A'ingae second-position clitics are matrix C-heads[*]

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Abstract: A'ingae (or Cofán, ISO 639-3: con) has relatively free word order in matrix clauses and extensive pro-drop, which are hallmarks of non-configurationality. Nevertheless, I argue that A'ingae has a configurational left periphery. Specifically, I show that A'ingae second-position clitics are C-heads of matrix clauses. I support my analysis by demonstrating that the second-position clitics expone features typically associated with CPs, they are preceded by only one constituent, they trigger WH-movement, and are prohibited in subordinate clauses. I also observe that the requirements on second-position clitic co-occurrence are straightforwardly captured if they are introduced in one functional head. Thus, I show that A'ingae has a complex and hierarchical syntactic structure despite its apparent non-configurationality.

Keywords: left periphery, A′-movement, non-configurationality, φ-agreement, EPP

Contents

1 Introduction

Phrase structure grammars propose that syntactic structure is strictly hierarchical. Nevertheless, some languages, such as Mohawk, Warlpiri, and Nahuatl, have been argued to be non-configurational, i.e. to have non-hierarchical phrase structure. Hallmarks of non-configurationality include

free word-order and extensive pro-drop. Non-configurational languages have been considered a challenge to phrase structure grammars.

A'ingae (or Cofán, ISO 639-3: con) has relatively free word order in matrix clauses and extensive pro-drop. Thus, it can be classified a non-configurational language. Nevertheless, I show that A'ingae has a configurational left periphery. Specifically, I propose that second-position clitics in A'ingae are C-heads of matrix clauses: The second-position clitics expone features typically associated with CPs, they are preceded by only one constituent, trigger WH-movement, and are prohibited in subordinate clauses. Finally, the requirements on second-position clitic co-occurrence are straightforwardly captured if they are introduced in one functional head.

The rest of the paper is organized as follows. Section 2 gives background on the A'ingae language and its speakers. Section 3 introduces second-position clitics, describes their their distribution, shows an agreement pattern with the matrix subject, and proposes a Minimalist analysis. Section 4 discusses further complexities pertaining to agreement and extends the analysis to capture those data as well. Section 5 concludes.

2   Background

A'ingae (or Cofán, ISO 639-3: con) is an Amazonian isolate spoken by the Cofán people in northeast Ecuador and southern Colombia. The language is endangered and severely underdocumented.

The origin of the Cofán can be traced back to the Andes, where they used to range over a large territory (Cepek 2012). The history of the Cofán migration is reflected in the typological profile of their language, which mixes and matches typically Andean and Amazonian properties (AnderBois, Emlen, Lucitante, Sanker, and Silva 2019).

A'ingae is an agglutinating language. In matrix clauses, word order is largely free, whereas subordinate clauses are strictly verb-final. Functional categories are expressed with suffixes and enclitics; prefixes and proclitics are virtually absent. Verbs are richly inflected, including categories such as voice, aspect, associated motion, number, modality, polarity, force, and others. For an extensive discussion, see Dąbkowski (2019). Verbal dependents are marked for case in a nominative-accusative alignment.

All the data come from the author's own fieldwork and an extensive corpus of written A'ingae organized as a part of the A'ingae Language Documentation Project (AnderBois and Silva 2018). All data coming from written sources are cited as such.

3   Distribution

In this section, I introduce the basic data which motivate my analysis of A'ingae second-position clitics as C-heads. Section 3.1 discusses A'ingae word order in matrix and subordinate clauses. Section 3.2 introduces second-position clitics. Section 3.3 describes the interactions of second-position clitics with WH-question forming mechanisms. Section 3.4 considers less frequent cases when the typically second-position clitics occur in lower positions. Section 3.5 presents the analysis.

3.1   Word order

Word order in matrix clauses is free. Thus, in a transitive sentence with both arguments overtly expressed, all six word-order possibilities are attested (1). The most common orders include SOV

(1a) and SVO (1b). Verb-initial word orders (1e-f) occur least frequently in the language corpus (AnderBois and Silva 2018) and are judged as less natural in elicitation contexts, but are nevertheless accepted.

