form used to agree with a following third person subject in a future clause chain is *=kê*, with cognate forms used in the same context in all the Northern Jê languages where the relevant evidence has been located (we lack data on Parkatêjê). Table 3 gives these forms for all the languages.

		SS	DS						
			Free chain: anticipatory agreement					Embedded chain
			1st	2nd	1stinc	3rd		
						non-future	future	
	Kĩsêdjê	=n(e)	=wa	=ka	=ku	=nhy	=kê	=nhy
	Apinajé	nẽ	pa	ka		ɲum	ke	ɲum
	Mebengokre	nẽ	ba	ga	gu	nhym	gê	[same as free chain]
E. Timbira	C. Apãniekrá	nẽ	wa	ka	ku	mã	ke	[unknown]
	Krahô	nẽ	wa	ka	ku	mã	kê	mã
	Parkatêjê	nə̃	wa	ka	ku	mə̃	[unknown]	[unknown]

Table 3: Switch-reference markers of the clause chaining Northern Jê languages

4 Apinajé clause chaining

The references I consulted only briefly describe the Apinajé clause chaining system system. Waller (1974:4) states that *nhũm (ɲum)* is used when the following subject is third person and is disjoint from the previous subject. Oliveira (2005:221) describes *nẽ* and *nhũm* as being switch-reference, stating that when the following subject is not third person,

there is sentence juxtaposition. Callow (1962:189) says that *nẽ* "introduces a clause without change of subject" and *nhũm* "introduces a clause with a change of subject [...] in particular, when the subjects are third person singular."

However, as we will learn from the examples extracted from these sources, there is more to the Apinajé clause chaining system. As far as we are able to tell, it is identical to what I just described for Kĩsêdjê. Note that the examples in (43) were originally not glossed. I glossed them with the help of a lexicon collected by Oliveira (2005:360–421).

4.1 Same-subject

Chaining of clauses with identical subjects is marked with the isomorphic form *nẽ*. Following the marker, non-nominative pronominal subjects are overt (39) and nominative pronominal subjects are dropped (40).

(39) a.
ʌmri	nẽ	akupɨm	∅-mɔ̃-r,	**nẽ**	∅-ʔpo-č	ket
then	&.SS	away	3.ABS-go-NOMZ	&.SS	3.ABS-return-NOMZ	NEG

'He went away and never came back.' (Callow 1962:274)

b. [=43a]
Na	pa	iɲ-mɔ̃	[	ɨe-tɛ	a-mẽ-n	ɲum	ma	a-te-m	**ne**
REAL	1.NOM	1.ABS-to		1-ERG	2.ABS-send-NOMZ	&.DS	DIR	2.ABS-go-NOMZ	&.SS

a-tɛ	iɲ-mɔ̃	a-čujapro	]	prɔ̃m	nẽ
2-ERG	1.ABS-to	2.ABS-buy.NOMZ		want	&.SS

'I want to send you downtown so you can do some shopping for me.' (Oliveira 2005:371)

(40) a.
kot	pa-j	aroj	kugɔ̃-n	pa	**nẽ**	*pa*	pɔ̃ɲ	∅-katõ-∅	pa	**nẽ**	*pa*	pɔ̃ɲ
IRR	1.NOM-IRR	rice	tresh-NOMZ	finish	&.SS	1.NOM	after	3.ABS-roast-NOMZ	finish	&.SS	1.NOM	after

ku-či	ɲum	∅	nõ	**nẽ**	∅	∅-akrɨ
3.ACC-put	&.DS	3.NOM	lie.down	&.SS	3.NOM	3.ABS-get.cold

'I'll thresh the rice, roast it, put it on a flat surface, then it will sit there and cool off.' (Oliveira 2005:259–260, ex. 90c)

b.
ne	əbri	ɲum	čɛ	wɛ	∅	wa	ma	mõ	ɲum
CONJ	then	&.DS.3	as.they.say	as.they.say	3.NOM	DU	away	go	&.DS.3

∅	kukõɲ	ja	ta	**ne**	∅	∅-ɔ	mõ
3.NOM	gourd	DEF	chop.off	&.SS	3.NOM	3.ABS-INST	go

'Then they went to the garden, he took one gourd and brought it.' (Oliveira 2005:312)

In the sources I consulted, I could not locate evidence about whether nominative pronominal subjects must be explicit whenever not *immediately* adjacent to an SS marker, or about whether non-nominative pronominal subjects can be omitted after SS markers.

Note that in (39a) the first clause of the chain is headed by a verb in the nominalized form, even though the chain itself is grammatically free (the impersonal negative verb *ket* scopes over and embeds only the second clause). Except for Kĩsêdjê,[8] every other Northern Jê language allows main sentences to be headed by nominalized verbs, with a perfect aspectual interpretation. Salanova (2007) accounts for this phenomenon by proposing a null existential copula as the actual head of such clauses, which embeds the nominalized clause like impersonal verbs do.

4.2 Different-subject

In the literature concerning Apinajé, we find examples of embedded (42) as well as free (41) clause chains featuring DS switches, which allows us to proceed to a more complete comparison between this language's clause chaining

system and Kĩsêdjê's. Agreeing DS markers were only found in free clause chains, with following nominative subjects consistently dropped (41).

(41) a. inh-mã pixô 'õ gõ **pa** ~~pa~~ ku-krẽ
     1.ABS-to banana one give &.DS.1 1.NOM 3.ACC-eat
     'Give me a banana and I will eat it.'   (Waller 1974:6, ex. 15)

  b. [=44b]
     Ãn pa a-to amũxu kê apinhõ... pôj **pa** ~~pa~~ kãm i-xkapẽr...
     ok 1.NOM 2.ABS-with hide &.DS.3.FUT brother-in-law arrive &.DS.1 1.NOM 3.ABS:to 1.ABS-speak
     'I'll hide you, so that when your brother-in-law comes I'll talk to him...'   (Waller 1974:13, ex. 42)

  c. … pa dɔkij a-tɔ tẽ **ka** ~~ka~~ itkõ
     1.NOM at.once 2.ABS-with go &.DS.2 2.NOM drink
     'I'll take you so you drink water an once.'   (Oliveira 2005:260, ex. 90d)

  d. Pa i-xprõ-t **ka** ~~ka~~ akunha.
     1.NOM 1.ABS-run-NOMZ &.DS.2 2.NOM laugh
     'I ran and you laughed.'   (Waller 1974:5, ex. 13)

The form of the Apinajé clause chaining marker used when the following subject is 3rd person, *ɲum* (in 42), is cognate with that used in the same context in Kĩsêdjê, *=nhy*. As in Kĩsêdjê, this is also the form used in contexts that do not trigger agreement, namely, embedded chains of clauses with different subjects (43).

