

Verb-initial Clauses in Kawahíva

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Abstract

Estimates suggest that approximately 10% of the world's languages exhibit the verb first pattern (the V1 pattern), where the verb obligatorily occupies the initial position (with respect to its arguments) in declarative sentences with neutral information structure (Dryer 2005). In this paper, I argue that verb-initial (VSO) word order in Kawahíva (Tupí-Guaraní; Brazil) is a result of (long) syntactic head movement, akin to phrasal movement. This analysis is supported by the hallmarks of syntactic movement present in the head movement responsible for creating V1 order, including interpretive effects, nonlocality, and a specifier landing site. I also show that two alternative analyses to V1 order – Remnant VP Movement and Morphological Amalgamation – fail to show their predicted outcomes, i.e., the creation of a Remnant VP and a strictly local head movement.

Keywords: Clause Structure; Verb-initiality; Syntactic Head Movement; Tupí-Guaraní; Kawahíva

1 Introduction¹

Many unrelated languages exhibit the verb first pattern (V1 pattern) defined below:

(1)

The verb first pattern (V1 pattern):

A language has a verb first pattern when the verb is obligatorily first with respect to its arguments in a declarative sentence with neutral information structure.

Prominent examples of the verb first pattern can be found in Austronesian languages (Clemens and Polinsky 2017), Celtic languages (McCloskey 2006; 2017; Borsley and Kathol 2000; Jouitteau 2005), Mayan languages (Clemens and Coon 2018), and Berber languages (Ouhalla 1994).

¹ This paper is a revised and slightly extended version of the dissertation chapter “Verb-initiality” in dos Santos (2024). I would like to acknowledge the invaluable contribution of the Kawahíva people, especially Mandeí Juma and Mandá Uru Eu Wau Wau, for not giving up on me for making many (sometimes, intentional) mistakes with the VSO order. I am also grateful to Peter Jenks and Line Mikkelsen for their guidance and feedback on this project, and the thoughtful comments and suggestions from three anonymous reviewers. Thanks also to NLLT editor Martin Salzmann for conducting the reviewing process. Any errors and omissions are my fault. Finally, I dedicate this paper to the memory of my dear friend Estépheny Alvarenga. E-mail: wesley.nascimento.go@gmail.com.

In South America, we also encounter several unrelated language families and isolates that exhibit the V1 pattern. These include the Arawak languages Baure (Danielsen 2007), Caquinte (O'Hagan 2020), and Yanesha' (Duff-Tripp 1997); the Carib languages Ikpeng (Pachêco 2001) and Panare (Gildea 1993); the Chapacuran language Wari' (Everett and Kern 1997; Apontes 2015; Birchall To appear); the Macro-Jê language Kipéa do Karirí (Rodrigues 1999; Queiroz 2012); the Maku languages Nadëb and Kuyawi (Martins and Martins 1999); the Tupí-Guaraní language Tenetehará (Harrison 1986; Duarte 2012); the Tacanan language Reyesano (Guillaume 2012); the Peba-Yaguan language Yagua (Payne 1990); and the linguistic isolates Guató (Palácio 1984; Rodrigues 1999; Balykova 2019), Itonama (Mily Crevels, p.c for SAILS), Muniche (Michael et al. 2023), and Taushiro (O'Hagan 2023).²

However, despite the fact that V1 has been a long-standing topic of discussion in theoretical linguistics (see Carnie and Guilfoyle (2000); Carnie et al. (2005)), the V1 pattern in South American languages has not received significant attention in this theoretical literature, with the exception of Duarte (2012)'s work on Tenetehára (Tupí-Guaraní).

Answers to the question of how V1 is derived in natural language presuppose detailed formal syntactic accounts of clause structures across a typologically diverse set of languages. In this paper, I offer a case study that contributes to the cross-linguistic and theoretical study of the V1 pattern, as described in (1), by examining the verb-initial (VSO) clauses of Kawahíva, based on the dialects spoken by the Júma (ISO code: juá) and Jupaú (ISO code: urz) (also known by the exonym Uru Eu Wau Wau), a severely endangered Tupí-Guaraní language from South America. We see the Kawahíva V1 pattern below in (2).³

(2)

- a. A-hepia ki jie anhänga ko.
1.SG.A-see PST 1.SG ghost REAL
'I saw a ghost.' (Juma: Elicit)
- b. Ere-'u-ipe po nde?
2.SG.A-eat-ALREADY IRR 2.SG
'Did you already eat?' (Juma: Elicit)

The V1 pattern also applies to sentences with a nonpronominal subject and object, as demonstrated by examples in (3).

² I found some of these languages and relevant sources in the *South American Indigenous Languages Structures* database (SAILS) (Krasnoukhova 2016).

³ Examples are presented in the Kawahíva practical writing system, which is used by the Júma and Jupaú. Most letters represent the same sounds as they do in English, with the following exceptions: <y> = [i], the apostrophe <'> = [?], <kw> [kw], <tx> = [tʃ], <ngw> = [ŋgw], <ng> = [ŋg], <gã> = [ŋã].

(3)

- a. V-epiang po txi ji=rembiriko=gā kaninde=gā nāhē.
3.A-see IRR FUT 1.SG=partner=3.SG.MASC Kanindé=PL POT
'My husband might see the Kanindé NGO group.' (Juma: Elicit)
- b. O-i'inguhu ki javatxinga kohoa ko.
3.A-bark PST dog DEM:PROX:FLAT REAL
'That dog barked (at night).' (Juma: Elicit)
- c. Nd-o-ko-potar-i tūhūi ki ji=rekira=hēa Maytá=hēa
NEG-3.A-live-DES-NEG INDEED PST 1.SG=older.sister=3.SG.FEM Maytá=3.SG.FEM
pevo oi'i nōmīa.
LOC.DEM:DIST some.time.ago FRUSTR
'My sister Maytá did not want to live there anymore indeed.' (Juma: Text)

An important aspect of this pattern is a complementary distribution between clause-initial verbs and informationally prominent constituents in the clausal left periphery, as in the examples with an object question and event report sentence in (4a-b), respectively.

(4)

- a. Gara po txi nde ere-apo koi'iramē?
what IRR FUT 2.SG 2.SG.A-do later
'What will you do later?' (Juma: Elicit)
- b. A-hepiang po txi jie UEWW=gā nāhē.
1.SG.A-see IRR FUT 1.SG UEWW=PL POT
'I might see the Uru-Eu-Wau-Wau (in the meeting I'm attending soon).' (Juma: Elicit)

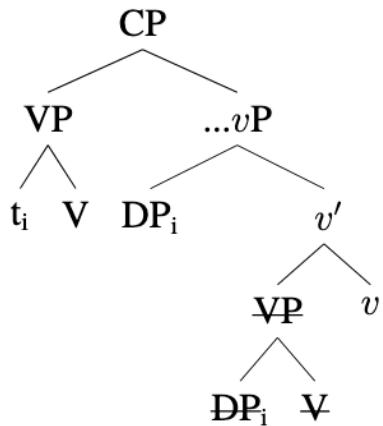
The object question constituent in (4a) is initial and immediately followed by a mood and a tense particle, respectively. In (4b), the verb is initial and followed by the same particles. Examples (5a-b) demonstrate that only one of these elements may precede these particles at a time, regardless of their linear order before the particles.

(5)

- a. *V-epiang Kaninde=gā **po txi** ji=rembiriko=gā.
3.A-see Kanindé=PL IRR FUT 1.SG=partner=3.SG.MASC
'It is Kanindé that may see my husband.' (Juma: Elicit)
- b. *Kaninde=gā v-epiang **po txi** ji=rembiriko=gā.
Kanindé=PL 3.A-see IRR FUT 1.SG=partner=3.SG.MASC
'It is Kanindé that may see my husband.' (Juma: Elicit)

A similar surface pattern is also found in Niuean, where either informationally prominent arguments or verbs occupy the initial position in the clause (Massam 2001).⁴ Massam (2001) develops a Remnant VP analysis to account for this pattern; she proposes that the elements involved are both phrasal, and the verb is embedded within a VP whose object is evacuated before the fronting of the VP. Consequently, the initial VP surfaces with only the verb head, although it is still a phrasal constituent, as represented in Tree (6). A similar account is proposed for Tenetehára (Duarte 2012), which I will review later in this paper.

(6)



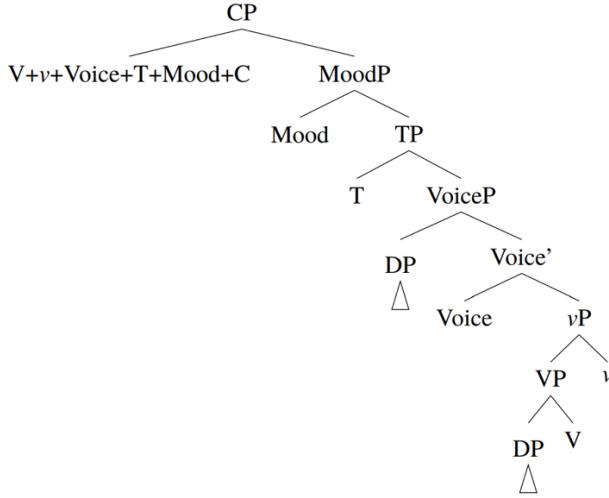
Notably, a remnant movement account necessitates that object evacuation is independently attested in the language. In Section 4, I argue this approach is not suitable for Kawahíva V1 based on positive evidence showing that the object does not evacuate the VP in V1 clauses.

I explore and ultimately reject a non-syntactic derivation of the Kawahíva V1 pattern through Morphological Amalgamation, a type of postsyntactic head movement (Harizanov and Gribanova 2019).⁵ A clear proposal for a V1 pattern using this approach is Hammerly (2021) for the Algonquian language Ojibwe. In a morphological amalgamation account to V1, the verb moves through all intermediate heads between its base position and landing site. This account is schematized in 7:

⁴ Despite the similar distribution involving informationally prominent phrases and verbs in Kawahíva and Niuean, there is a difference worth pointing out in the status of the fronted DP in the two languages. In Niuean (and Polynesian languages, more generally) (Seiter 1979, Massam 2001, Potsdam and Polinsky 2011), the fronted DP is the predicate of the sentence (not an argument); additionally, the remaining of the sentence is an embedded clause. In contrast, in Kawahíva, the fronted DP is an argument (not the predicate) in DP-initial clauses, as discussed in more detail in Section 7.1.2.

⁵ I refer to this movement as ‘morphological amalgamation,’ rather than ‘head movement,’ to avoid a long-standing controversy around this term and its implications (cf. Dékány (2018) for a critical assessment of the different phenomena under the rubric ‘head movement’).

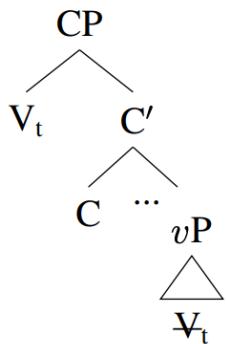
(7)



In Section 5, I present several arguments that challenge this analysis for Kawahíva V1, all having to do with the absence of the hallmarks of morphological amalgamation, including locality (Harizanov and Gribanova 2019) – while morphological amalgamation abides by the Head Movement Constraint (Travis 1984) (i.e., a head may only move to the next head up), verb fronting in Kawahíva skips at least TP, thus strongly suggesting that it is not strictly local.