(1) a. *kuraga thesi=ma   athe*
       shaman jaguar=ACC see

   b. *kuraga   athe   thesi=ma*

   c. *thesi=ma   kuraga   athe*

   d. *thesi=ma   athe   kuraga*

   e. ?*athe   kuraga   thesi=ma*

   f. ?*athe   thesi=ma   kuraga*

   "A shaman saw a jaguar."

A common subordination strategy employs the nominalizing subordinator =*'chu* 'SRBD.' Subordinate clauses are strictly verb final, which I interpret to mean that the underlying word order in A'ingae is SOV. The order of constituents other than the verb within the subordinate clause is free (2a-b). The subordinate clause is given in brackets [ ]. Moreover, scrambling out of subordinate clauses is impossible (2c-d).[1]

(2) a. *paña=ngi [kuraga thesi=ma   athe='chu]=ma*
       hear=1   shaman jaguar=ACC see=SBRD=ACC

   b. *paña=ngi [thesi=ma kuraga athe='chu]=ma*

   c. **kuraga=ngi paña [thesi=ma athe='chu]=ma*

   d. **thesi=ma=ngi paña [kuraga athe='chu]=ma*

   "I heard that a shaman saw a jaguar."

3.2 Second-position clitics

There are five sentence-level clitics in A'ingae. The sentence-level clitics encode subject person features, reportative evidentiality, and polar interrogatives, as given in Table 1.

Three of the clitics encode the person of the matrix clause's subject. The subject can also be expressed by a regular DP. The subject DP can co-occur with the subject clitic (3), but both the clitic (4) and the subject DP (5) are optional. Regular subject pronouns are glossed as *ña* '1SG,' *ke* '2SG,' and *tise* '3SG.' As can be seen in (3, 5), sentence-level clitics normally appear after the first constituent, i. e. in the second position.

(3) a. *ña=ngi panza*   b. *ke=ki panza*   c. *tise=tsû panza*
       1SG=1 hunt   2SG=2 hunt   3SG=3 hunt

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[1] I am here restricting my attention to scrambling to the position immediately before the second-position clitic (to be discussed in Section 3.2). Scrambling to other positions obeys fewer restrictions. For example, objects of nominalized subordinate clauses can scramble rightward (i).

(i) *paña=ngi [kuraga athe='chu]=ma thesi=ma*
    hear=1   shaman see=SBRD=ACC jaguar=ACC

    "I hear that a shaman saw a jaguar."

=*ngi*	'1' (first person subject)
=*ki*	'2' (second person subject)
=*tsû*	'3' (third person subject)
=*ti*	'INT' (polar interrogative)
=*te*	'RPRT' (reportative evidentiality)

Table 1: Sentence-level clitics.

(4) a. *ña panza*
        1SG hunt

    b. *ke panza*
        2SG hunt

    c. *tise panza*
        3SG hunt

(5) a. *panza=ngi*
        hunt=1

        "I hunted"

    b. *panza=ki*
        hunt=2

        "you hunted"

    c. *panza=tsû*
        hunt=3

        "(s)he hunted"

Featural identity between the first constituent and the second-position clitic is not required. For example, a second-position clitic exponing first or second person subject can attach to a third person object (6).

(6) a. *khuvi=ma=ngi (ña) panza*
        tapir=ACC=1 (1SG) hunt

        "I hunted tapir"

    b. *khuvi=ma=ki (ke) panza*
        tapir=ACC=2 (2SG) hunt

        "you hunted tapir"

The other two clitics expone discourse-related categories. One encodes polar questions (7a), while the other—reportative evidentiality (7b).

(7) a. *panza=ti=ki*
        hunt=INT=2

        "did you hunt?"

    b. *panza=te=ki*
        hunt=RPRT=2

        "you hunted (they say)"

3.3 Content questions

In this section, I address the relation of A'ingae second-position clitics to content question-forming mechanisms. A'ingae indefinite pronouns play a double role as content question words. For example, the inanimate indefinite *junguesû* can mean either 'something' or 'what.' Interrogative uses are distinguished from indefinite uses by WH-fronting and the obligatory use of a second-position clitic (8a). Failing to front the WH-word results in ungrammaticality (8b). Likewise, failing to use a second-position clitic yields a degraded sentence (8c).