(42) a. 'Ãmri nẽ 'vỳr mõ **nhũm** ve *kôkôj nẽ vakõ nẽ ãm mry pijtã* **nhũm**
     then & to go &.DS ? monkey & coati & only animal all &.DS

     ∅ vem kajre 'vỳr mõ.
     3.NOM rabbit to go
     'Then (the deer) went (to the rabbit) and the monkey, the coati and all the animals went to the rabbit.'
     (Waller 1974:5, ex. 11)

  b. Pa kamã 'krak **nhũm** ∅-tẽ-m.
     1.NOM shoot.NOMZ &.DS 3.ABS-fall-NOMZ
     'I shot it and it fell.'   (Waller 1974:4, ex. 5)

  c. Kot ka ri kupê **nhũm** ∅-prõ-t kêt nẽ ∅ arĩ xa
     IRR 2.NOM touch &.DS 3.ABS-run-NOMZ NEG &.SS 3.NOM still stand
     'If you touch him he won't run and will stand.'   (Waller 1974:4, ex. 7)

(43) a. [=39b]
     Na pa iɲ-mɔ̃ [~~ic-tɛ~~ a-mẽ-n **ɲum**
     REAL 1.NOM 1.ABS-to 1-ERG 2.ABS-send-NOMZ &.DS

     ma *a*-te-m ne a-tɛ iɲ-mɔ̃ a-čujapro] prɔ̃m nẽ
     DIR 2.ABS-go-NOMZ &.SS 2-ERG 1.ABS-to 2.ABS-buy.NOMZ want &.SS
     'I want to send you downtown so you can do some shopping for me.'   (Oliveira 2005:371)

  b. Na pa [ic-tɛ a-mɔ̃ a-ɲi-r **ɲum** *a-tɛ* iɲ-mɔ̃ ša n-ipe-č] prɔ̃m nẽ
     REAL 1.NOM 1-ERG 2.ABS-to 2.ABS-make-NOMZ &.DS 2-ERG 1.ABS-to tea RP-make-NOMZ want &.SS
     'I wish you would make me some tea.'   (Oliveira 2005:381)

c. Pa   na   pa   [ic-tɛ   a-mɜ̃   mebɔj   ɲõ-r   **ɲum** *a-tɛ*   iɲ-mɜ̃   a-čujarẽ-n   ]
1.EMPH REAL 1.NOM   1-ERG 2.ABS-to something give-NOMZ &.DS 2-ERG 1.ABS-to 2.ABS-tell-NOMZ

    kačɨw.
    intend

'I intend to give you something for you to tell me a story.'   (Oliveira 2005:371)

I could not locate examples of free clause chains in which the subject following a DS marker was 1st or 2nd person non-nominative (e.g. counterparts to 42b or 42c). We are left to wonder whether chaining markers in free chains can optionally lack agreement with non-nominative subjects (as seems to be the case in Kĩsêdjê for some speakers).

Finally, when the clause following a DS marker is in the future and has a 3rd person subject, the marker takes the form *ke*, cognate with that used in the same context in Kĩsêdjê. Some examples of use of this form found in the literature are given in (44).

(44)   a.   [contrast with (41a)]
        E   ∅-kãm   mẽmoj   japêj   **kê**   ∅   ku-krẽ
        Hey   3.ABS-for something hunt   &.DS.3.FUT 3.NOM 3.ABS-eat
        'Hey, look for something for him so that he eats.'   (Waller 1974:13, ex. 43)

    b.   [=41b]
        Ãn   pa   a-to   amũxu **kê**   *apinhõ...*   pôj   pa   ~~pa~~   kãm   i-xkapẽr...
        ok   1.NOM 2.ABS-with hide   &.DS.3.FUT brother-in-law arrive &.DS.1 1.NOM 3.ABS:to 1.ABS-speak
        'I'll hide, so that when your brother-in-law comes I'll talk to him…'   (Waller 1974:13, ex. 42)

    c.   "Mã   akupỹm tẽ   nẽ   kãm   i-xkapẽr   jarẽ **kê**   ∅   tokyx anẽ."
        away   back   go   &.SS 3.ABS:to 1.ABS-speak tell   &.DS.3.FUT 3.NOM fast   do
        'Return, tell him my talk, so that he hurry.'   (Waller 1974:13, ex. 45)

In conclusion, as far as we are able to verify from the data available, the clause chaining grammars of Apinajé and Kĩsêdjê are identical in terms of the surveyed parameters. Both feature an isomorphic SS marker, and a DS marker that is isomorphic only in embedded chains but which displays anticipatory agreement with the following subject in free chains. In the latter situation, the marker also displays a future/non-future distinction whenever the subject agreed with is third person. The forms used in all these functions are clearly cognate among the two languages.

5   Mebengokre clause chaining

The Mebengokre clause chaining system is identical to the Kĩsêdjê and Apinajé ones with respect to the form of the markers, clearly cognate among these languages. A single important difference lies in the use of those forms: whereas in Kĩsêdjê and Apinajé, DS markers only display anticipatory agreement in free chains, in Mebengokre they always seem to display anticipatory agreement.

There are issues with the data I had access to in order to come to this conclusion, though, which beg further confirmation from different sources. I only found examples of embedded clause chains (47) in a translation of the Bible, whose authorship the Wycliffe Bible Translators does not disclose, and which may not reflect naturalistic speech styles. These examples were not glossed in the original and, in order to gloss them, I worked from the Portuguese version of the relevant verses, a lexicon collected by Jefferson (1989:241–249) and another one collected by Andrés Salanova (p.c.).

The descriptions I consulted only briefly describe the system. Stout & Thomson (1974:8) state that *gê* is only used when the following subject is third person, and that otherwise there is juxtaposition. They recognize the contrast between *nẽ* and *nhym* but do not recognize that *nhym* is only used when the following subject is third person. Wiesemann

(1986:377) recognizes that *nẽ* and *nhym* constitute an SR system, and that *nhym* is only used when the following subject is third person. Jefferson (1989:186) states that *ne* "indicates that there is no change between the two units in the focused person. If there is a change [...] free pronouns are added to the second unit [...] *nhym* indicates a change from a first or second person subject to a third person subject in the second unit; or indicates a change from third person in the first unit into another third person in the second unit" (my translation).

5.1 Same-subject

This part of the Mebengokre clause chaining system is most similar to the Kĩsêdjê and Apinajé ones. The form that marks chaining of clauses with identical subjects is isomorphic and cognate with that found in the other languages: *nẽ*. Nominative pronominal subjects expected to immediately follow the connective are dropped (45) and non-nominative pronominal subjects must be overt (46).