In Section 6, I will argue that the correct analysis of Kawahíva V1 is syntactic head movement (or head-to-specifier movement), illustrated in (8); intermediate projections are omitted.⁶

(8)



This idea has not been popular as a way of deriving V1 order as a general principle of clausal organization. To my knowledge, only Mayan (Clemens and Coon 2018), Otomanguean (Lee 2005; Macaulay 2005; Eberhardt 1999) and, under one proposal, the Polynesian language Niuean

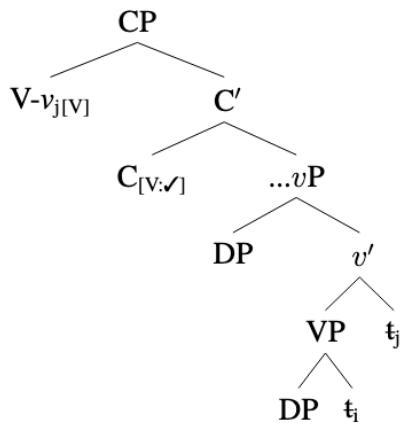
⁶ In Section 7, we will see that Kawahíva V1 also involves a few steps of local movement in the lower domain of the clause, namely vP and VoiceP.

(Clemens 2019) have explicitly received this account. However, given that the theory predicts syntactic head movement is available, we would expect to find more languages where it is used in the creation of the V1 order. In this paper, I argue that Kawahíva is one such language where this approach applies effectively to account for its V1 pattern.

Supporting evidence for this idea comes from properties usually associated with syntactic movement, including the presence of interpretive effects, nonlocality, and a specifier position as the landing site (Vicente 2009; Harizanov 2019). In addition, this approach effectively accounts for the complementary distribution between the verb and phrases of the CP domain (e.g., foci, topics, frame-setting adverbial PPs) as a competition for this specifier position.

More technically, I propose the Kawahíva syntactic movement is driven by the feature [V] with the EPP property on CP, following similar proposals for the feature trigger in other verb-initial languages (Massam 2020; 2024). Additionally, I posit [V] is present on vP. A consequence of the latter is the head V will acquire the feature [V] after head-moving onto v .⁷ The complex head V- v bearing [V] will move to Spec,CP to satisfy the EPP property of [V] on C, as schematized in (9):

(9)



Finally, in Section 7, I extend this analysis to non-verb-initial clauses, where PPs and DPs are clause-initial due to extraction. I argue that when PPs, but not DPs, front due to extraction, they check the [V]-feature trigger on C. In cases of PP fronting, the verb is no longer able to undergo fronting. Support for this idea comes from a strict clause-final position and the absence of verbal morphology associated with C when PPs, but not DPs, are initial. In contrast, in DP extraction, the DP does not remove the feature trigger for verb movement, and the verb moves covertly to the same specifier as the DP (i.e., Spec,CP). I suggest a restriction on spelling out the verb in this position applies such that the verb is spelled out in a lower position than the DP, but still higher

⁷ Following a standard assumption in Distributed Morphology (Halle and Marantz 1993), I assume V is a root categorized as a verb by combining with the functional head v .

than its base position, as diagnosed from its intermediate position and presence of C-related morphology.

This paper is organized as follows. Section 2 reviews key aspects of Kawahíva grammar, including verbal agreement, matrix clauses, and dependent clauses. In Section 3, I propose a phrase structure for matrix (Section 3.1) and dependent clauses (Section 3.2) to account for their different properties, as well as the complementary distribution between verbs and phrases in the initial position. Then I offer a brief account of verbal agreement that captures straightforwardly the absence of subject agreement in dependent clauses, in Section 3.3. After that, I consider and discard alternatives to derive V1 clauses, namely Remnant VP movement, in Section 4, and morphological amalgamation, in Section 5. In Section 6, I present the proposed analysis of Kawahíva V1, the Syntactic Head Movement/Head-to-Spec triggered by [V] with the EPP property. Finally, in Section 7, I discuss how my analysis extends to non-verb-initial clauses, consider a feature account of the complementary distribution, and address the issue of XP vs. X movement.

2 Kawahíva: People and language

2.1 Basics on the sociocultural situation

The Kawahíva are indigenous communities native to the Amazon basin, in Brazil, with a population of about 1060 people (Moore et al. 2008; dos Santos 2017; dos Santos to appear).

Their language, also called Kawahíva, is a severely endangered Amazonian language of the Tupí-Guaraní language family spoken by approximately 560 people across eight extant ethnic dialects (Moore et al. 2008; dos Santos 2017; dos Santos to appear).⁸

The dialects are often referred to by the name of the respective communities where they are spoken. In the state of Amazonas there are Jiahui [ISO: pah], Júma [ISO: jua], Parintintin [ISO: pah], and Tenharim [ISO:pah]. In the state of Mato Grosso, there is Piripkura, and in the state of Rondônia, there are Amondawa [ISO: adw], Karipuna [ISO: kuq], and Jupaú [ISO: urz].

2.2 Data and methodology

The examples provided in this paper are based on the author's corpora of spontaneous speech and targeted elicitation with one native speaker of Júma and three speakers of Jupaú to confirm the preliminary assumptions based on positive evidence identified in the texts.

⁸ It is worth noting that, during the submission process of this paper between 2022-23, the last known speaker of the Capivari dialect, which was spoken in the state of Rondônia, passed away.

The data is part of the *Kawahíva Language Documentation Archive* hosted with the *California Language Archive*.⁹ The collection has been built through fieldwork in the single Júma village and the Jupaú village Jaikara (formerly known as the 621 village) since 2017.

In the following three subsections, I introduce fundamental aspects of Kawahíva, which have been described in neutral terms due to the language's limited prior documentation. In Section 3, we will delve into a proposed analysis of these properties.

2.3 Grammatical relations

Kawahíva grammatical relations are expressed via agreement between a matrix verb and the [ϕ]-features (person, number, and Case) of one of its nominal arguments. The complete set of person indexes is detailed in Table (1). Subject agreement is expressed via inflectional prefixes (hereafter, SET A), whereas object agreement is realized with bound pronouns (i.e., SET B) (dos Santos 2021a; dos Santos 2023b). Note Kawahíva does not exhibit agreement with 3rd person objects.

	SET A	SET B
1SG PERSON SINGULAR	a-	ji=
2ND PERSON SINGULAR	ere-	nde=
3RD PERSON SINGULAR	v- ~ o-	-
1ST PERSON INCLUSIVE	txi-	nhãnde=
1ST PERSON EXCLUSIVE	oro-	ore=
2ND PERSON PLURAL	pe-	pe=
3RD PERSON PLURAL	v- ~ o-	-

Table 1. Kawahíva agreement markers.

In matrix clauses, transitive verbs index either the subject or object; the choice depends on the person hierarchy 1>2>3 (dos Santos 2021a; dos Santos 2023b). Examples in (10) demonstrate that, in 1->2 and 2->1 contexts, the 1st person pronoun is always marked on the verb regardless of the grammatical role.

⁹ The collection is available online: <http://dx.doi.org/doi:10.7297/X2P26W9H>.

(10)

- a. A-hepia ki ji nde ko.
1.SG.A-see PST 1.SG 2.SG REAL
'I saw you.'
- b. Ji=requia ki nde ko.
1.SG.B=see PST 2.SG REAL
'You saw me.'

Intransitive verbs can be categorized into three subsets. Two of them are marked with one of the sets presented in Table (1), while a third subset marked with the invariant prefix *i*-.

I summarize the morphologically distinguished intransitive verbs in Table (2).

	SET A	SET B (<i>n=4</i>)	PREFIX <i>i</i> -
1SG PERSON SINGULAR	a-	ji=	i-
2ND PERSON SINGULAR	ere-	nde=	i-
1ST PERSON INCLUSIVE	txi-	nhändē=	i-
1ST PERSON EXCLUSIVE	oro-	ore=	i-
2ND PERSON PLURAL	pe-	pe=	i-
3RD PERSON SINGULAR & PLURAL v- ~ o-	v- ~ o-	-	i-

Table 2: Morphologically distinct intransitive verbs.

The subset of intransitive verbs that exhibit SET A marking includes verbs like *kwam* 'dance, jump', among others; an example is (11). I refer to this subset as unergative verbs.

(11)

- A-kwam ki ji.
1.SG.A-dance PST 1.SG
'I danced.'

The subgroup of intransitive verbs that takes SET B marking is small. It includes the verbs *tur ~ rur* 'come, arrive', *ten ~ ren* 'be seated', *tup ~ up* 'be in a horizontal position, be laid down', and *tuv ~ ruv* 'stay'. (12) provides an example of this subset. I refer to this subset as unaccusative verbs.

(12)

A'ero txiro, ji=rur-i carro-'i=a pype.
then CONSTINUOUSLY 1.EXCL.B=come-i car-DIM=NMLZ inside
'Then I was coming in the small car.'

Additionally, the subset of intransitive verbs that takes the invariant prefix *i*- includes verbs like *katu* 'be pretty, well,' *kwerai* 'be tired,' *rovia* 'be happy,' *rāite* 'be ugly,' and *ro'y* 'be cold', among many others. (13) is an example of this subset.

(13)

I-kwerai ji.
i-be.tired 1.sg
'I am tired.'

I treat *i*-marked intransitive verbs on a par with the SET B-marked verbs on the basis that their sole argument behaves akin syntactically; that is, as objects. In other words, they are unaccusative verbs (Perlmutter 1978). Evidence for this syntactic object status comes from previous work (dos Santos 2022), where I presented a Kawahíva-internal diagnostic for unaccusativity.¹⁰ This argument draws on the distribution of the prefix *i*- with transitive verbs: *i*- is the morphological reflex of object extraction on transitive verbs in clause-final position, such as dependent clauses; this pattern is demonstrated in (14). These examples show that object extraction from a complement clause to the matrix clause initial position triggers the prefix *i*- on the dependent verb. Notably, this marking does not appear in subject extraction (not shown here).

¹⁰ Standard cross-linguistic tests for unaccusativity, such as passives, auxiliary selection, resultative predicates, and participle formation, are not applicable in Kawahíva (dos Santos 2022).

(14)

- a. Ere-piang nde [apinaga pira 'u=a] rai'i.
2.SG.A-see 2.SG father fish eat=NMLZ YESTERDAY.PST
'You saw father eating fish yesterday.'
- b. Gara nde ere-piang [apinaga __ i-'u=a] rai'i?
what 2.SG 2.SG.A-see father i-eat=NMLZ YESTERDAY.PST
'What did you see Father eating yesterday?'
- c. *Gara nde ere-piang [apinaga __ 'u=a] rai'i?
what 2.SG 2.SG.A-see father eat=NMLZ YESTERDAY.PST
'What did you see Father eating yesterday?'

As the sole argument of unaccusative verbs is a derived subject, moved from the internal argument position, the sole argument of *i*-marked intransitive verbs must have moved in Kawahíva as well. I propose this object movement, like object extraction in (14b), triggers *i*- in Kawahíva. In brief, while unaccusative verbs in Kawahíva a different morphology – SET B (object agreement morphology) and *i*-prefixation – this morphology still shows their sole argument is an object (i.e., they have the syntax of unaccusatives).

2.4 Matrix clauses

2.4.1 Verb-initial matrix clauses

Kawahíva regular declarative matrix clauses exhibit a VSO word order in event reports, out-of-the-blue clauses, as in (15a), and songs (15b).¹¹ We also see the VSO order in polar questions, as in (16).¹²

¹¹ The invariable VSO order in songs is especially significant as songs are a good source to diagnose pragmatic unmarked word order in languages where word order is pragmatically determined (Turpin 2013).

¹² Before this work, the only reference to Kawahíva clause structure, including verb-initial clauses, is the following observation from Pease (1968)'s grammar sketch: "When the object is a noun the preferred order of occurrence is S P ±O [SVO] in the declarative intransitive and demonstrative transitive clauses, and also in the declarative transitive type except when the subject is a pronoun in which case the preferred order is P S O [VSO]."