(8) a. *jûnguesû=ma=tsû athe kuraga=ja?*
        what=ACC=3   see shaman=CNTR

        "What did the shaman see?"

    b. * *athe jûnguesû=ma kuraga=ja?*
        see what=ACC   shaman=CNTR

        intended: "What did the shaman see?"

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c. ?*jûnguesû=ma athe kuraga=ja?*
    what=ACC   see shaman=CNTR
    intended: "What did the shaman see?"

Oblique content interrogatives without the sentence-level clitic are even more degraded (9). It is not well understood why the lack of a second-position clitic results in a more degraded sentence when the WH-constituent is an adjunct (9) than when the WH-constituent is an object (8c).[2]

(9)   *maningae?*(=tsû) ja kuraga=ja?*
    where?*(=3)   go shaman=CNTR
    "Where did the shaman go?"

When the interrogative appears within a subordinate clause, the WH-word appears initial in the subordinate clause, and the subordinate clause itself appears initial in the sentence. This is to say, one can move the entire clause to the position before the clitic in order to satisfy the requirement on WH-initiality (10).

(10)   [*junguesû ña=mbe=ma   ke=nga   kati-ye*]=*ki in'jan?*
     what   1SG=BEN=ACC 2SG=DAT cast-INF=2 want
     "What pledge shall I give you?"   (Genesis 38:18)
     literally: "What thing of mine do you want (me) to cast to you?"

In non-interrogative uses, however, indefinites can be used without fronting and without a second-position clitic (11).

(11)   [*tise mama junguesû=ma tsun-'je=ni*]=*jan   tsa=ma='khe   faen'gae fûite-'je*
     3SG mom what=ACC   do-IMPV=LOC=CNTR ANA=ACC=ADD together help-IMPV
     "She helps her mom with whatever she's doing."   (Chica Umenda and Borman 1982:22)

In general, second-position clitics are restricted to matrix clauses. This is to say, second-position clitics can only encode the subject of the matrix clause and they can occur only in matrix clauses. Even if the subordinate clause precedes the matrix verb, a second-position clitic cannot occur there-within. A second-position clitic can, however, be right-adjacent to the subordinate clause (12). This indicates that the entire subordinate clause counts as one constituent which occupies the first position.

(12)   [*ke*(*=*ngi*/*=*ki*) *kunda='chu*]=*ma=ngi paña-mbi*
     2SG(*=1/*=2) tell=SBRD=ACC=1   understand-NEG
     "I didn't understand what you said."

Observe that a second-position clitic is disallowed in (12) because *ke* '2SG' cannot be interpreted as the matrix subject. A very similar string, however, is grammatical, if =*ngi* '1' is stripped away so that *ke* '2SG' can be parsed as the subject of the matrix clause (13). The difference in the structural position of *ke* '2SG' is reflected by the difference of bracketing.

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[2] Furthermore, some of these effects might be restricted to elicitation contexts. In the corpus of written A'ingae organized as a part of the A'ingae Language Documentation Project (AnderBois and Silva 2018), fronted WH-constituents are robustly accompanied by second-position clitics.

(13) *ke=ki* [*kunda='chu*]=*ma paña-mbi*
2SG=2 tell=SBRD=ACC understand-NEG
"You didn't understand what was said."

3.4 Lower positions

Lastly, sentence-level clitics can sometimes appear in positions other than the second position, including the third and even fourth position (14).

(14) *a'tse=ta(=tsû)* *tsa'u=nga(=tsû) ka'ni(=tsû)*
hummingbird=NEW(=3) house=DAT(=3) enter(=3)
"The hummingbird entered the house."

The conditions under which a sentence-level clitic can appear in positions other than second are not clear. For one, sentence-level clitics appear in the second position much more frequently than in the third or fourth position.

I tentatively propose that structures where the sentence-level clitic appears further to the right result from focus and topic fronting. Support for this tentative proposal comes from the fact contrastive topics marked with *=ja* 'CNTR'[3] can never be immediately followed by a sentence-level clitic. This is to say, when a constituent with the contrastive topic marker appears sentence-initially, the sentence-level clitic can appear in the third, but never second, position (15).