(45) ba   ku-bù   **nẽ**   *ba*   ku-ga   **nẽ**   *ba*   ku-krẽ
      1.NOM   3.ACC-get   &.SS   1.NOM   3.ACC-bake   &.SS   1.NOM   3.ACC-eat
      'I get it, I bake it and I eat it.'   (Stout & Thomson 1974:74)

(46) [i-je   Metĩndjwỳnh   kabẽn   ja   ma-r   ] kam   ne   ba   [i-je   a-kuka   kônh
        1-ERG   God   speech   DEF   know-NOMZ   in   NFUT   1.NOM   1-ERG   2.ABS-front   in
        i-kõnkrã-o   i-nhỹ-r   **ne**   *i-je*   a-mã   a-rax   jarẽ-nh   ] prãm-∅   kêt
        1.ABS-knee-on   1.ABS-sit-NOMZ   &.SS   1-ERG   2.ABS-to   2.ABS-be.big   say-NOMZ   want-NOMZ   NEG
      'Knowing what God said, I do not want to kneel down in front of you and tell you that you are big.'
                                                                              (Wycliffe Bible Translators 2012, Matthew 4:10)

5.2 Different-subject

Whenever the subject following a DS marker is 1st (exclusive or inclusive) or 2nd person, the marker agrees with it, taking a form homophonous with the equivalent nominative pronoun. Unlike Kĩsêdjê and Apinajé, in Mebengokre this behavior does not depend on whether the clause chain is embedded (47) or free (48). Another difference between the Mebengokre system and the Kĩsêdjê/Apinajé one is that in the former, whenever the subject following a DS marker is expected to be nominative, it is possible for the marker to be preceded by the morpheme *nẽ*, homophonous with the SS marker.

(47) a. … [Me   ku-te   õ-bê   a-mã   ∅-arẽ-nh   **ga**   *a-je*   katàt   ∅-ma-r   o
              PL   3-ERG   one-of   2.ABS-to   3.ABS-say-NOMZ   &.DS.2   2-ERG   right   3.ABS-know-NOMZ   INST
         a-tẽ-m   ] mã   …
         2.ABS-go-NOMZ   will.happen
      'Someone will tell you and you will know it correctly.'   (Wycliffe Bible Translators 2012, Luke 1:4)

     b. … Nàr   a-je   ami-m   me   ∅-kukjê-r   prãm   nhym   [me   ku-te   a-mã   ami-jarẽ-nh   **ga**
            or   2-ERG   REFL-to   PL   3.ABS-ask-NOMZ   want   &.DS   PL   3-ERG   2.ABS-to   REFL-say-NOMZ   &.DS.2
         a-je   amũ   me-mã   me   ∅-arẽ-nh   ] prãm. …
         2-ERG   beyond   PL-to   PL   3.ABS-say-NOMZ   want
      'But you want to ask people about themselves and want them to speak to you about themselves so you speak about them to others'   (Wycliffe Bible Translators 2012, 1 Peter 4:15)

In the examples located, there is never dropping of ergative (47) or absolutive pronominal subjects (48d) following DS markers. As in Kĩsêdjê/Apinajé, nominative pronominal subjects must be dropped if they would otherwise immediately

follow the the marker—(48a), (48b) and (48c). I could not find documentation bearing on whether nominative pronominal subjects must be overt when non-adjacent to the clause chaining marker and whether dropping of ergative pronominal subjects is also grammatical, as in Kĩsêdjê.

(48)   a.   [=50]

ku-bê   nõ   gê   ∅   wãm   kò   **ga**   *ga*   kãm tẽ
3.ABS-of   lie.down   &.DS.3.FUT   3.NOM   however   oscillate   &.DS.2   2.NOM   then go
'Lie down (hiding from him) so that when he goes away stumbling, you go away.'

                                         (Stout & Thomson 1974:81)

      b.   ba   ku-ga   **(nẽ) ga**   *ga*   akrẽ
          1.NOM   3.ACC-bake   &   &.DS.2   2.NOM   eat
          'I baked it and you ate.'   (Wiesemann 1986:377, ex. 66)

      c.   Mẽ i-kukama-re   ku-te arẽ-y   tũm   **nẽ ba**,   *ba*   i-prĩ-re   kãm   ku-ma.
          PL   1.ABS-forebears-DIM   3.ERG tell-NOMZ   be.old   &   &.DS.1   1.NOM   1.ABS-child-DIM   when   3.ACC-hear
          'Our forebears would always tell about them and I heard as a child.'

                                         (Stout & Thomson 1971:253, ex. 21)

      d.   Metĩndjwỳnh   ku-te   i-jã   ami-m   karõ-∅   nhym
          God   3-ERG   1.ABS-of   REFL-to   image-NOMZ   &.DS

          Jeju   Kritu   ku-te   i-jano-r   **ba**   *i*-tẽ-m,
          Jesus   Christ   3-ERG   1.ABS-send-NOMZ   &.DS.1   1.ABS-ir-NOMZ
          'God made me, Jesus Christ sent me and I came.'   (Wycliffe Bible Translators 2012, Colossians 1:1-2)

Finally, as in Kĩsêdjê and Apinajé, when a DS marker is followed by a non-nominative 3rd person subject, it takes the form *nhym* (49a), and when it is followed by a nominative third person subject, it takes one of two forms to indicate tense coindexation. If the clause is in the non-future tense, it takes the form *nhym* (49b) and if the clause is in the future tense, it takes the form *gê* (50).

(49)   a.   [=48d]

Metĩndjwỳnh   ku-te   i-jã   ami-m   karõ-∅   **nhym**
God   3-ERG   1.ABS-of   REFL-to   image-NOMZ   &.DS.3

          Jeju   Kritu   ku-te   i-jano-r   ba   i-tẽ-m,
          Jesus   Christ   3-ERG   1.ABS-send-NOMZ   &.DS.1   1.ABS-ir-NOMZ
          'God made me, Jesus Christ sent me and I came.'   (Wycliffe Bible Translators 2012, Colossians 1:1-2)

      b.   Bir   nẽ   mrù   ga   **nhüm**   ∅   ku-krẽ
          B.   NFUT   meat   bake   &.DS.3.NFUT   3.NOM   3.ABS-eat
          'Biri baked meat, but he ate it.'   (Stout & Thomson 1974:75)

(50)   [=48a]

ku-bê   nõ   **gê**   ∅   wãm   kò   ga   *ga*   kãm tẽ
3.ABS-of   lie.down   &.DS.3.FUT   3.NOM   however   oscillate   &.DS.2   2.NOM   then go
'Lie down (hiding from him) so that when he goes away stumbling you go away.'

                                         (Stout & Thomson 1974:81)

In conclusion, while all the forms Mebengokre uses to mark clause chaining are cognate with those of Kĩsêdjê and Apinajé, Mebengokre DS markers always display anticipatory agreement, whereas in Kĩsêdjê and Apinajé they only display agreement in free clause chains. I would like to see that pattern confirmed in sources other than a translation of the Bible. A minor distinction we also noted is that whenever the following subject is nominative, the DS marker

can be preceded by the morpheme *nẽ*, cognate with the SS clause chaining marker. As we will see in the next section, in this, Mebengokre is similar to Canela Apãniekrá.