(15)

- a. A-hepiag-ipe ki ji gā ko.
1.SG.A-see-ALREADY PST 1.SG 3.PL REAL
‘I already saw them the other day’ (Juma: Text)
- b. Ere-imbory-vepia-piang nde akaritajavuhua.
2.SG.A-yellow-RED-see 2.SG headdress
‘You saw several yellow headdresses’ (Juma: Text from a song)

(16)

- O-’u po nde=ra’yra=ga pira?
3.A-eat IRR 2.SG=offspring=3.SG.MASC fish
‘Does your son eat fish?’ (Juma: Elicit)

Matrix clauses in Kawahíva are further characterized by the presence of the mood particles *po* ‘irrealis’ and *ko* ‘realis’, as well as the tense particles *ki* ‘past’ and *txi* ‘future’. In natural speech, these particles are sometimes dropped, with their meanings inferred from the context. A brief characterization of the surface position of these particles is relevant for determining the landing site of the verb.

The tense particles *ki* ‘past’ and *txi* ‘future’ are mutually exclusive, and their surface position depends on the presence of other elements within the clause. These particles occur in the initial position in the clause if no constituent or verb is fronted, and if *po* ‘irrealis’ is absent, as examples (17) and (18) demonstrate for each tense particle.

(17)

- Ki** ore ho-i, karuka=mē ko.
PST 1.EXCL go-i afternoon=to REAL
‘We went in the afternoon.’ (Juma: Text)

(18)

Txi te gă o-juka miara, txi te gă nd-o-juka-i.
FUT REALLY 3.PL 3.A-kill meat FUT REALLY 3.PL NEG-3.A-kill-NEG

‘(I do not know) whether they will kill something or not (lit.: (I do not know) whether they will kill game meat, or they will not kill (it)).’ (Juma: Text)

Tense particles, on the other hand, appear in the second position within the clause if a constituent is fronted, as seen in example (19) where the verb occupies the clause-initial position. The same position is observed when there is no fronting, but *po* ‘irrealis’ is present, as demonstrated in example (20).

(19)

A-hendu-katu-ramō txi jie nōmīa, ’i ki ji ko=ra.
1.SG.A-listen-WELL-LIKE FUT 1.SG FRUSTR say PST 1.SG REAL=TODAY.PST
‘I got it, I said.’ (Lit.: ‘I understood it well, I said’) (Juma: Text)

(20)

Po txi (nāhē)!

IRR FUT POT

‘Later!’ (Common in everyday speech when one is asked to do something and they respond that they will perhaps do it later. This is most of the time uttered as a joke.)

Finally, these tense particles appear in the third position of the clause when there is both fronting of a constituent or the verb, and *po* ‘irrealis’ is overt, as shown in (21) with constituent fronting.

(21)

Gara po txi nde ere-apo koi’iramē?
what IRR FUT 2.SG 2.SG.A-do later
‘What will you do later?’ (Juma: Elicit)

This distribution also applies to *ki* ‘past’, with the caveat that this particle does not occur

in the third position; this would require co-occurrence with *po* ‘irrealis’, which is semantically incompatible.

The particles *po* and *ko* are mood particles with the meanings ‘irrealis’ and ‘realis’, respectively (dos Santos 2021b). While these particles exhibit a paradigmatic relation, they have different surface positions. On the one hand, *po* ‘irrealis’ appears either in the first position when no constituent or the verb is fronted or in the second position when a constituent or the verb is fronted. On the other hand, *ko* ‘realis’ appears in sentence-final position.¹³ In Section 3, I revisit this surface distinction to propose that it ultimately boils down to the headedness parameter of the phrase where these particles reside. This phrase is head-final in realis-marked sentences but head-initial in irrealis-marked sentences. Due to the surface differences between the mood particles and the present focus on the left periphery of the clause, I will primarily consider *po* ‘irrealis’ in the discussion and examples.

As previously mentioned, determining the surface position of these particles is crucial for identifying the initial verb’s position. In all the examples presented so far, the initial verbs precede the mood particle *po* ‘irrealis’ and the tense particles *ki* ‘past’ and *txi* ‘future’. In fact, in pragmatically neutral contexts, the verb must surface before each of these particles. We see this requirement in past tense-marked clauses with *ki* ‘past’, as demonstrated below. Any deviation from this word order results in unacceptable sentences.

(22)

- a. A-hepiang **ki** jie gã ko
1.SG.A-see PST 1.SG 3.PL REAL
- b. ***Ki** a-hepiang jie gã ko
PST 1.SG.A-see 1.SG 3.PL REAL
- c. ***Ki** jie a-hepiang gã ko
PST 1.SG 1.SG.A-see 3.PL REAL
- d. ***Ki** jie gã a-hepiang ko
PST 1.SG 3.PL 1.SG.A-see REAL
- e. ***Ki** jie gã ko a-hepiang
PST 1.SG 3.PL REAL 1.SG.A-see
‘I saw them’ (Juma: Elicit)

¹³ The example in (19) initially appears to be a counterexample for this generalization. However, see footnote (16), where I revisit this observation in the context of the proposed clause structure for Kawahíva.

The same generalization holds for irrealis-marked sentences with *po* ‘irrealis’ — the verb must precede this particle, or the sentence becomes unacceptable:¹⁴

(23)

- a. ***Po** o-’u nde=ra’yra=ga pira?
IRR 3.A-eat 2.SG=offspring=3.SG.MASC fish
- b. ***Po** nde=ra’yra=ga o-’u pira?
IRR 2.SG=offspring=3.SG.MASC 3.A-eat fish
- c. ***Po** nde=ra’yra=ga pira o-’u?
IRR 2.SG=offspring=3.SG.MASC fish 3.A-eat
‘Does your son eat fish?’ (Juma: Elicit)

A further property of initial verbs is agreement marking. In the clause-initial position, verbs are required to exhibit agreement marking, a subject person marker (SET A) or an object person marker (SET B). This requirement is demonstrated for subject agreement in (24).

¹⁴ It is worth noting that this requirement for the verb to precede the mood and tense particles is not the result of a language-wide prosodic constraint against these particles in clause-initial position. Examples like those in (i), which can be found in the corpora of Kawahíva spontaneous speech, demonstrate that either particle may occur clause-initially. Additionally, we already saw in (20) that these particles can occur in sequence by themselves.

(i)

- a. **Ki** ore ho-i, karuka=mē ko.
PST 1.EXCL go-i afternoon=to REAL
‘We went in the afternoon.’ (Juma: Text)
- b. **Po** ahe ho-i a’ero, ’i ki gā ko.
IRR people go-i then say PST 3.PL REAL
‘Let’s go then, they said.’ (Juma: Text)

A reviewer has raised the question of whether these particles when found in clause-initial position, could potentially have prosodically weak variants. In this view, then, it would be the weak variants that are banned from the initial position. However, considering the complete analysis that will be developed, the reason these particles are prohibited from appearing at the beginning of a clause in examples (22)-(23) is due to the categorical requirement that the verb must move across them to reach the clause-initial position in pragmatically neutral declarative matrix clauses.

(24)

- a. *Hepiang **ki** jie gã ko.
see PST 1.SG 3.PL REAL
‘I saw them.’ (Juma: Elicit)
- b. A-hepiang **ki** jie gã ko.
1.SG.A-see PST 1.SG 3.PL REAL
‘I saw them.’ (Juma: Elicit)

However, if the verb is not in the initial position, it may or may not bear a subject index (SET A marker). This difference is correlated with whether the clause-initial constituent is an adverbial or an extracted DP, as I will discuss next along with other accompanying morphosyntactic changes in non-verb-initial clauses.

2.4.2 Non-verbal-initial matrix clauses

Non-verb-initial clauses are found in two instances. In one, the initial position is filled in with an informationally prominent DP, such as foci (25)-(26), *wh*-words (27)-(28), and topics (29). Crucially, a SET A argument marker on the verb can appear in all these cases; the choice depends on the person hierarchy.

(25)

- Mbahira ki v-apo kunhã.
Mbahira PST 3.A-make woman
‘It was Mbahira who made the woman.’ (Jupaú: Text)

(26)

- Pirapetxinguhua ki hẽa o-pyhy-pyhy ko.
pirapetxinguhua.fish PST 3.SG.FEM 3.A-RED-catch REAL
‘It was *pirapetxinguhua* fish that she caught.’ (Juma: Text)

(27)

Māngā ki v-epiang kwemba'ea?
who PST 3.A-see man
'Who saw the man?' (Juma: Elicit)

(28)

Māngā po ji=ruvyra v-epiang rimba'e?
who IRR 1.SG=uncle 3.A-see NWIT.REM.PST
'Who did my uncle see back in the day?' (Juma: Text)

(29)

Takāi Kajuvi ki, tapy'ynha o-purun ga=rehe.
Takāi Kajuvi PST non-indigene 3.A-hit 3.SG.MASC=at
'(As for) Takāi Kajuvi, the non-indigene ran over him.' (Juma: Text)

A second instance of non-verb-initial clauses includes cases where the clause-initial position is filled in with a postpositional phrase (PP) that serves as an adverbial frame-setting element, including *wh*-words like *maramē* 'when', as in (30), and a discourse particle, which is generally a PP. In contrast to DP-initial clauses, in PP-initial clauses, the verb cannot bear a SET A argument index, which (30) illustrates.

(30)

Mārā=mē po ga pira (*o-)‘u-i?
where=to IRR 3.SG fish (3.A-)eat-i
'Where does he eat fish?' (Juma: Elicit)

In Section 7, I suggest the complementary distribution between subject argument indexation and clause-initial PPs follows straightforwardly in my account of V1 order in Kawahíva. I refer the reader to Section 7 for further details, as previewing them in this here would take us too far afield.

Informationally prominent constituents also interfere with the ability of a matrix verb to surface before the mood and tense particles when in the clause-initial position, in

that the verb can no longer appear before them, as the example in (31) shows:

(31)

- *Mbahira v-apo ki kunhā.
 Mbahira 3.A-make PST woman
 ‘It was Mbahira who made the woman.’ (Jupaú: Elicit)

(31) is similar to (25). The difference is the verb precedes the past tense particle in the former but not in the latter example. This change in word order causes unacceptability. This sentence is unacceptable regardless of whether the verb precedes or follows the focused constituent, as shown in (32).

(32)

- *V-apo Mbahira ki kunhā.
 3.A-make Mbahira PST woman
 ‘It was Mbahira who made the woman.’ (Jupaú: Elicit)

This data strongly suggests that the reason that the verb and informationally prominent constituents cannot precede the mood and/or tense particles at the same time is structural. They compete for the same clause-initial position.

Two final aspects of non-verb-initial clauses are the surface position of the verb in the clause and specifically in the case of PP-initial clauses, the appearance of the suffix *-i*. Regarding verb position, in DP-initial clauses, as in (25), the verb occupies a medial position. This is evidenced in subject extraction since, in object-extraction clauses, the object is fronted. In PP-initial clauses, however, the verb is always final, as in (30). This and other differences discussed above are summarized in Table (3):

CLAUSE-INITIAL XP	VERB POSITION	AGREEMENT	<i>i</i> -SUFFIXATION
EXTRACTED DPs	medial	sets A & B	✗
EXTRACTED PPs	final	set B	✓

Table 3. Summary of clause-initial elements and morphosyntactic properties.

Note how these different orderings between the object and verb correlate with the availability of subject marking (i.e., a SET A marker). In particular, PP-initial clauses, but not DP-initial subjects, seem to interfere with the availability of subject marking on the non-initial verbs. I will return to this distribution in Section 5, where I demonstrate how my analysis accounts for these cases.