(15) *a'tse=ja(*=tsû)* *tsa'u=nga(=tsû) ka'ni*
hummingbird=CNTR(*=3) house=DAT(=3) enter
"The hummingbird entered the house."

In summary, the following facts hold of A'ingae sentence-level clitics: They agree with the matrix subject and expone discourse-level features of force (polar interrogative) and evidentiality (reportative). They typically appear right-adjacent to the first constituent. They always appear after the fronted WH-constituent. Finally, sentence-level clitics can also appear in positions other than the second one and they never directly follow a contrastive topic marked with *=ja* 'CNTR.'

3.5 Analysis

I propose that the A'ingae sentence-level clitics are introduced by a C-head distributionally restricted to matrix clauses. The agreement clitics *=ngi* '1,' *=ki* '2,' and *=tsû* '3.' are introduced by a null head which receives its phonology through Agree: It has an uninterpretable person agreement φ-feature satisfied by copying features from the structurally highest DP.[4] This captures the fact that second-position clitics agree with the matrix subject. Feature copying is represented with a dashed line. Figure 1 gives the tree structure for (6a).

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[3] The morpheme is identified as contrastive topic following Fischer and Hengeveld (in press). Yet, constituents marked with *=ja* 'CNTR' do not pass the usual tests for contrastive topics. The semantics of *=ja* 'CNTR' is therefore unclear.

[4] In analyzing these clitics as C-heads agreeing with subject φ-features, I draw on Deal (2015)'s analogous treatment of complementizer agreement in Nez Perce.
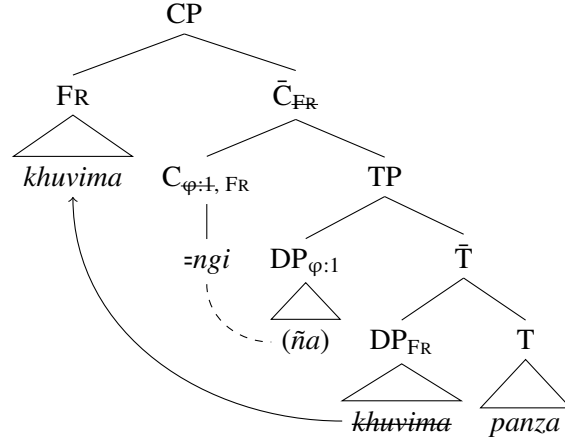
Figure 1: A tree for (6a).

In addition, second-position clitics require movement of a constituent to [Spec, CP]. Movement is represented with an arrow and a striking out of the extracted constituent. I model this with an Aravind (2018)'s EPP feature *uFR which probes for constituents bearing the FR(onting) feature. Any constituent may bear FR. Thus, second-position clitics surface in the second position (16). The features φ and FR are independent. Thus, the extracted constituent and the sentence-level clitic need not agree in person.

(16)   the subject-agreement clitics (i. e. *=ngi* '1,' *=ki* '2,' *=tsû* '3'): { C, uφ:_, *uFR }

The first piece of evidence in support of this analysis comes from the fact that the A'ingae clitics occur typically occur in the second position, which means that only one constituent precedes them. This fact finds a natural explanation in the architecture of the Minimalist theory of movement, where only one constituent is moved up to the specifier position by a strong uninterpretable feature (Chomsky 1993).

Second, there are "contentful" second-position clitics *=te* 'RPRT' and *=ti* 'INT,' which expone the morphological features of reportative evidentiality RPRT (17a) and polar questions INT (17b). The categories of interrogative force and evidentiality pertain to entire sentences and the two clitics *=te* 'RPRT' and *=ti* 'INT' are in complementary distribution, which makes the C-head a natural locus for them.