6 Eastern Timbira clause chaining

In the next sections I describe the clause chaining systems of three languages in the Eastern Timbira complex—Canela Apãniekrá (section 6.1), Krahô (section 6.2) and Parkatêjê (section 6.3). Except for a gap in the documentation of Parkatêjê, we will see that clause chaining markers assume fully cognate forms in the three Eastern Timbira languages. When we compare the Eastern Timbira languages with the already surveyed Kĩsêdjê, Apinajé and Mebengokre languages, we find that only one form is not cognate between the two groups, namely, *mã*/*mã*/*mã̌* vs. *nhy*/*ɲum*/*nhym*. These are the markers that indicate that the following subject is 3rd person, the two connected clauses have different subjects, and the chain is in the non-future tense.

The isomorphic SS marker is cognate among all the Northern Jê languages, a nasal consonant followed by a non-posterior middle vowel (Kĩsêdjê =*ne*, Apinajé and Mebengokre *nẽ*, Canela Apãniekrá *nẽ*, Krahô *nẽ*, Parkatêjê *nə̃*). In all these languages, DS chaining is marked with morphemes homophonous with nominative pronouns whenever anticipatory agreement with 1st (exclusive or inclusive) or 2nd person subjects holds. The form alluded to at the end of the previous paragraph, used to mark DS chaining and anticipatory agreement with a 3rd person subject in the non-future tense, is also used as a non-agreeing DS marker in Kĩsêdjê, Apinajé and Krahô. In Mebengokre, Canela Apãniekrá and Parkatêjê, such a *default* is never seen: DS markers always agree in the available examples.

Finally, when the clause following a DS marker is in the future and has a 3rd person subject, all the Northern Jê languages use a distinct and cognate form of the marker, a velar stop followed by a anterior middle vowel (Kĩsêdjê =*kê*, Apinajé *ke*, Mebengokre *gê*, Canela Apãniekrá *ke*, Krahô *kê*). In Parkatêjê I did not find documentation of a form with this function, but also did not find any example of chaining in this kind of context, so the matter is still open.

6.1 Canela Apãniekrá clause chaining

Alves (2004:142-146) describes the switch-reference marking clause chaining system of the language as follows: *mã* and *kê* are only used when the following subject is third person, *nẽ* is used to indicate coreference between subjects, and whenever the following subject is first or second person, there is juxtaposition.

6.1.1 Same-subject

The isomorphic SS form in Canela Apãniekrá is *nẽ*, a clear cognate with the forms the other Northern Jê languages use in this context. Pronominal subjects seem to follow similar rules as in Kĩsêdjê, Apinajé and Mebengokre: absolutive pronominal subjects are never omitted (arguably due to the fact that they are verbal prefixes) and nominative pronominal subjects that would immediately follow the marker must be omitted (51). We do not know if nominative pronominal subjects could escape omission in Canela Apãniekrá when non-adjacent to the marker, as is the case in Kĩsêdjê and also in Krahô (which we will review in section 6.2).

(51) a. wa ha poj **nɛ** ~~wa~~ a-pupu
　　　 1.NOM IRR arrive &.SS 1.NOM 2.ACC-see
　　　 'I will arrive and see you.'　　　　　　　　　　　　　　　　　　　(Alves 2004:143, ex. 874)

　　 b. ke ha Alice poj **nɛ** *ke* i-pupu
　　　 3.NOM IRR A.　 arrive &.SS 3.NOM 1.ACC-see
　　　 'Alice will arrive and see me.'　　　　　　　　　　　　　　　　　(Alves 2004:143, ex. 875)

c. i-tɛ   a-pupu-n   **nɛ** *wa* ma tɛ̃
   1-ERG 2.ABS-see-NOMZ &.SS 1.NOM DIR go
   'I saw you and went away.'   (Alves 2004:143, ex. 876)

Alves (2004:143) states that ergative pronominal subjects following clause chaining markers can be dropped, even though it happens infrequently. Sentences where the marker *nɛ̃* is followed by a non-nominative subject are shown in (52), including, in (52d), an example where an ergative pronominal subject is dropped.

(52) a. rɔp pe iʔ-hire   **nɛ̃** *iʔ*-ti-k
        dog PAST 3.ABS-thin &.SS 3.ABS-die-NOMZ
        'The dog was skinny and died.'   (Alves 2004:143, ex. 871)

     b. i-poj   **nɛ̃** *i-tɛ* a-pupu-n
        1.ABS-arrive.NOMZ &.SS 1-ERG 2.ABS-see-NOMZ
        'I arrived and saw you.'   (Alves 2004:143, ex. 877)

     c. [counterpart to (54c)]
        i-poj   **nɛ̃** *i-tɛ*   Alice pupu-n
        1.ABS-arrive.NOMZ &.SS 1-ERG A.   see-NOMZ
        'I arrived and saw Alice.'   (Alves 2004:88, ex. 555)

     d. intʃe tɛ   intʃũ pupu-n   **nɛ̃** *ku-te* amjĩ j-atsha-r
        mother ERG father see-NOMZ &.SS 3-ERG REFL RP-come.back-NOMZ
        'The mother saw the father and came back.'   (Alves 2004:144, ex. 879)

6.1.2 Different-subject

As far as the available data allows to determine, Canela Apãniekrá marks DS chaining in the same way as Mebengokre. In every DS chain exemplified in the literature, there is anticipatory agreement between chaining marker and following subject, obligatory omission of nominative pronominal subjects after the marker, and maintenance of other kinds of subjects. As in the other Northern Jê languages, when the clause following the DS marker has a 3rd person subject, the form of the chaining marker varies according to tense.

    I do not know if, as in Kĩsêdjê, a nominative pronominal subject would have be overt whenever not immediately adjacent to a DS marker or if an ergative pronominal subject could be dropped after a DS marker. I also do not know what forms are used in embedded clause chains, as it was not possible to locate examples similar, for instance, to (31), in which a transitive verb took a clause chain as its direct object.

    In free clause chains—the only context found in the available data—if the subject following a DS marker is 1st (exclusive or inclusive) or 2nd person, the form the marker takes is homophonous with the equivalent nominative pronoun, as we see in (53). In Canela Apãniekrá, as in Mebengokre, but not Kĩsêdjê and Apinajé, when the marker is homophonous with a nominative pronoun, it can optionally be preceded by *nɛ̃* (53b), which is homophonous with the SS marker.

(53) a. a-poj   **wa**   *i-tɛ*   a-pupu-n
        2.ABS-arrive.NOMZ &.DS.1 1-ERG 2.ABS-see-NOMZ
        'You arrived and I saw you.'   (Alves 2004:145, ex. 887)

     b. hũmrɛ tɛ   i-pupu-n   **(nɛ̃) wa** *wa* ma tɛ̃
        man   ERG 1.ABS-see-NOMZ &   &.DS.1 1.NOM DIR go
        'The man saw me and I went away.'   (Alves 2004:145, ex. 885)

c.   i-tɛ   a-pupu-n   **ka**   *ka*   ma tɛ̃
      1-ERG 2.ABS-see-NOMZ &.DS.2 2.NOM DIR go
      'I saw you and you went away.'   (Alves 2004:145, ex. 886)

d.   [contrast with (56c)]
      ke ha a-mã   h-ũte   **ka**   *ka*   ha aku
      3   IRR 2.ABS-to 3.ACC-allow &.DS.2 2.NOM IRR eat
      'He will allow you to eat.'   (Alves 2004:136, ex. 834)

As we already learned, all Northern Jê languages use a specialized form of the connective to indicate anticipatory agreement with 3rd person subjects in non-future clauses. In Canela Apãniekrá, this form is *mã* and it agrees with 3rd person subjects in any grammatical case, as we see in (54) and (55).