In brief, I have shown the following properties characterize main clauses: the availability of two sets of agreement markers, the availability of verb fronting, the presence of reality marking particles, and the availability of a left peripheral focus and topic position, which competes with verb fronting. In the following section, we will see that dependent clauses lack all of these properties. This scenario, I argue, strongly suggests the same initial position in matrix clauses is missing in dependent clauses. I will propose in Section 3 that this is because the dependent clauses lack a CP.

2.5 Dependent clauses

In contrast to matrix clauses, dependent clauses exhibit a truncated structure. They lack an internal landing site for extraction, mood particles, verb fronting, and subject agreement. The latter will be discussed only after presenting a proposal for the clause structure in 3.3.

2.5.1 Absence of landing site for extraction within embedded clauses

The most telling piece of evidence that dependent clauses are truncated comes from embedded questions. In elicitation, the strategy of questioning a phrase within the embedded clause is always rejected, as the examples in (33) below demonstrate.

(33)

- a. *A-kwaham jie [mõrõmõ=pe ji=mitakwanha i-'u=a].
1.SG.A-know 1.SG which=2.PL bread 1.SG-eat=NMLZ
Intended: 'I know which one of you ate my bread.' (Juma: Elicit)
- b. *Nd-a-kwahav-i jie [mãngã=pe Wesley=ga u'ia reroho=a].
NEG-1.SG.A-know-NEG 1.SG who=to W.=3.SG.MASC manioc.flour take=NMLZ
Intended: 'I don't know who Wesley took manioc flour to.' (Juma: Elicit)

One of the different strategies to convey an embedded question involves two independent clauses, as illustrated in the following sentence.

(34)

Mãngã=pe Wesley=ga u'ia eroho-i? Nd-a-kwahav-i jie.
who=to W.=3.SG.MASC manioc.flour take-i NEG-1.SG.A-know-NEG 1.SG
'Who did Wesley take manioc flour to? I don't know.'

In one intricate instance of the two-sentence strategy to convey the embedded question meaning, the speaker uses a complex clause wherein the first part shows the matrix verb *kwahav* ‘know’ embedding a clause, but the embedded clause lacks the *wh*-word, as in (35a). The second part of the two-sentence structure is a simple interrogative clause. This example was given as the repair to example (33b) from above. The other strategy is pervasive in natural speech. In it, what is consistently translated as embedded questions is formally not an embedded question. Rather, the structure used is simply a matrix question with the irrealis particle *po*, as the examples (35b-c) illustrate.

(35)

- a. Nd-a-kwahav-i jie [Wesley=ga u'ia reroho=a]. Māngā=pe po
NEG-1.SG.A-know-NEG 1.SG W.=3.SG.MASC manioc.flour take=NMLZ who=to IRR
ga eroho-i, u'ia?
3.SG.MASC take-i manioc.flour

‘I don’t know (who) Wesley took manioc flour to. To whom did he take it, the manioc flour?’ (Backtranslation of “I don’t know who Wesley took manioc flour to?”)
- b. Māngā po ji=ruvyra v-epiang rimba'e?
who IRR 2.SG=late.uncle 3.A-see NWIT.REM.PST
‘Who did my late uncle see long ago?’ (Juma: Text)
- c. Mārāmē po ore=ho-i?
when IRR 1.SG.B=go-i
‘When will we travel?’ (Juma: Text)

Taken all together, these facts suggest that Kawahíva lacks embedded questions, and their meanings are conveyed with other structures. I propose that this follows from embedded clauses lacking the relevant position that hosts questioned phrases. In other words, embedded clauses are truncated. The absence of embedded questions would be surprising for Kawahíva if we viewed both matrix and dependent clauses with an uniform clausal structure. In the next subsections, I demonstrate that mood particles, verb fronting, and subject agreement are also unavailable in embedded clauses. After assembling these facts, it will become evident that the position responsible for the different morphosyntactic properties between matrix and dependent clauses is the clause-initial position. In Section 3, I will identify this position as C.

2.5.2 Absence of mood particles

A second piece of evidence indicating that the clause-initial position of matrix clauses is missing in dependent clauses is their lack of reality marking. For instance, the use of reality mood is unacceptable in the complement clauses (36a) and relative clauses (36b).

(36)

- a. *A-rovia jie [Puré=ga po tapi'ira juka=a].
1.SG.A-believe 1.SG IRR P.=3.SG.MASC tapir kill=NMLZ
'I believe Puré perhaps killed a tapir.'
- b. *E-mōtyryry irāmutxinguhua [Wesley=ga remb-i-mōndo=a ko]!
2.SG.IMP-fry chicken W.=3.SG.MASC WH.OBJ.I-i-send=NMLZ REAL
'Fry the chicken which Wesley sent!'

The absence of reality marking in a dependent clause might not be strong evidence in itself that dependent clauses are truncated.¹⁵ However, conjoined with the result that embedded clauses also lack a position for extraction, it becomes natural to link the absence of the two to a single explanation, which is the absence of a specific structural domain in their structure.

2.5.3 Absence of verb fronting

The absence of embedded questions and mood particles in embedded clauses leads to another expectation: that verbs should not be allowed to surface at the edge of the embedded clause. This prediction arises from the fact that in matrix clauses, verbs and pragmatically prominent phrases compete for the clausal-initial position, and both immediately appear before *po* 'irrealis'. If neither of these properties is observed in dependent clauses because these clauses are truncated, then it follows that verb fronting must also be lacking in embedded clauses. This expectation is confirmed as follows.

Dependent clauses are strictly verb-final (i.e., SOV order). The following examples provide positive evidence of this verb-final order in all types of dependent clauses present in the language, in complement clauses (37a), relative clauses (37b), and adverbial clauses (37c).

¹⁵ A reviewer suggests this could be due to these structures not being truth functions, as they are not assertions.

(37)

- a. A-hepiang ki jie [ji=ruva=ga pira ‘u=a].
1.SG.A-see PST 1.SG 1.SG=father=3.SG.MASC fish eat=NMLZ
'I saw [my father eating fish].' (Juma: Elicit)
- b. [Tapy'ynha mōhangā mbuhu-har=a]=gā te'i o-hun ore=pyri.
non.indigenous medicine bring-WH.TRANS.SUBJ=NMLZ=PL only 3.A-come 1.EXCL=by
'The non-indigenous (people) [who bring medicine] are the only ones that come to us.'
- c. [Ji kandambuhua ‘u-ramē], ji=reveka nda-katu-i.
1.SG papaya eat-WHEN 1.SG=stomach NEG-be.well-i
'[When I eat papaya], my stomach gets bad.' (Juma: Elicit)

Indeed, any other position for the verb within dependent clauses is unacceptable, as shown in (38), which includes an argument complement clause. This pattern extends to relative clauses and adverbial clauses likewise (not shown below).

(38)

- a. *A-hepiang ki jie [‘u=a ji=ruva=ga pira].
1.SG.A-see PST 1.SG eat=NMLZ 1.SG=father=3.SG.MASC fish
'I saw [my father eating fish].' (Juma: Elicit)
- b. *A-hepiang ki jie [ji=ruva=ga ‘u=a pira].
1.SG.A-see PST 1.SG 1.SG=father=3.SG.MASC eat=NMLZ fish
'I saw [my father eating fish].' (Juma: Elicit)

3 Clause structure and verbal agreement

I argue the differences between matrix and dependent clauses receive a natural account under the proposal that the clause-initial position is the CP domain and this domain is lacking in dependent clauses.

3.1 A proposal for the clause structure

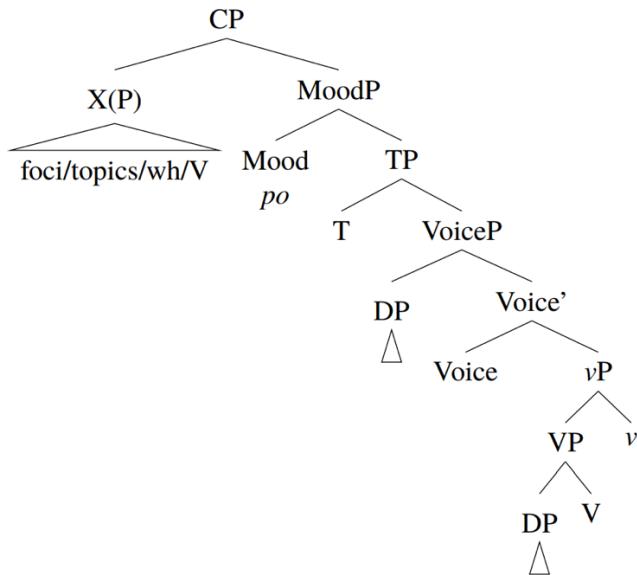
I propose the matrix clause structure is as shown in (39).

(39)

CP – MOODP – TP – VoiceP – vP – VP

The CP, MoodP, and TP are supported by the properties of matrix clauses discussed in the previous section. The other projections, VoiceP, vP and VP, are unexceptional on the layered approach to clausal structure arrived at in various schools of syntactic analysis (Kratzer 1996; Pykkänen 2002; Harley 2013). The trees below illustrate that discourse-prominent constituents and the verb occupy the CP domain when clause-initially.

(40)

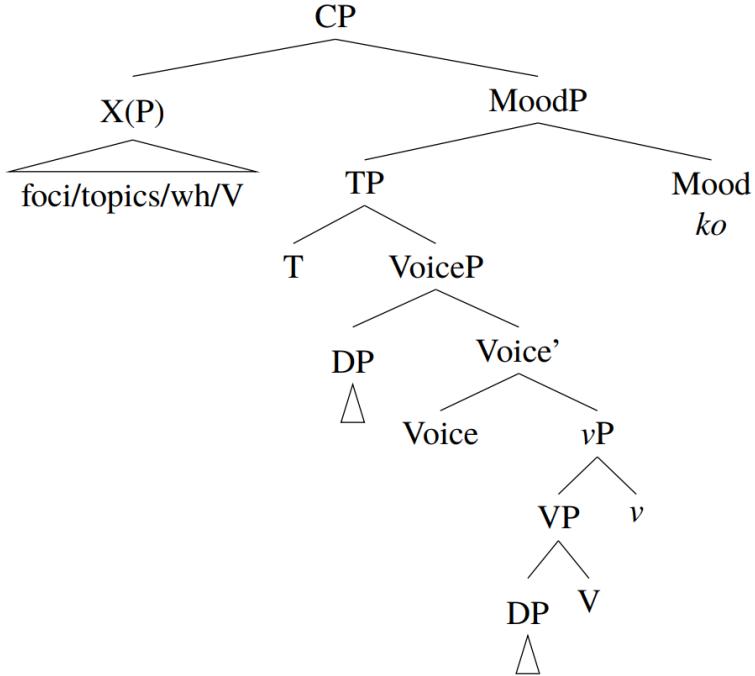


In this view, the surface difference between the mood particles *po* ‘irrealis’ and *ko* ‘realis’ boils down to the headedness parameter within MoodP, as I propose in this paper. In particular, *po* ‘irrealis’ is left-headed (40), but *ko* ‘realis’ is right-headed, as in (41):¹⁶

¹⁶ The non-clause-final position of *ko* ‘realis’ in example (19) might, at first sight, contradict the clause structure proposed for the matrix clause in Section 3. The realis particle realizes the highest right-headed functional projection of the clause spine, yet it does not surface as the final element in the clause.