(17)   a.   *=te* 'RPRT:' { C, RPRT, *uFR }
        b.   *=ti* 'INT:' { C, INT, *uFR }

Third, the analysis also captures A'ingae WH-movement. I propose that in a content interrogative, the second-position clitic bears the uninterpretable *uWH feature, triggering WH-movement. Since second-position clitics are responsible for the movement of the WH-constituent, they are obligatory in WH-questions. Figure 2 gives the tree structure for (9).[5]

Fourth, second-position clitics are prohibited from subordinate clauses. This is straightforwardly accounted for, as subordinate clauses require complementizers, which are standardly assumed to be C-head themselves. In (12), for example, I take *='chu* 'SBRD' to be the C-head.

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[5] The order of the subject and the verb in (9) is different from the one presented in Figure 2. I take the word order difference to be a consequence of A'ingae's regular scrambling, which I do not represent in Figure 2.
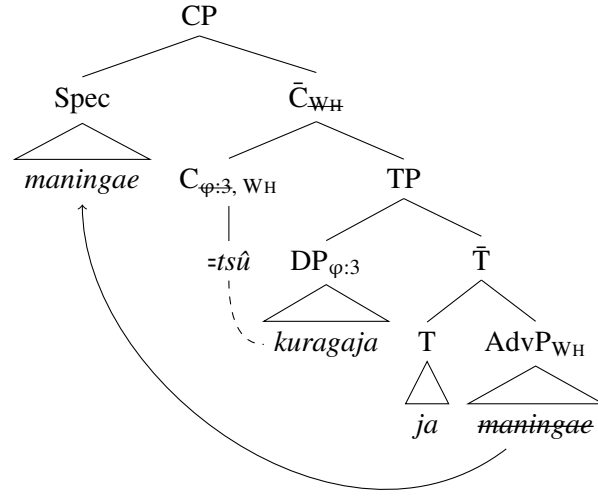
Figure 2: A tree for (9).

The C-heads of matrix clauses (i. e. second-position clitics) and the C-heads of subordinate clauses (i. e. subordinators) differ: The former precede their arguments, while the latter follow their arguments. Moreover, subordinators, such as the nominalizing subordinator *='chu* 'SBRD' do not show subject agreement and do not trigger any movement. Both second-position clitics and complementizers, however, occupy the same structural position, which explains their complementary distribution. Figure 3 gives the tree structure for the subordinate clause in (12).
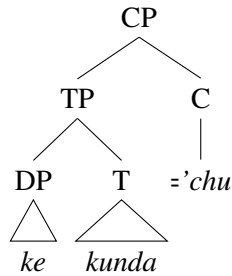
Figure 3: A tree for the subordinate clause in (12).

Fifth, recall that sentence-level clitics cannot appear in the second position when the first position is occupied by a contrastive topic. In those cases, however, the clitic can appear in the third position (15). The architecture motivated so far easily extends to capture these data.

I propose that contrastive topics have a feature CNTR and that CNTR cannot co-occur with FR. Thus, contrastive topics are ineligible for extraction by second-position clitics. They can, however, be extracted to the specifier position of a higher projection which I label TopP. A lexical entry for the phonologically empty Top head is given in (18).

(18)   a phonologically-empty Top head: { Top, *uCNTR }

Figure 4 gives the tree structure for (15). Generally, projections above CP, such as TopP, can capture cases when the sentence-level clitics appear in positions further to the right, even in the absence of contrastive topics, such as (14).
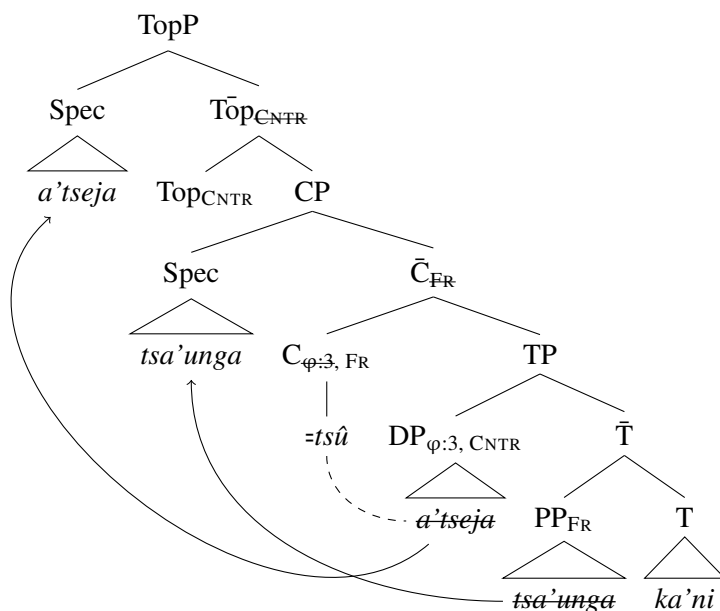

Figure 4: A tree for (15).