(54) a. i-poj   **mã**   *hũmrɛ* *tɛ* i-pupu-n
          1.ABS-arrive.NOMZ &.DS.3.NFUT man   ERG 1.ABS-see-NOMZ
          'I arrived and the man saw me.'   (Alves 2004:144, ex. 881)

      b. pedro tɛ joão pupu-n   **mã**   *joão* mɔ̃-r
          Pedro ERG João see-NOMZ &.DS.3.NFUT João go-NOMZ
          'Pedro saw João and João went away.'   (Alves 2004:144, ex. 882)

      c. [counterpart to (52c)]
          i-poj   **mã**   *alice* *tɛ* i-pupu-n
          1.ABS-arrive.NOMZ &.DS.3.NFUT A.   ERG 1.ABS-see-NOMZ
          'I arrived and Alice saw me.'   (Alves 2004:89, ex. 556)

(55) i-tɛ   hũmrɛ pupu-n **mã**   *ke*   ma tɛ̃
      1-ERG man   see-NOMZ &.DS.3.NFUT 3.NOM DIR go
      'I saw the man and he went away.'   (Alves 2004:144, ex. 880)

As in the other Northern Jê languages, when the subject following a DS marker is 3rd person and the clause is in the future, a special form is employed, which in Canela Apãniekrá is *ke* (a clear cognate with the form employed in this function by the other languages). In contrast with Kĩsêdjê, Apinajé and Mebengokre, however, this morpheme has another synchronic use in Canela Apãniekrá, namely, as the 3rd person nominative pronoun (Alves 2004:81).

(56) a. wa   ha poj **ke**   *alice* i-pupu
          1.NOM IRR arrive &.DS.3.FUT A.   1.ABS-see
          'I will arrive and Alice will see me.'   (Alves 2004:145, ex. 888)

      b. ka   ha poj **ke**   *ke*   ha a-pupu
          2.NOM IRR arrive &.DS.3.FUT 3.NOM IRR 2.ABS-see
          'You will arrive and he will see you.'   (Alves 2004:145, ex. 888)

      c. [contrast with (53d)]
          i-tɛ   hũmrɛ ita mã **ke**   *ke*   i-mã   ∅-to
          1-ERG man   this to &.DS.3.FUT 3.NOM 1.ABS-to 3.ABS-do
          'I (said) to the man for him to do for me.'   (Alves 2004:135, ex. 827)

6.2 Krahô clause chaining

Krahô differs from Canela Apãniekrá in using the specialized DS marker *mã* in grammatical contexts in which Canela Apãniekrá employs agreeing connectives. That is to say, Krahô also uses *mã* as a non-agreeing DS marker. While in Canela Apãniekrá *mã* is only used in the non-future tense if the following subject is third person, in Krahô, besides this context, *mã* is also employed when the different subjects of the preceding and following clauses are non-nominative, whatever their grammatical person. This is a context in which Canela Apãniekrá employs forms homophonous with nominative pronouns. Though the specialized forms themselves are not cognate, this phenomenon is similar to what we saw in Kĩsêdjê and Apinajé: in these three languages, the specialized form used to indicate anticipatory agreement with a following 3rd person subject in a non-future chain is also employed in non-agreeing contexts.

Miranda (2014) does not describe the full system I illustrate below. He describes *nẽ* and *mã* as constituting a switch-reference system and the semantically parallel sentences where they do not appear as juxtaposition (p. 197). The other reference I cite below (Melatti 2010) is an interlinearized text without grammatical description.

6.2.1 Same-subject

The morphological marking of SS chaining as well as the rules governing pronominal subject drop after SS markers in Krahô are similar to those found in the other Northern Jê languages. In (57), we see examples of the Krahô SS marker *nẽ* followed by non-nominative subjects. I located an example in which a third person ergative pronoun was dropped after the SS marker (57b), as we saw also happens in Kĩsêdjê and Canela Apãniekrá.

(57) a. i-mã   h-ɐ   **nẽ** *i-tɛ*   kɔrmã kako tɔ   i-kʰõ-m   narɛ
        1.ABS-to 3.ABS-hurt &.SS 1-ERG still   liquid with 1.ABS-drink-NOMZ NEG
        'I am sick and I still haven't drunk the tea.'   (Miranda 2014:189, ex. 333c)

    b. ku-tɛ kʰrit kʰrɛ-∅   **nẽ** ~~kute~~ ko   mã ∅-mẽ-n
        3-ERG tip   make.hole-NOMZ &.SS 3.ERG water to   3.ABS-throw-NOMZ
        'He made a hole on the tip (of the gourd) and threw it into the water. '   (Melatti 2010:25)

    c. i-pĩmpra-r   **nẽ** i-nõ-r   kʰam *i-krɐ-∅*
        1.ABS-wake.up-NOMZ &.SS 1.ABS-lie.down-NOMZ in   1.ABS-continue-NOMZ
        'I woke up and continued lying down.'   (Miranda 2014:274, ex. 421)

In (58) we see examples of SS markers followed by nominative subjects. Besides the frequent examples in which they are omitted when expected to follow a chaining marker, I have also been able to locate an example in which one such pronoun is overt (58d). As in Kĩsêdjê, that happens when the subject is not immediately adjacent to the chaining connective.

(58) a. pe   … ∅   aʔtɛ ajko h-ikʰwa   **nẽ** ∅   apu krɛ
        PAST   3.NOM only IMPERV 3.ABS-lie.down &.SS 3.NOM PROG sing
        '… He would lie down by himself and be singing.'   (Miranda 2014:267, ex. 416a)

    b. ku   ha   paʔ-tẽ-m   təj **nẽ** *ku*   ha   mãm poj
        1inc.NOM IRR 1inc.ABS-go-NOMZ be.fast &.SS 1inc.NOM IRR first arrive
        'If we go fast, we will arrive first.'   (Miranda 2014:234, ex. 376b)

    c. wa   ha   ramã   mõ **nẽ** ~~wa~~   areti   kʰãm nõ   …
        1.NOM IRR already go &.SS 1.NOM hammock in   lie.down
        'I will already go and lie down in the hammock.'   (Miranda 2014:251, ex. 392b)

d. i-mã   i-kʰra   ∅-pə-m   wa   ~~wa~~ apu   jət   mẽ   piti   põhɨ kʰu **nẽ**
    1.ABS-to   1.ABS-son 3.ABS-fall.down-NOMZ   &.DS.1 1.NOM   PROG potatos with only corn eat &.SS

    ita katsuw *wa*   ra   i-təj   arəjhɨ, wajĩ, kʰwər   kʰu
    today   1.NOM already   1.ABS-can   rice   meat   manioc eat

    'My son is born and I was only eating potatoes with corn and today I can already eat rice, meat and manioc.'
    (Miranda 2014:282, ex. 432a)

6.2.2 Different-subject

Krahô extends the use of the specialized form of the DS connective *mã* into contexts where, in Canela Apãniekrá, agreeing forms homophonous with nominative pronouns are used. While in Canela Apãniekrá the form *mã* is only used when the following subject is 3rd person and the chain is in the non-future tense, in Krahô that form is also used when the subjects of the clauses preceding and following the chaining marker are non-nominative, independently of their grammatical persons, as illustrated by the examples in (59). A sentence in Canela Apãniekrá where the subjects of two chained clauses are non-nominative but in which, in contrast to Krahô, a form homophonous with a nominative pronoun is used is (53a).