However, this particular order between the two particles arises only in cases where *ra'e* shows up in its reduced form and encliticizes to the right of *ko*. In the natural speech corpus, the instances wherein the full form of *ra'e* is used and it co-occurs with *ko* shows that the order is always *ra'e* followed by *ko*, as in the following example in (ii):

(41)



A mixed-headedness parameter finds further support in a distantly related language in the Tupían stock. It has been independently argued for to explain the surface differences in the realization of members of the paradigm that belongs to T in Tuparí (Tuparí branch of Tupían). In particular, Singerman (2018, 2021) argues that the Tuparí tense domain (i.e., TP) has head-initial and head-final properties.

Furthermore, the complementary distribution between discourse prominent phrases and the verb is a concomitant of both competing for the same landing site, Spec,CP.¹⁷

(ii)

Mā! i-pojita j-uví ra'e ko.
 Huh! i-be.afraid i-from TODAY.PST REAL
 ‘Huh! One is afraid of it.’ (Juma: Text)

Given that the two orders seem to be conditioned by the full phonological form of one of the particles, one way to understand these ordering differences is as the result of some postsyntactic rearrangement between the two, possibly due to a requirement imposed by the reduced form of *ra'e* that it needs a host to its left. Alternatively, the two particles might not be compositionally transparent at this point, in which case there is only one morpheme synchronically. Consequently, the issue of morpheme order becomes irrelevant. Notably, the glossing would have to change to reflect this descriptive analysis. Either way, the proposed clause structure in Section 3 can still be maintained despite the surface order of the two particles.

¹⁷ In Section 7.2, I discuss an alternative account for this distribution wherein the competition between informationally prominent phrases and verbs for the clause-initial position might alternatively be due to the feature

Finally, I propose that the VP is underlyingly head-final (i.e., OV). Verbs in all types of dependent clauses exhibit a strict SOV word order; this contrasts with the fact that SOV order in matrix clauses is only possible in cases where the trigger for verb fronting is removed (i.e., sentences with an initial adverbial PP). Additionally, this head-final property correlates with other properties generally found in languages that have been described as head-final. Particularly, it correlates with the strict head-final order of other phrases in the language, including the *noun-postposition* order, *possessor-possessee*, *noun-demonstrative*, and the *verb-auxiliary* order.

3.2 The structural difference matrix and dependent clauses

The absence of embedded questions becomes quite straightforward given the matrix clause structure. We saw in Section 2.5 that dependent clauses lack several properties of matrix clauses, including a host position for extraction and verb fronting, and the lack of mood particles.¹⁸ Translated into the current proposal wherein these properties are associated with the CP and MoodP domains, this fact means that dependent clauses lack both. Consequently, I propose the dependent clause structure as represented in (42).

(42)

TP – VoiceP – vP – VP

I also posit that dependent clauses are embedded under a syntactic nominalizing head to account for their nominal properties¹⁹; this head is spelled out as =*a* (see dos Santos (2023a) for a nominalizer account of =*a*). (43) represents the proposed structure of dependent clauses, where their highest functional projection, TP, is the complement of the nominalizing =*a*:²⁰

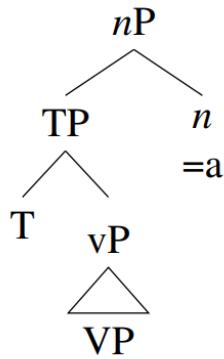
trigger for fronting. I thank two reviewers for raising this alternative.

¹⁸ Other differences between matrix and dependent clauses include tense and nominalization status. Dependent clauses, but not matrix clauses, exhibit bound tense morphology and are nominalized.

¹⁹ The idea that nominal properties of a nominalization are contributed by a nominal projection is at the core of the Functional Nominalization Thesis (Kornfilt and Whitman 2011).

²⁰ Precedent for a functional head *n* selecting a functional complement in dependent clause structures is found in Vivanco (2018: 87-130), who argues that a cognate morpheme in Karitiana (Arikém family), a distantly-related language in the stock, takes an Evidential Phrase as its complement.

(43)



In summary, in Kawahíva, verbs and prominent constituents compete for the same matrix clause-initial position in Kawahíva, as evidenced by their complementary distribution. I have proposed that both prominent constituents and the verb land in the specifier of CP. The position of Spec,CP as the landing site for verbs and prominent constituents is supported by their consistent placement before the mood and tense particles, which are exponents of the heads of MoodP and TP, respectively, when fronted. Therefore, given the conventional layered approach to clause structure (i.e., CP-TP-VoiceP-vP-VP), it is natural to propose this position is CP.

3.3 Verbal agreement: an additional argument for dependent clauses truncation

3.3.1 The pattern

Further evidence that dependent clauses are truncated can finally be appreciated, namely their lack of subject agreement. While matrix clause verbs can index either the subject or object due to the person hierarchy 1>2>3, dependent clause verbs index only the object (dos Santos 2021a; dos Santos 2023b), thus neutralizing the person hierarchy of matrix clauses. Therefore, while the 1>2 and 2>1 scenarios consistently show agreement with the more local person in (44), dependent clauses consistently show agreement with the object in (45).

(44)

- a. A-hepia ki ji nde ko.
1.SG.A-see PST 1.SG 2.SG REAL
‘I saw you.’
- b. Ji=reapia ki nde ko.
1.SG.B=see PST 2.SG REAL
‘You saw me.’

(45)

- O-kwaha ki ga [ji nde=repiak=a].
3.A-know PST 3.SG.MASC 1.SG 2.SG=see=NMLZ
'He knew I saw you.'

This pattern of object agreement only in dependent clauses becomes even more evident in non-local scenarios (i.e., 3>3). Recall from Table (4) that Kawahíva exhibits agreement with 3rd person subjects (marked with *o-*), but not 3rd person objects. If dependent clause verbs agree only with objects, then we expect the prefix *o-* to be ruled out from dependent clauses. This is true according to the ungrammaticality of (46).²¹

(46)

- *Ere-pia ki nde [jawara tapi'ira o-juka=a] ko.
2.SG.a-see PST 2.SG jaguar tapir 3.A-kill=NMLZ REAL
'You saw the jaguar killing a tapir.'

I take the absence of subject agreement in dependent clauses to suggest the existence of two distinct sources for verbal agreement in Kawahíva. This idea receives further support from verbal reduplication.

²¹ It is important to note that in Kawahíva (and other TG languages), a prefix *o-* can appear on the verb of a dependent clause, but only when there is coreference between the subject of matrix clause subject and either argument of the dependent clause. This distribution is essential for characterizing the prefix *o-* in examples like (46) as part of the set of prefixes known as 'cross-referencing' prefixes of Tupí-Guaraní languages (see Jensen 1998 for an overview of this paradigm), which are presented in Table (4), rather than being considered the 3rd person subject index (i.e., SET A) in Table (1), the paradigm of which is also included in Table (4) for convenience.

PERSON/NUMBER	CROSS-REFERENCING MARKERS	SET A
1SG PERSON SINGULAR	it-	a-
2ND PERSON SINGULAR	e-	ere-
1ST PERSON INCLUSIVE	nhände-	txi-
1ST PERSON EXCLUSIVE	oro-	oro-
2ND PERSON PLURAL	pe-	pe-
3RD PERSON SINGULAR & PLURAL	v- ~ o-	v- ~ o-

Table 4. Kawahíva cross-referencing agreement markers.

The fact that the 3rd person morphemes in both paradigms are homophonous is a coincidence for this combination of person and number features. As one can see from Table (4), other combinations, such as the 1st person (singular and plural inclusive) and the 2nd person singular forms, are not homophonous.

In reduplication, object markers, but not subject markers, can be copied into the reduplicant (dos Santos 2023b). To illustrate, consider (47a), which presents a baseline example of object agreement without reduplication. In turn, (47b) is an example of object agreement with reduplication. Notably, the object marker is copied into the reduplicant. Finally, (47c) reveals the requirement that object markers be copied in reduplication.

(47)

- a. Are=rety ki gã ko.
1.EXCL.B=pull.down PST 3.PL REAL
'They pulled us down.'
- b. [Arerety]-are=retyk ki gã ko.
[RED]-1.EXCL.B=pull.down PST 3.PL REAL
'They pulled us all down.'
- c. *Are=[rety]-retyk ki gã ko.
1.EXCL.B=[RED]-pull.down PST 3.PL REAL
'They pulled us all down.'

Unlike the obligatory copying of object markers in reduplication, subject agreement markers do not have a similar requirement. Consider (48a), a baseline example of subject agreement in non-local scenarios (i.e., 3->3), where the verb is marked with *o-*; (48b) and (48c), respectively, demonstrate that the subject agreement marker is not copied and, and any attempt to copy it results in unacceptable sentences.

(48)

- a. Anhãnga o-kutu-pam j-urua.
ghost 3.A-pierce-COMpletely i-mouth
'It was the ghost that pierced all his mouth (the chief's mouth).'
- b. Anhãnga o-[kutu]-kutu-pam j-urua.
ghost 3.A-[RED]-pierce-COMpletely i-mouth
'It was the ghost that pierced his mouth (the chief's mouth) multiple times.'
- c. *Anhãnga [okutu]-o-kutu-pam j-urua.
ghost [RED]-3.A-pierce-COMpletely i-mouth
'It was the ghost that pierced his mouth (the chief's mouth) multiple times.'

Assuming that agreement dependencies arise from a functional head in the clausal spine that copies morphosyntactic features from a nominal (Chomsky 2001), resulting in the proper agreement markers, the absence of subject markers in dependent clauses and reduplication cannot be explained if a single functional head is involved in both subject and object agreement. However, this pattern becomes clear if we posit that subject and object agreement markers have distinct structural loci.²² I pursue this alternative in the rest of this section. This analysis supports that dependent clauses are truncated.

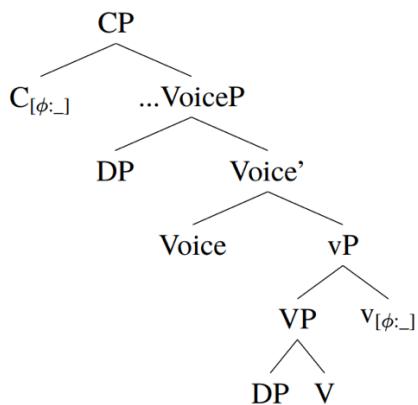
3.3.2 The derivation of verbal agreement

I treat agreement phenomena as dependencies that result from the syntactic operation *Agree* (Chomsky 2001). In particular, agreement involves a relation between a probe on a functional head and a nominal goal within its search domain.

Translating the pattern of Kawahíva agreement into this framework, I propose that each agreement set (i.e., SET A and SET B) is the result of Agree dependencies created through probes that are hosted on different functional heads of the clause structure. I also associate the lack of subject agreement with the absence of the CP within dependent clauses and propose that the CP domain is related to subject agreement. In addition, I propose that the vP head is implicated in object agreement.

More technically, matrix clauses come with two probes, one on the CP head and another on the vP head. Diagram (49) represents the clause structure for matrix clauses based on these ideas; a dash next to a feature in the probe specification means that the probe has not yet begun its search for that feature. In contrast, dependent clauses lack the CP domain and, consequently, the CP-probe (not shown here).

(49)



²² The use of reduplication as a diagnostic tool in Avar by Rudnev (2020) served as an inspiration for the similar purpose of locating the structural source of agreement in Kawahíva.

The rules of subject and object agreement are (50) and (51), respectively.

(50)

Subject agreement

Subject agreement is the overt spellout of an Agree relation between a probe on C and the features of an external argument.