4 Agreement

In this section, I turn to further complexities of person features expressed on the second-position clitics. Section 4.1 introduces the relevant data. Section 4.2 presents the analysis.

4.1 Data

The interpretation of second-position clitics is dependent on the presence of other second-position clitics. Although the second-position clitics are generally optional, the polar interrogative *=ti* 'INT' and the reportative *=te* 'RPRT' always have third person interpretation when no other clitic is present. Moreover, the third person subject clitic *=tsû* '3' is incompatible with *=ti* 'INT' and *=te* 'RPRT' (19).

(19)   a. *panza=ti(*=tsû)*
           hunt=INT(*=3)

           "did (s)he hunt?"

   b. *panza=te(*=tsû)*
           hunt=RPRT(*=3)

           "(s)he hunted (they say)"

The third person interpretations in (19) do not arise merely as default interpretations in the absence of other information about subject features. This is to say, the presence of *=ti* 'INT' or *=te* 'RPRT' by themselves must, in some way, encode the third person subject. The clitics 'INT' and *=te* 'RPRT' must always be followed by *=ngi* '1' or *=ki* '2' when the subject is first or second person, even when an overt subject DP is present (20).

9

(20) a. *ke=ti*(=ki) panza*
     2SG=INT*(=2) hunt

     "did you hunt?"

b. *ke=te*(=ki) panza*
     2SG=RPRT*(=2) hunt

     "you hunted (they say)"

The pattern holds even when the phrase on which the clitics lean is not a featurally identical pronoun (21).[6] Thus, we see that this is not a matter of agreement between the fronted constituent and the person features expressed on the clitic.

(21) a. *khuvi=ma=ndi*(=ki) (ke) panza*
     tapir=ACC=INT*(=2) (2SG) hunt

     "did you hunt a tapir?"

b. *khuvi=ma=nde*(=ki) (ke) panza*
     tapir=ACC=RPRT*(=2) (2SG) hunt

     "you hunted a tapir (they say)"

To recap, the puzzle boils down to this: *=ngi* '1' and *=ki* '2' are optional in the absence of *=ti* 'INT' and *=te* 'RPRT,' but categorically required when either *=ti* 'INT' or *=te* 'RPRT' is present (22).

(22) a. *ke(=ki) panza*
     2SG(=2) hunt

     "you hunted"

b. *ke=ti*(=ki) panza*
     2SG=INT*(=2) hunt

     "did you hunt?"

4.2 Analysis

Descriptively, the polar interrogative *=ti* 'INT' and the reportative *=te* 'RPRT' show third person subject agreement *unless* the first person subject clitic *=ngi* '1' or the second person subject clitic *=ki* '2' is present. This type of *unless*-conditions on morpheme realization is straightforwardly captured in the framework of Distributed Morphology (henceforth DM, Embick and Noyer 2007), which provides an explicit formalism for contextual allomorphy with respect to adjacent morphemes.

$[\varphi : 1]$	$\leftrightarrow$	$\{\mathfrak{F}: \textit{=ngi}\}$
$[\varphi : 2]$	$\leftrightarrow$	$\{\mathfrak{F}: \textit{=ki}\}$
$[\varphi : 3]$	$\leftrightarrow$	$\{\mathfrak{F}: \textit{=tsû}\}$
$[\varphi : 3]$	$\leftrightarrow$	$\{\mathfrak{F}: \varnothing\}$ / $\{\text{INT, RPRT}\}$ __
$[\text{INT}]$	$\leftrightarrow$	$\{\mathfrak{F}: \textit{=ti}\}$
$[\text{RPRT}]$	$\leftrightarrow$	$\{\mathfrak{F}: \textit{=te}\}$

Table 2: Lexical entries for the sentence-level clitics.