(59) a. *i-tɛ*   a-jikaj-∅   **mã**   hɨ̃rmã   *a*-mõ-r   narɛ
          1-ERG   2.ABS-wait-NOMZ &.DS.ABS   towards.there 2.ABS-go-NOMZ   NEG
          'I waited for you and you did not go there.'   (Miranda 2014:188, ex. 333a)

      b. ka   *a-tɛ*   mẽ   ikʰrɛ kat   jahe-r   **mã**   *i-tɛ*   ta nã   mẽ a-kʰrãjpa-r
          2.NOM   2-ERG   PL   house wall   cover-NOMZ   &.DS.ERG 1-ERG   3   with PL 2.ABS-help-NOMZ
          'You guys covered the wall of the house and I helped you with that.'   (Miranda 2014:186, ex. 328c)

      c. … nẽ   amẽ *iʔ*-kaʔkʰũ-m   **mã**   *jũm*   ita   ma   h-ũrkʰwa   wər   ∅-tẽ-m   …
          &.SS   PL   3.ABS-spread-NOMZ &.DS.ABS   someone   this DIR 3.ABS-house towards   3.ABS-go-NOMZ
          'They (the men) dispersed and someone went towards their house …'
          (Miranda 2014:184–185, ex. 327b)

An example of the form *mã* used in a non-future chain with a following 3rd person subject—the only context of use of this form in Canela Apãniekrá—is given in (60).

(60) … apu   ajtwsə   **mã**   *kukʰrit, jãtsɨ,   karɐ*   iʔ-təj   ku-ku
      PROG fall.down.PL &.DS.3.NFUT   tapir   forest.deer savanna.deer 3.ABS-must 3.ACC-eat
      '(the tapir bean) is falling down and the tapir, the forest deer and the savannah deer must be eating them.'
      (Miranda 2014:186, ex. 328b)

In Krahô, the agreeing forms of the DS marker are only used if at least one of the subjects of the combined clauses is nominative. In such circumstances, when the following subject is 1st (exclusive or inclusive) or 2nd person, the marker assumes a form homophonous with the equivalent nominative pronoun, as illustrated by the examples in (61).

(61) a. i-tõ   apu   i-nã   ∅-aʔwə   **wa**
          1.ABS-brother PROG 1.ABS-with.respect 3.ABS-ask &.DS.1

          ãmpə   hɨ   tə   *i*-pikwə-r   nõ
          something   seed with 1.ABS-mix-NOMZ   NEG
          'My brother is asking that I don't mix the seeds.'   (Miranda 2014:203, ex. 344d)

b. … nẽ wa a-wər i-wrə-k kakʰro **ka** *ka* apu i-tɔ hanẽ
& 1.NOM 2.ABS-towards 1.ABS-go.down-NOMZ be.useless &.DS.2 2.NOM PROG 1.ABS-with do
'And in spite of my coming down towards you, you are indeed doing this to me.'

<div align="right">(Miranda 2014:189, ex. 334a)</div>

c. Kratɛ apu paʔ-nã ∅-aʔwə **ku** *kʉ* hõtkʰet nã mẽ poj
K. PROG 1inc.ABS-in 3.ABS-ask &.DS.1inc 1inc.NOM early in PL arrive
'Krate is asking that we come early.' (Miranda 2014:201, ex. 342b)

Finally, if the chain is in the future tense and the following subject is third person, the form *ke* is employed (62), as is the case in all Northern Jê languages.

(62) ke ha pɨ-je mẽ h-ũmrɛ kujatɛ **ke** ∅ *mẽ* kʰij tɔ
3 IRR woman-PL PL 3.ABS-male order &.DS.3.FUT 3.NOM PL barbecue make
'The women will order that the men make the barbecue.' (Miranda 2014:205, ex. 346a)

In the corpora I had access to, I could not find examples of clause chains embedded, for instance, as the object of a transitive verb. Since in all Northern Jê languages verbal arguments of embedded clauses are marked as ergative-absolutive, we can expect, however, that DS relations in embedded clause chains would be marked by *mã* in Krahô.

6.3 Parkatêjê clause chaining

In Parkatêjê, SS chaining is marked in the same way as in the other Northern Jê languages. In terms of anticipatory agreement between a DS marker and the following subject, Parkatêjê seems to align with Canela Apãniekrá and Mebengokre and to contrast with Krahô, Kĩsêdjê and Apinajé, in the sense that DS markers display anticipatory agreement in every chain. As with Canela Apãniekrá, though, that can be attributed to a gap in the data. No examples of embedded clause chains, the context in which agreement is blocked in Krahô, Kĩsêdjê and Apinajé, have been found in the literature.

Ferreira (2003) describes *nɔ̃* and *mɔ̃* as constituting a switch-reference system, but does not talk about the requirement that *mɔ̃* be followed by a third person subject, even though that generalization holds in the data she presents in her manuscript.

6.3.1 Same-subject

The chaining of clauses with identical subjects is marked in Parkatêjê with the isomorphic form *nɔ̃*. In the examples I located, nominative pronominal subjects expected to surface immediately after the marker were omitted (63), with non-nominative pronominal subjects overt in the same context (64). It is unclear whether nominative pronominal subjects would have to be overt when non-adjacent to the marker, as observed in Kĩsêdjê and Krahô, or whether non-nominative subjects could be optionally omitted, as observed in Canela Apãniekrá, Kĩsêdjê and Krahô, since the relevant data have not been found.

(63) i-tɛ ∅-tɔ yatʃɨ kora-n **nɔ̃** *wa* amnẽ apɨ-∅ mɔ̃ tẽ
1-ERG 3.ABS-with deer kill-NOMZ &.SS 1.NOM to.here return-NOMZ to go
'I killed deer and was returning here.' (Ferreira 2003:183, ex. 350)

(64) i-ntʃũm tɛ mĩrɛ kora-n **nɔ̃** ∅-*tɛ* kukrɨt pĩ-r
1.ABS-father ERG cayman kill-NOMZ &.SS 3-ERG tapir kill-NOMZ
'My father killed caymans and killed tapir.' (Ferreira 2003:183, ex. 349)

6.3.2 Different-subject

The chaining of clauses with different subjects is marked in an almost identical fashion in Parkatêjê and Canela Apãniekrá. When the marker is followed by a 1ˢᵗ (exclusive or inclusive) or 2ⁿᵈ person subject, it takes a form homophonous with the equivalent nominative pronoun. When the following subject is 3ʳᵈ person, the form *mə̃* is employed.