(51)

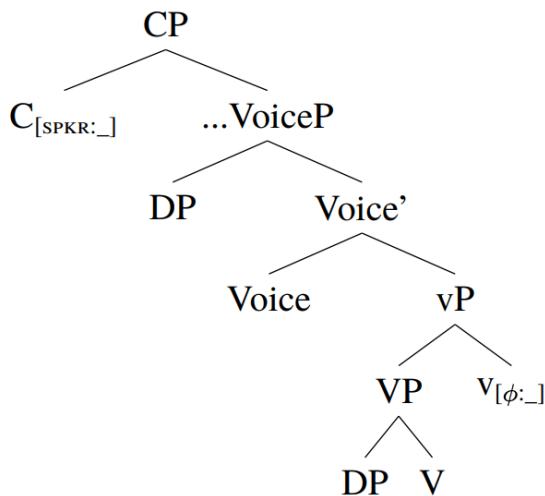
Object agreement

Object agreement is the overt spellout of an Agree relation between a probe on v and the features of an internal argument.

Recall, however, that Kawahíva allows only one argument at a time to be indexed on the verb, and the choice is dependent on the person hierarchy 1>2>3. To account for these person hierarchy effects, however, the generalized [ϕ]-probes on CP and vP are not sufficient. We need a more specific feature than [ϕ].

I propose the CP-probe is relativized to [SPKR]. This is so because matrix clauses, but not dependent clauses, exhibit person hierarchy effects. Given the absence of CPs in dependent clauses, it follows that CPs carry the probe with the feature [SPKR]. I propose the probe on v is a standard flat probe that can be satisfied by any [ϕ] feature-bearing goal. The final representation of Kawahíva matrix clauses can be illustrated through diagram (52) after incorporating the agreement rules in (50) and (51).

(52)



We can now derive the verbal agreement of matrix and dependent clauses. First, consider a local scenario 1>2 of the simple matrix clause in (53). In these cases, the CP-probe copies the features of the external argument, and the vP-probe copies the features of the internal argument.

(53)

A-hepia ki ji nde ko.
 1.SG.A-see PST 1.SG 2.SG REAL
 ‘I saw you.’

To ensure that the resulting agreement marker on the verb obeys the person hierarchy 1>2>3, and that *a-* is correctly chosen in (53), I assume this choice is calculated according to the *Subset Principle* (Keine 2010):

(54)

Subset Principle, adapted from Keine (2010:8).

- a) The morphosyntactic features of the agreement marker are a subset of the morphosyntactic features copied back by the probe.
- b) The agreement marker has the highest number of morphosyntactic features that are a subset of the features copied by the probe.

Moreover, a preliminary version of the composite feature bundles of *a-* ‘1st singular’ and *ere-* ‘2nd singular’, assuming the feature-geometric representation proposed in Harley and Ritter (2002), and their vocabulary insertion rules are presented in Table (5). These bundles will be revised shortly to include one more feature specification (i.e., Case).

[SPKR, PART, Φ , SG, C]	\leftrightarrow	a-
[PART, Φ , SG, C]	\leftrightarrow	ere-

Table 5. Vocabulary items for 1ST and 2ND SG. subject markers.

We can now derive the choice of agreement marker in different person scenarios within matrix clauses. Consider, for instance, the local scenario 1->2. In this case, the features of the 1st person are copied onto C, while the features of the 2nd person are copied onto v. However, as there exists only a single verbal slot for verbal agreement, only a single feature bundle will be overtly realized. At Spellout, *a-* will be chosen as its features match the highest number of features with the subset of features on C, following the second condition of the Subset Principle in (54). The 2nd person subject agreement marker *ere-* cannot be selected, as its features match a fewer number of the feature bundle on C.

Meanwhile, in dependent clauses, only the features of the object will be considered for overt realization, as these clauses lack the subject agreement probe. Since the object probe is always satisfied with the [ϕ]-features of any nominal in the internal argument position, the result is object agreement throughout all dependent clauses but relative clauses; the latter exhibit *wh*-agreement instead.

These assumptions are sufficient to correctly derive the person hierarchy effects in Kawahíva. However, something still needs to be said about the actual form of agreement marker chosen. Most combinations of person features exhibit two choices, one for subject agreement, and another for object agreement. For example, in 1->2 scenarios, the agreement marker is *a-* ‘1st person singular subject’, not *ji=* ‘1st person singular object’. I argue this choice is due to the first clause of the Subset Principle in (54) coupled with the Case feature of nominal arguments. First, I briefly lay out my assumptions about Case assignment.

I assume that Case is assigned under a dependency under a dependency between a nominal DP and a functional head. The heads involved in Case assignment are T and *v*. In matrix clauses, T assigns Case to its closest c-commanded DP, the external argument. In turn, *v* assigns Case to its closest c-commanded DP, the internal argument.²³

Putting together these assumptions about Case assignment and DP-internal features, Table (6) shows the composite feature bundles of the singular agreement markers. I indicate the Case feature on a nominal argument with K and a subscript indicates the Case assigning functional head (e.g., K_T means that Case is assigned by T).

1st person singular subject	$[SPKR, PART, \Phi, SG, K_T, C]$	\leftrightarrow	<i>a-</i>
1st person singular object	$[SPKR, PART, \Phi, SG, K_v, C]$	\leftrightarrow	<i>ji=</i>
2nd person singular subject	$[PART, \Phi, SG, K_T, C]$	\leftrightarrow	<i>ere-</i>
2nd person singular object	$[PART, \Phi, SG, K_v, C]$	\leftrightarrow	<i>nde=</i>
3rd person subject	$[\Phi, K_T, C]$	\leftrightarrow	<i>v- ~ o-</i>
3rd person object	$[\Phi, K_v, v]$	\leftrightarrow	\emptyset

Table 6. Feature composite and vocabulary insertion rules of a set of person markers.

According to Table (6), in 1->2 local scenarios, a 1st person will be selected by the Subset Principle over a 2nd person for the verbal agreement slot, as per the previous discussion.

²³ In intransitive clauses, T assigns Case to the sole argument of unergative and unaccusative verbs. The Case on *v* will not be discharged onto any DP; the sole argument of the unergative is in Spec, Voice, outside the c-command reach of *v*. The probe on *v* in unergative clauses will not find a goal in its search domain, and Agree fails, in the sense of Preminger (2011). The probe on C finds the unergative argument in Spec, Voice and copies its ϕ-features and Case feature assigned by T. As for unaccusatives, the unaccusative *v* does not assign Case (the Unaccusativity Hypothesis). The unaccusative argument must evacuate the VP and move to Spec, Voice so as to receive Case from T. This movement is triggered by an EPP feature on *v*. The probe on unaccusative *v* copies the features of the unaccusative argument. However, as I propose in Section 4.1.5, the EPP feature, not ϕ-features of the unaccusative argument, is spelled out. Finally, the probe on C can no longer interact with the unaccusative DP because the latter had interacted with *v* already.

Additionally, the agreement marker *a-* ‘1st person singular subject’ wins over *ji=* ‘1st person singular object’ because the feature bundle of *a-* is an exact match of feature bundle on C. In contrast, the feature bundle of *ji=*, while including features that match most of the features on C, differs from it for having a distinct Case feature.

To summarize, in 2.5, I showed several pieces of evidence that dependent clauses are truncated as they lack the CP (e.g., they miss a landing site for extracted constituents). In this section, I discussed additional evidence for this claim based on verbal agreement. In particular, I showed that matrix clauses exhibit agreement with the subject or object. However, dependent clauses show agreement only with objects. A unified account of the differences between matrix and dependent clauses that also capture this asymmetry in agreement marking between both clauses is possible: the absence of subject agreement in dependent clauses follows from the lack of the structural position that hosts subject agreement in matrix clauses, the CP, independently supported by the pieces of evidence discussed in 2.5.

Next, I discuss three analytical alternatives to derive V1 in Kawahíva, starting with the VP remnant movement. Then, I consider morphological amalgamation in Section 5, and finally, syntactic head movement (or head-to-specifier movement) in Section 6.

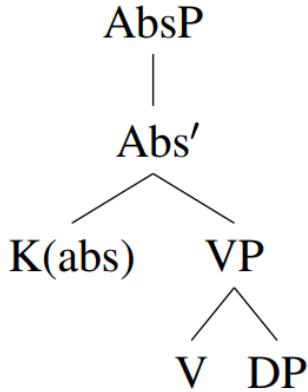
4 Remnant movement

One initially appealing analysis of Kawahíva verb movement would be as Remnant VP movement. This view has been advocated elsewhere, including for Zapotec (Lee 2000), Niuean (Massam 2000; 2001) Malagasy (Rackowski and Travis 2000), the related Tupí-Guaraní language Tenetehára (Duarte 2012), among other languages; see Thiersch (2017) for an overview of this approach.

A remnant movement analysis predicts two steps of movement, one for the object and another for the complement-free VP. The movement of the object is motivated, in some languages, by the need of a DP to check a case feature. This idea builds off the assumption that, while NPs do not have case features to be checked, DPs do (see Bittner and Hale (1996); Giorgi and Longobardi (1991)).

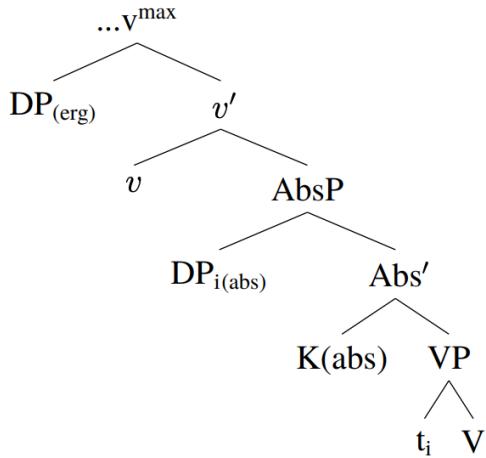
As said, the idea that VP remnants are involved in the creation of V1 clauses has been proposed for the VSO/VOS alternating orders of Niuean (Seiter 1979; Massam 2001), an ergative-absolutive language. In this language, the first step in the creation of VSO clauses is object DP movement to the specifier of Abs(olutive)P. A diagram showing the underlying structure of the VP and this functional projection is presented in (55); unnecessary details are omitted. At this point in the derivation, the DP object is VP-internal but it needs to check its case feature.

(55)



The DP object checks its case feature by moving to Spec,AbsP, thus evacuating the VP, which would contain only V in the simplest case.²⁴ The derivation proceeds with the merge of *v* and the ergative DP.

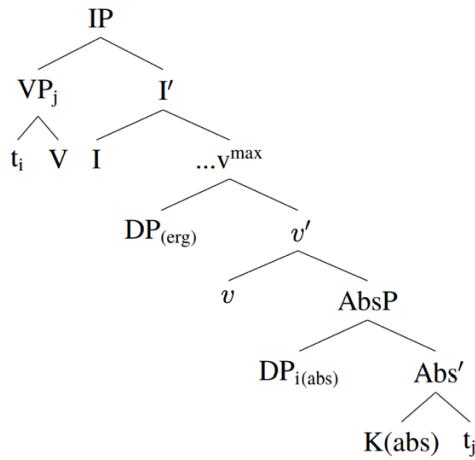
(56)



After that, the head of IP is merged. Massam (2001) — building off previous works (Massam and Smallwood 1997; Massam 2000) — assumes the head of IP has a strong predicate feature [pred] with the EPP property for movement. This feature attracts the VP to the specifier of IP, yielding VSO in Niuean, as schematized in (57).

²⁴ If other VP-internal elements are present, evacuation of these VP-internal elements may be required.