DM-style lexical entries for the sentence-level clitics are given in given in Table 2. The left-hand side lists morphological features. The right-hand side lists phonological realizations of these features. Conditioning environments are given after the right slash /. No conditioning environment corresponds to the "elsewhere" condition.

Crucially, the the third person agreement feature $[\varphi : 3]$ has two allomorphs: $\{\mathfrak{F}: \varnothing\}$ and $\{\mathfrak{F}: \textit{=tsû}\}$. It is realized as without any phonological content (i. e. $\{\mathfrak{F}: \varnothing\}$) only in the presence of $[\text{INT}]$ or $[\text{RPRT}]$. Otherwise, it is realized as $\{\mathfrak{F}: \textit{=tsû}\}$. Thus, $\{\mathfrak{F}: \textit{=tsû}\}$ will never surface after $\{\mathfrak{F}: \textit{=ti}\}$ or $\{\mathfrak{F}: \textit{=te}\}$, which accounts for the incompatibility presented in (19).

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[6] The clitics *=ndi* and *=nde* seen in (21) are nasal allomorphs of the polar interrogative *=ti* 'INT' and the reportative *=te* 'RPRT,' respectively, here adjacent to the nasal *=ma* 'ACC.'

(19) a. *panza=ti(*=tsû)*
      hunt=INT(*=3)

      "did (s)he hunt?"

b. *panza=te(*=tsû)*
   hunt=RPRT(*=3)

   "(s)he hunted (they say)"

In addition, a phonologically empty element will always be given the $[\varphi:3]$ interpretation in the presence of [INT] or [RPRT]. In that environment, therefore, $\{\mathfrak{F}: \textit{=ngi}\}$ and $\{\mathfrak{F}: \textit{=ki}\}$ are necessary for first and second person agreement. This accounts for (20).

(20) a. *ke=ti*(=ki) panza*
      2SG=INT*(=2) hunt

      "did you hunt?"

b. *ke=te*(=ki) panza*
   2SG=RPRT*(=2) hunt

   "you hunted (they say)"

The optionality of first and second person clitic in the absence of [INT] and [RPRT] is explained on structural grounds. Clauses which do not show any clitics are TPs, not CPs. Thus, the difference between (3a) and (4a) lies in the presence or absence of CP structure, rather than environmentally conditioned allomorphy. Figure 5 gives the two tree structures.
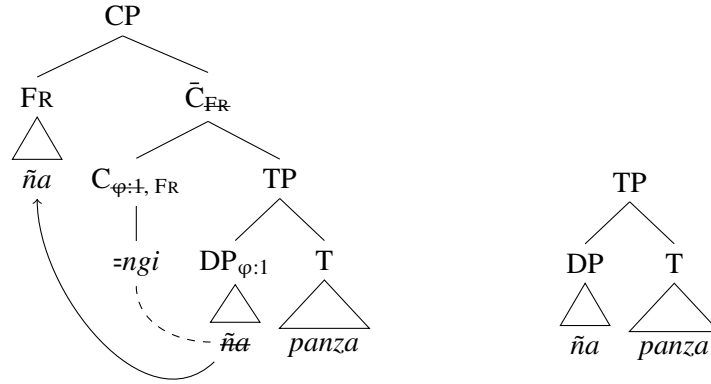
Figure 5: Trees for (3a) and (4a).

In other words, while a phonologically null element expones $[\varphi:3]$ in (19), there is no need to propose a phonologically null element exponing $[\varphi:1]$ in (4a).

5 Conclusion

I have considered the distributional facts of A'ingae second-position clitics, which show agreement with the matrix subject and expone interrogative force and reportative evidentiality. I have demonstrated that the second-position clitics are optional in matrix clauses, prohibited in subordinate clauses, and obligatory in WH-questions. Moreover, the clitics cannot appear in the second position if the first position in occupied by a contrastive topic.

I have demonstrated that a phrase-structure grammar well accounts for the properties of A'ingae second-position clitics. Thus, I have shown that the language has hierarchical syntactic structure despite its relatively free word order and extensive pro-drop.

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