In the examples I examined, nominative pronominal subjects expected to follow immediately after the marker were dropped (65a) and non-nominative pronominal subjects were overt in the same context (65b and 66a). I could not locate any examples in which *mə̃* was clearly followed by a nominative subject or in which clause chains were embedded in an argument position. I was also not able to locate evidence that this language includes a form of the marker that is cognate with the form *ke/kê* found in the other Northern Jê languages.

(65) a. ʒe, ariri tɔk tɔ **wa** ~~wa~~ kaprën pɨ **ku** ~~kɨ~~ ku-ka
   VOC again fire make &.DS.1 1.NOM turtle catch &.DS.1inc 1inc.NOM 3.ACC-bake

   nə̃ ~~kɨ~~   ∅-kapi
   &.SS 1inc.NOM 3.ACC-taste

   'Jê, make fire again, I catch the turtle, we will bake it and taste it.'   (Ferreira 2003:198, ex. 383)

 b. ya kɨmə̃ ʒĩ **ka** *a-tɛ* tɔ ∅-kora-n?
  INTER CONT to.be.sitting &.DS.2 2-ERG make 3.ACC-kill-NOMZ

  'It (the paca) was sitting (when) you killed it?'   (Ferreira 2003:84, ex. 120)

(66) a. mẽkunĩnĩ i-tɛm Piare pupũ-n **mə̃** ∅-tɛ mẽ i-pupu-n inũarɛ
  everybody 1-ERG.PL P. see-NOMZ &.DS.3 3-ERG PL 1.ABS-see-NOMZ NEG

  'We all saw Piare but he didn't see us.'   (Ferreira 2003:74, ex. 83)

 b. … ∅ katʃer mə̃ ∅-hĩkrëkrërɛ hõ **mə̃** *katʃer mə̃ ∅-hĩkrëkrërɛ* kaka
   3.NOM moon to 3.ABS-be.thin give &.DS.3 moon to 3.ABS-be.thin not.want

  '(he) gave the thin one to the moon and the moon did not want the thin one.'   (Ferreira 2003:246)

 c. … apu ∅-kə̃m nkrɨk **mə̃** ∅ aptɛ h-aher …
   PROG 3.ABS-in be.angry &.DS.3 3.NOM in.vain 3.ABS-approach

  '… (the sun) is still angry and (the moon) tries to approach him …'   (Ferreira 2003:268)

7 Conclusion

The languages of the Northern branch of the Jê family are very similar with respect to the grammatical subsystems involved in clause chaining. We saw that in the Northern Jê languages, clauses in a chain are connected by morphemes that marks switch-reference. In DS contexts, there is the possibility of agreement with the following subject and, if that subject is third person, also tense coindexation.

Northern Jê languages do not pro-drop and feature rigid word order. However, clause chaining connectives condition dropping of nominative pronominal subjects that would otherwise immediately follow them. In two languages, Kĩsêdjê and Krahô, we found evidence that nominative pronominal subjects must be overt whenever not immediately adjacent to the connective. Absolutive pronominal subjects in the clause following the connective are never dropped (which is expected, since they constitute part of the verbal word) and ergative pronominal subjects in the clause following the connective are usually overt. In Kĩsêdjê, Canela Apãniekrá and Krahô we found evidence that pronominal ergative subjects can also be dropped.

The isomorphic SS chaining connective is cognate among Northern Jê languages, a nasal alveolar consonant followed by a non-posterior middle vowel (Kĩsêdjê *=ne*, Apinajé and Mebengokre *nẽ*, Canela Apãniekrá *nẽ*, Krahô *nẽ*, Parkatêjê *nə̃*).

The forms of the DS connective can be divided, in all of the languages, into three sets: 1) forms homophonous with nominative pronouns, which agree in person with a [+participant] subject in the following clause, 2) a form that looks cognate with the 3rd person nominative pronoun of the Eastern Timbira languages, used to coindex future tense if the subject following the marker is 3rd person (Kĩsêdjê *=kê*, Apinajé *ke*, Mebengokre *gê*, Canela Apãniekrá *ke*, Krahô *kê*)[9] and 3) a *specialized form*, used a) to coindex non-future tense when the subject following the marker is 3rd person or b) when there is no agreement with the subject following the marker.

With regard to the shape of this specialized form of the DS marker, the Northern Jê languages can be divided into two groups. In the Eastern Timbira languages, this form comprises a nasal bilabial consonant followed by a central mid vowel (Canela Apãniekrá *mã*, Krahô *mã*, Parkatêjê *mə̃*). In Kĩsêdjê, Apinajé and Mebengokre, this form comprises a nasal palatal consonant, a non-anterior high vowel and, finally, but only in Mebengokre and Apinajé, a nasal bilabial coda (Kĩsêdjê *=nhy*, Apinajé *num*, Mebengokre *nhym*).

The Northern Jê languages diverge with respect to what contexts condition anticipatory agreement. Within the (problematic) dataset I had access to, we saw that anticipatory agreement always holds in Mebengokre. On the other hand, we saw that in Kĩsêdjê, Krahô and Apinajé, there are some contexts that block anticipatory agreement between a chaining connective and the following subject. In these contexts, the specialized form of the marker mentioned in the previous paragraph must be used. In Krahô, agreement is blocked when the chaining marker connects clauses with non-nominative subjects. In Apinajé and Kĩsêdjê, agreement is blocked when the clause chain is grammatically embedded (in which context, as a matter of fact, subjects will be non-nominative).

As noted throughout the text, there are still many empirical gaps in our understanding of the clause chaining systems of the Northern Jê languages. In particular, I would like to mention two important gaps. 1) Only in Kĩsêdjê, Apinajé and Mebengokre have I been able to locate examples of embedded clause chains. In Mebengokre, as mentioned, the examples I found are not very reliable, since they come from translations of the Bible, which may not be naturalistic. 2) Only in Kĩsêdjê and Krahô have I found examples relevant to determining whether nominative pronominal subjects escape dropping if they are not immediately adjacent to the chaining marker. Further field research will be necessary to fill in those gaps.

Notes

[1] source: https://pib.socioambiental.org/pt/Quadro_Geral_dos_Povos accessed on 06/20/2023

[2] http://prodoclin.museudoindio.gov.br/index.php/etnias/kisedje

[3] My fieldwork with the Kĩsêdjê spanned from 2008 until 2016. The materials collected over this period include 100 recorded and transcribed traditional narratives, as well as some songs and interviews, and 4599 sentences elicited over 219 sessions. This research was made possible in part due to the ProDocLin project.