(57)



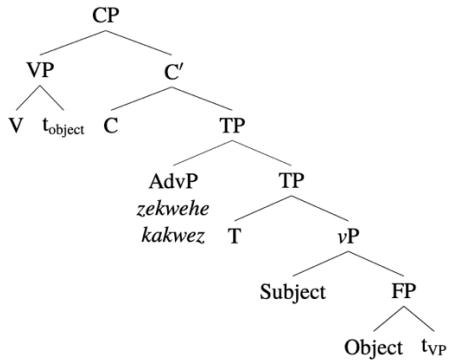
Tenetehára, a sister language to Kawahíva, with alternating VSO/VOS orders, has also been analyzed as undergoing remnant movement in Duarte (2012). The examples in (58) illustrate the two verb-initial orders in Tenetehára.

(58)

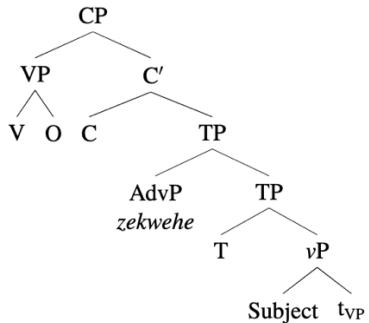
- a. W-exak ze-kwehe zawa-ruhu tapixi memyr a'e pe no.
3SG-see EVID-UDPAST jaguar-big rabbit son there at also
'The big jaguar also saw the rabbit's son there.' (Duarte 2012:369)
- b. A-exak kakwez ka'i ihe
3SG-see DPASS.ATTESTED monkey I
'I saw the monkey.' (Duarte 2012:369)

In Duarte's proposal, VSO follows from a remnant VP that moves to Spec,CP – this landing site is proposed based on the surface order of the verb, which precedes the temporal adverbials (e.g., *zekwehe* and *kakwez*) adjoined to TP. This part of the proposal is schematized in (59) (adapted from Duarte (2012:371)). In turn, VOS order is the result of the movement of the VP with an overt object, as diagrammed in (60) (Duarte 2012:372).

(59)



(60)



Analogous to Massam (2001), Duarte (2012) ties the object movement from the VP to Case assignment required for object DPs. Duarte (2012: 372) argues that DP objects evacuate the VP in VSO, but not VOS, from positive evidence showing that D-level material (e.g., demonstratives) is present with objects in VSO clauses, as evidenced in (61), but not objects in VOS clauses (the paper does not include evidence that D-type elements are ruled out with objects in VOS clauses). In the latter cases, as the object does not evacuate the VP, it will be dragged along to the clause-initial position as the VP fronts.

(61)

- a. U-zuka Xegi amo tazahu a'e mehe.
3sg-kill Sérgio other pig this time
'Sérgio killed another pig in that time.' (Duarte 2012:372)
- b. U-'u Pedro pira ke'e kury
3sg-eat Pedro fish grilled then
'Pedro ate grilled fish.' (Duarte 2012:372)

There are two pieces of evidence against the remnant approach to V1 clauses in Kawahíva, including one piece that directly shows that these clauses do not involve object DP movement prior to the fronting of VP. The first evidence against a VP-raising analysis is the

absence of VOS in informationally neutral matrix clauses. Example (62) cannot mean that Clebson saw a jaguar, which parsing this sentence with a VOS order would lead us to expect, regardless of the definiteness status of ‘jaguar’.

(62)

V-epia jawara Clebson=ga.

3.A-see jaguar Clebson=3.SG.MASC

‘A jaguar saw Clebson.’

“*Clebson saw a/the jaguar.” (Jupaú: Elicit)

One could maintain that the VSO order of Kawahíva is derived via object shift followed by movement of the remnant VP, even for those cases wherein the object is an NP (rather than a DP). This, however, would be against the very reason object shift was proposed to account for the verb-initial orders in VSO/VOS alternating languages, namely the need for Case licensing on objects with a DP layer. Therefore, I take the lack of informationally neutral VOS order in Kawahíva to be unexpected under the Remnant VP approach to verb fronting in the language.²⁵

Having shown negative evidence that object shift is not involved in Kawahíva V1, I discuss a positive piece of evidence that these V1 clauses do not involve object evacuation from the VP.

4.1 The argument from the pattern of *i*-prefixation

The second piece of evidence that V1 clauses in Kawahíva do not involve a step of object movement comes from a language-internal argument based on the distribution of the prefix *i*. This prefix is triggered when the object vacates the VP.

Three instances of object movement out of the VP trigger the prefix *i*. In the first case, a thematic object, but not the verb, vacates the VP. Secondly, a thematic object is dropped and the verb does not leave the VP. The third and final case is when a thematic object vacates the VP prior to the movement of the verb. In brief, the appearance of *i*- is tied to the absence of an overt DP within a VP with an overt verb. Table (7) summarizes the structural context for the occurrence of *i*.²⁶

²⁵ Interestingly, Chung (2005) sets apart languages with strict VSO order in pragmatically neutral clauses in a discussion about whether all verb-initial orders should be derived by a Remnant VP approach.

²⁶ There is a different reflex than *i*- found on a subset of verbs when they meet the same conditions that lead to *i*- . The members of this subgroup instead undergo root allomorphy wherein their initial segment surface with either [h] or no initial-consonant under conditions a) through c) above, or with an initial [r] otherwise.

Table 7. The distribution of the *i*-marked verbs.

	<i>i</i> -marked VERBS
VP-INTERNAL OBJECT DPS	[DP mōndo] _{VP}
VP-EXTERNAL OBJECT DPS	DP, [i- mōndo] _{VP}
	‘throw away DP’

The relevance of the *i*-prefixation to the present discussion is an expectation within the Remnant VP approach to V1 related to object movement prior to VP fronting. Given that *i*- is triggered under object movement out of the VP, then a clear prediction arises: if V1 clauses in Kawahíva involve a step of object movement prior to VP fronting, V1 clauses must surface with an initial verb marked with *i*. However, this is only true in the case of unaccusative verbs. We will see that even in these cases, the use of *i*- follows from an independent reason, namely the derivational life of unaccusative verbs. The failed prediction of the Remnant VP approach that clause-initial verbs should bear the prefix *i*- argues against it as the means to derive V1 in Kawahíva.

It should be noted that the pattern of *i*-prefixation is not restricted to verbs, nor is it exclusive to Kawahíva. The prefix *i*- extends to all cases where the complement of a head is moved or dropped, which includes objects of postpositions and inalienable possessors. These other instances will be discussed in 3.1.4. The pattern of *i*-prefixation is also widespread across the Tupí-Guaraní family, wherein this prefix is referred to as a “relational prefix” and is generally described as a marking of syntactic adjacency between a complement and its selecting head (Rodrigues and Cabral 2012). Rodrigues and Cabral (2012: 511) write that this prefix indicates “in a stem that it forms a syntactic unit with its determiner, which is the immediately preceding expression.” Similar conditions for the appearance of a cognate morphological reflex are described for the distant-related language Karitiana (from the Arikém branch of the Tupían family) (Storto 1999: 194-204; Vivanco 2018: 133-177), wherein a complement-less VP appears with a morpheme *ti-* on the verb. Object extraction also co-occurs with a verbal prefix *i-* in the distant-related language Sakurabiát (Tuparí branch) (also known as Mekens) (Galucio 2001; 2002); this morpheme has been historically accounted for as an object nominalizer in the Tuparí branch (Galucio

	<i>h/r</i> -initial VERBS	<i>i</i> -marked VERBS
VP-INTERNAL OBJECT DPS	[DP repia] _{VP} ‘DP see’	[DP mōndo] _{VP} ‘NP throw away’
VP-EXTERNAL OBJECT DPS	(DP), [hepia/epia] _{VP} ‘see (DP)’	(DP), [i- mōndo] _{VP} ‘throw away (DP)’

Table 8. The distribution of the *h/r*-initial verbs and *i*-marked verbs.

Table (8) illustrates the resulting form of the verb under the same conditions that lead to the *i*-prefixation alongside the parallel in verbs that surface with *i*- instead. Whether a verb will surface with one or the other pattern can only be lexically determined synchronically (see Meira and Drude (2013) for a historical development that led to this present-day two-way split). In the next subsections, I focus on the subset of verbs that show the pattern of *i*-prefixation because it includes a much larger number of verbs compared to the number of verbs that have the pattern of root allomorphy.

and Nogueira 2018).

4.1.1 Object movement in the absence of verb movement

One instance wherein object movement triggers the prefix *i-* involves dependent clauses and matrix clauses with a clause-initial PP. In both structures, the verb whose object is moved shows up final in regard to its arguments. We already saw that the verb is final in dependent clauses, a baseline example of which is (63), reproduced from dos Santos (2022). I will show that PP-fronting competes with V-fronting in Section 7, thus making the verb also occur clause-finally.

(63)

- Ere-piang nde [apinaga pira 'u=a] rai'i.
2.SG.A-see 2.SG father fish eat=NMLZ YESTERDAY.PST
'You saw Father eating fish.'

I take the final position of the verb within the complement clause to mean the verb stays in its base-generated position, i.e., right-heading the big VP, given the proposed structure of a dependent clause in (43). Focusing first on dependent clauses, object extraction triggers the prefix *i-* on the dependent verb, as demonstrated in example (64); otherwise, the sentence becomes unacceptable, as in (64b).

(64)

- a. Gara nde ere-piang [apinaga i-'u=a] rai'i?
what 2.SG 2.SG.A-see father i-eat=NMLZ YESTERDAY.PST
'What did you see Father eating?'
- b. *Gara nde ere-piang [apinaga 'u=a] rai'i?
what 2.SG 2.SG.A-see father eat=NMLZ YESTERDAY.PST
'What did you see Father eating?'

The second verb-final structure where *i*-prefixation occurs is in clauses where an adverbial PP/particle has been fronted and the object leaves the VP due to its pragmatic and/or semantic status, as illustrated in (65). Several independent observations support this claim, including an intonational break between the pre-verbal object and the verb – which is marked via a comma – the associated pragmatic and/or semantic status(es) of the object, and the presence of *i-*.

(65)

A'ero jie te,	'yhea, i-mboapyg-i, 'i:te:ki:ko:ra.
then 1.SG REALLY	insides i-cook-i DIR.EVID
'Then I cooked (*the) (peccary's) insides.' (Juma: text)	

The factors that condition the intonational break between the object and verb, and the consequent marking with *i-* on the verb of Adverbial-SOV matrix clauses are those usually associated with pragmatic topics. In particular, the referents of these objects are *active* and *given* in the discourse (Chafe 1976; Lambrecht 1994). Other properties that correlate with the prosodic break setting the object apart from the verb are the semantic features *definiteness* and *specificity*. While objects might have all these properties at once, sometimes they have only one. For instance, only the definite status of '*yhea* 'bowel' conditions the prosodic break between the object and the verb in (65), given the context in which this particular example is uttered.²⁷

The intonational break between the preverbal object and the verb, and the consequent triggering of *i-*, become highly suggestive that the object is VP-external when we consider that prosodic constituency can be a diagnostic for syntactic constituency. If we assume that prosodic constituents generally match syntactic constituents, as Selkirk (2011) argues, then the object in example (65) is parsed into a prosodic constituent different from that where the verb belongs. Consequently, if prosody reads off syntactic structures, then the object and the verb belong to distinct syntactic constituents. The idea that a different prosodic constituency is indicative of a different syntactic constituent is further strengthened by the morphological reflex of *i-* on the verb in (65), which would meet the same structural condition of the *i-* that appears as the result of object extraction from an embedded clause to the clause-initial position of the matrix clause, as demonstrated based on the example in (64) from above. All in all, these facts support that preverbal objects are not in their thematic position in sentences like (65), that is, they occupy a position external to the VP.