[4] Whenever I separate prefixes or clitics from their hosts, like in this example, I am following the writing conventions adopted for the language.

[5] Possessors of alienable nouns are introduced through a possessive pronoun.

[6] That is the case with at least some languages from the Central Highlands of Papua New Guinea.

[7] We can reliably expect pronouns to appear in certain positions because Northern Jê languages do not pro-drop and display a mostly fixed word order, as detailed in section 2

[8] This divergence seems to have happened very recently, as even Tapayuna, the language closest to Kĩsêdjê, allows such clauses.

[9] In Parkatêjê I found no examples of this form, but also no examples in which another form was used in the same context.

References

Alves, Flávia de Castro (2004). 'O Timbira falado pelos Canela Apãniekrá: uma contribuição aos estudos da morfossintaxe de uma língua Jê.' PhD thesis. Universidade Estadual de Campinas, Campinas.

Callow, John Campbell (1962). 'The Apinayé language: phonology and grammar.' PhD thesis. SOAS.

Camargo, Nayara da Silva (2010). 'Língua Tapayúna: aspectos sociolingüísticos e uma análise fonológica preliminar.' MA thesis. UNICAMP.

Camargo, Nayara da Silva (2015). 'Tapayuna (Jê): aspectos morfossintáticos, históricos e sociolinguísticos.' PhD thesis. UNICAMP.

Culicover, Peter W. & Ray Jackendoff (1997). 'Semantic Subordination despite Syntactic Coordination.' In: *Linguistic Inquiry* 28.2, pp. 195–217.

Ferreira, Marília (2003). 'Estudo morfossintático da língua Parkatejê.' PhD thesis. Unicamp.

Guedes, Marymarcia (1993). 'Suya: a língua da gente "um estudo fonólogico e gramatical".' PhD thesis. Unicamp.

Jacobsen, William (1967). 'Switch-Reference in Hokan-Coahuiltec.' In: *Studies in Southwestern Ethnolinguistics*. Ed. by Dell H. Hymes & William E. Bittle. Mouton, The Hague, pp. 238–263.

Jefferson, Kathleen (1989). *Gramática Pedagógica Kayapó*. SIL, Brasília.

Lakoff, George (1986). 'Frame Semantic Control of the Coordinate Structure Constraint.' In: *Papers from the Parasession on Pragmatics and Grammatical Theory*. Ed. by Anne M. Farley, Peter T. Farley, & Karl-Erik McCullough.

McCarthy, Joy (1965). 'Clause Chaining in Kanite.' In: *Anthropological Linguistics* 7.5. URL: http://www.jstor.org/stable/30022550.

Melatti, Julio Cezal (2010). 'O mito do Sol e Lua: um comentário.' In: *Revista Brasileira de Linguística Antropológica* 2.1. URL: http://periodicos.unb.br/index.php/ling/article/view/8829.

Miranda, Maxwell Gomes (2014). 'Morfologia e morfossintaxe da língua Krahô.' PhD thesis. UnB.

Nikulin, Andrey & Andrés Pablo Salanova (2019). 'Northern Jê verb morphology and the reconstruction of finiteness alternations.' In: *International Journal of American Linguistics* 85.4, pp. 533–567.

Nonato, Rafael (2013). 'Clause-chaining is coordination.' In: *Proceedings of the Fourty-Second Annual Meeting of the North East Linguistic Society*. Ed. by Stefan Keine & Shayne Sloggett. Vol. 2, pp. 67–80. ISBN: 1484948688.

Nonato, Rafael (2014). 'Clause chaining, switch reference and coordination.' PhD thesis. MIT. URL: http://rafaeln.github.io/papers/thesis.pdf.

Nonato, Rafael (2017). 'Khátpy re wapãmjê thõ thurun tho thẽm nda: The one (story) in which the Khátpy monster loads a forefather of ours onto his back and carries him away.' In: *On this and other worlds: voices from Amazonia*. Ed. by Kris Stenzel & Bruna Franchetto. Language Science Press. ISBN: 978-3-96110-018-7. URL: http://langsci-press.org/catalog/book/167.

Oliveira, Christiane Cunha de (2005). 'The language of the Apinajé people of Central Brazil.' PhD thesis. University of Oregon.

Popjes, Jack & Jo Popjes (1986). 'Canela-Krahô.' In: *Handbook of Amazonian Languages*. Ed. by Desmond C. Derbyshire & Geoffrey K. Pullum. Vol. 1. New York/Berlin: Mouton de Gruyter, pp. 128–199.

Reesnik, Ger P. (1983). 'Switch reference and topicality hierarchies.' In: *Studies in Language* 2.7.

Reich, Ingo (2008). 'From discourse to "odd coordination": On asymmetric coordination and subject gaps in German.' In: *'Subordination' versus 'coordination' in sentence and text: A cross-linguistic perspective*. Ed. by Cathrine Fabricius-Hansen & Wiebke Ramm, pp. 281–303.

Rodrigues, Aryon D. (1999). 'Macro-Jê.' In: *The Amazonian languages*. Ed. by Robert M. W. Dixon & Alexandra Y. Aikhenvald. Cambridge University Press Cambridge, pp. 164–206.

Ross, John Robert (1967). 'Constraints on variables in Syntax.' PhD thesis. MIT.

Salanova, Andrés Pablo (2007). 'Nominalizations and aspect.' PhD thesis. MIT.

Stout, Mickey & Ruth Thomson (1971). 'Kayapó Narrative.' In: *International Journal of American Linguistics* 37.4, pp. 250–256. ISSN: 00207071. URL: http://www.jstor.org/stable/1264517.

Stout, Mickey & Ruth Thomson (1974). 'Modalidade em Kayapó.' In: *Série Linguística* 3, pp. 69–97.

Vincent, Alexander & Lois Vincent (1962). 'Introductory notes on Tairora verb morphology and syntax.' In: *Studies in New Guinea Linguistics by Members of the Summer Institute of Linguistics (New Guinea Branch). Sydney: University of Sydney*, pp. 4–27.

Waller, Helen (1974). 'The conjunction nhũm in Apinayé narrative.' Summer Institute of Linguistics. URL: http://www.sil.org/americas/brasil/publcns/ling/AYNhumE.pdf.

Wiesemann, Ursula (1986). 'The pronoun systems of some Jê and Macro-Jê languages.' In: ed. by Ursula Wiesemann, pp. 359–380. URL: http://biblio.etnolinguistica.org/wiesemann-1986-pronoun.

Wycliffe Bible Translators (2012). *The New Testament in Kayapó. Metĩndjwỳnh Kute Memã Kabẽn Ny Jarẽnh*. ISBN: 978-1-5313-0666-3. URL: https://bibles.dbs.org/TXUTBL/pdf/TXUTBL.pdf (visited on 09/06/2023).

Yoon, James Hye Suk (1994). 'Lexical Integrity and the Morphosyntax of Verbal Inflection in Korean Coordination.' ms. University of Illinois, Urbana-Champaign.