The discussion developed above leads us to expect that VP-internal objects will have the opposite pragmatic/semantic status (nonspecific) compared to VP-external objects (i.e., specific), in addition to no prosodic break between it and the verb. As far as I can tell, based on my spontaneous speech corpus, all illustrative examples confirm this prediction. In the following example, a clause-final verb within a purposive clause is preceded by its thematic object. Notably, no prosodic break between the two is observed, and the bare plural object

²⁷ The sentence in (65) is extracted from a 362-sentence personal narrative self-recorded by the speaker, wherein she narrates a land patrol activity during which some people went hunting. In line 184, the speaker describes that one group member killed a peccary (wild pig). The next four sentences are the speaker's elaboration of the *postmortem* cleaning of the peccary by herself, which culminates with the sentence in (65). The referent of the peccary is given at this point, and so the peccary is not overtly mentioned. Its bowel, however, had not been mentioned, and so its first mentioning through the phrase '*yhea* 'bowel' is overtly realized. Although this is the first mention of '*yhea*', its possessor can be easily recovered from the context. This is so because the speaker has been talking about the peccary and its cleaning all along.

agoutis of the translation correctly captures the specificity and givenness status of the object in the context where this example is uttered.²⁸

(66)

Davi=ga ho-i, karuvoruhua juka-vo, 'i:te:ki:ko.
Davi=3.SG.MASC go-i agouti kill-vo DIR.EVID
'(Then) Davi went to kill agoutis.' (Juma: text)

Now that we have seen the associated readings resulting from a VP-internal and VP-external object, we can tie the movement of the object outside the VP as the consequence of the pragmatic/semantic effects that would be associated if it stayed in its thematic position. Take specificity, for instance. It is a standard assumption that indefinite objects receive an obligatory specific reading if they move out of their thematic position (see Diesing (1992)), but can be ambiguous if they stay VP-internally.²⁹

4.1.2 Object drop in the absence of verb movement

Instances of object omission in verb-final clauses also lead to *i*-prefixation on the final verb. Consider (67) for an example.

(67)

Aramē ki ka, i-mõmbo-i repiag=a.
after.that PST 3.SG.MASC i-throw-i see=NMLZ
'After that he threw (it = fishing hook) to see.' (Juma: Text)

Context: A speaker is narrating a fishing day. Five sentences earlier, she said that she and her partner prepared their *vŷrŷtxi'ĩa* 'fishing hook,' made a bet on who would first catch a fish, and then threw it the first time in vain. Then, her partner tried it again, which the speaker describes in the sentence above.

I argue these cases can be subsumed under the previous cases we saw where the pragmatic and/or semantic status of the object is the key element conditioning a VP-external

²⁸ This sentence is drawn from the same text wherein (65) was uttered. In it, *karuvoruhua* 'agouti(s)' is mentioned only once – the sentence in (66) – right after the speaker describes a couple of events, including that it was already evening, she cooked, she and her land patrol team ate everything, and they all went to sleep, except her partner (sentence (66)), who went out to kill agoutis, and his nephew came along. To go after agoutis after having dinner is a common practice among the Júma and Jupaú. Despite the latter, one could go out to hunt many other things that are not agoutis. This might be one other reason that led the speaker to avoid dropping the object of *juka* 'kill' in (66).

²⁹ See Vicente (2009) for a rejection of the Remnant VP approach to derive predicate topicalization in Spanish based on the fact that the object in predicate topicalization can be read as nonspecific, contrary to the prediction expected under a Remnant VP approach.

position of a preverbal object. The difference seems to be in whether the referent of the object is given or not in the discourse. In particular, the givenness status of the object in (67) seems to be the important feature for its omission, which the context helps to identify. As it shows, the referent of the object has been introduced, and the speaker wants to refer back to it, but without overtly using linguistic material to do so (clearly because the speaker assumes that the interlocutor will be able to recover its referent from the context as it is still very active in the discourse given a recent mentioning). The object is omitted, and the verb is marked with *i*.

The structure of sentences with object drop can easily be unified with the structure of sentences wherein the object is overt and VP-external, as discussed in the previous subsection for the example in (65). Consequently, the idea that the object is in a position external to the VP in (65) can also be extended to these cases with null objects like (67). I concur that the syntactic position of the object in (67) is outside the VP.

4.1.3 Unaccusative verbs

The third and final instance of *i*-prefixation is that on unaccusative clauses, an example of which is presented in (68) (see Section 2.3 for further discussion).

(68)

I-kari	ga.
i-be.jealous	3.SG.MASC
‘He is jealous.’	

The use of *i*- on unaccusatives follows from the conditions that lead to *i*- in the language, in general, and the well-known fact that the sole argument of these verbs vacates the VP for Case. The latter is a consequence of the inability of unaccusative verbs to license Case onto their sole argument. The appearance of *i*- on this subset of intransitive verbs is the strongest (and only) piece of evidence that these verbs are unaccusative, as proposed in dos Santos (2022).

Dos Santos (2022) proposes an account of the *i*-prefixation that supports the analysis of these verbs as unaccusative in the absence of standard tests for unaccusativity in Kawahíva. This proposal conjoins the results of the use and distribution of *i*-prefixation beyond this subset of intransitive verbs – which was described in Subsections 4.1.1-4.1.2 – and the derivational life of unaccusative verbs. In terms of the latter, the idea that these are unaccusative verbs draw on the standard assumption that their sole argument, which is base-generated in the complement position of the verb (Perlmutter 1978), evacuates this position (possibly due to Case licensing as unaccusative verbs cannot license Case). Consequently, given how *i*- is triggered, namely, upon the absence of a thematic object within the VP with a stranded verb, and the sole argument of an unaccusative verb leaves the VP, then it follows that the condition for *i*-prefixation is also met during the derivation

of unaccusative clauses.

Conjoining the Remnant VP movement approach and the independent morphological reflex of object movement out of the VP leads to the expectation that V1 clauses show up with the initial verb bearing the prefix *i*- . Let us see this in detail. A remnant movement of a VP involves the pre-movement of the object. The movement of objects out of a VP triggers the morphological reflex of *i*- on the verb that is left stranded inside that VP. Subsequently, the VP raises without the object. Consequently, V1 clauses would consistently show up with *i*- attached to the initial verb. The failure of this prediction is patently demonstrated by examples (69-70), which include clause-initial transitive and active intransitive verbs, respectively; only in those cases where the verb bears a verbal agreement marker, but not *i*- , is the sentence well-formed.

(69)

- a. A-hepia ki ji ga.
1.SG.A-see PST 1.SG 3.SG.MASC
'I saw him.'
- b. *I-hepia ki ji ga.
i-see PST 1.SG 3.SG.MASC
'I saw him.'

(70)

- a. A-kwam ki ji.
1.SG.A-dance PST 1.SG
'I danced.'
- b. *I-kwam ki ji.
i-dance PST 1.SG
'I danced.'

In brief, the overall distribution of *i*-prefixation extends to the subset of unaccusative verbs that surface with this marking and its account does not involve a Remnant VP movement.

4.1.4 The pattern of *i*-prefixation beyond verbs

The absence of an overt complement to a postposition also triggers the pattern of *i*-prefixation on the latter, as in (71b), thus showing this pattern extends beyond verbs:

(71)

- a. **Avo** **uvi** i-ho-i, kahua.
LOC.DEM:PROX from i-go-i car
'It will leave from here, the car.' (Juma: Text)
- b. **Peko-'i** po ahe ho-i o-vag=a **j-uvi**, a-'i ki ji
LOC.DEM:DIST-DIM IRR people go-i 3COR-return=NMLZ i-from 1.SG.A-say PST 1.SG
ko=ra.
REAL=TODAY.PST
'(Let's) go a bit further there to turn back from (there).' (Juma: Text)

Additionally, *i*- is also used to mark an inalienable noun (e.g., body parts) within a possessive phrase whose inalienable possessor is absent, as in (72b); I assume inalienable possessors are syntactic complements of inalienable nouns (Alexiadou 2003, among others).

(72)

- a. **O-mbo-tyky-tyky** hēa **mbiara kava** rereko-vo.
3.A-CAUS-RED-drip 3.SG.FEM meat fat have-vo
'She had the meat's fat to drip.' (Juma: Text)
- b. **I-kava** ko.
i-fat REAL
'(She was frying meat's) fat.' (Juma: Text)

The characterization of *i*- in the previous sections, as resulting from the absence of an overt verbal object within a VP containing an overt verb, or the "premature" movement of the object before the verb, can naturally be extended to these instances of *i*-prefixation. In this broader pattern, *i*- is marked on all heads whose complements meet these conditions.

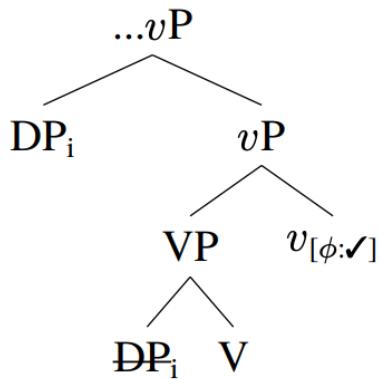
4.1.5 A proposal for and the relevance of the pattern of *i*-prefixation

I propose the *i*-prefixation pattern is the morphological reflex of a functional head bearing an edge feature with the EPP property. In particular, I propose that the [∅]-probe on vP can be optionally merged with the EPP property to facilitate movement of the DP to the edge of vP; in essence, a kind of object shift (Holmberg 1986; 1999). This idea is represented in (73).³⁰³¹

³⁰ I also posit that an edge feature is present in the instances of *i*-prefixation beyond VPs, that is, PPs and PossPs headed by inalienable nouns, as discussed in Section 4.1.4. In these cases, the functional heads bearing the edge features are on the heads of *pP* and *nP*, respectively.

³¹ A similar proposal that an edge feature is spelled out overtly on *v* is given to the tonal changes on a verb in instances of A'-movement in the Kwa language Asante Twi (Korsah and Murphy 2020).

(73)



When the object leaves the VP with the verb stranded inside, or when the object evacuates the VP prior to the verb head – for Case reasons as in the scenario with unaccusatives – the EPP feature is merged with the [ϕ]-probe on *v*. In those cases, *v* spells out with *i*-.

In contrast, if the object does not move, the EPP feature is not merged with the [ϕ]-probe. In those cases, *v* does not spell out with *i*-.

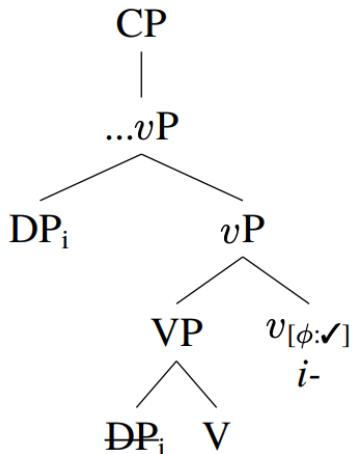
More technically, the rules for vocabulary insertion at Spellout in these two scenarios are as follows:

[Φ, EPP, <i>v</i>]	↔	<i>i</i> -
[PART, Φ, SG, C]	↔	ø

Table 9. Vocabulary items for *v*.

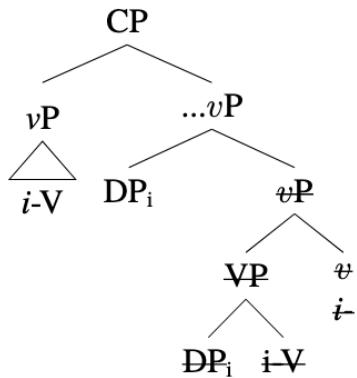
This pattern of prefixation with *i*- in Kawahíva gives us an empirical prediction about whether V1 clauses involve remnant movement. Under this view, V1 in Kawahíva should have resulted from evacuating the object outside the VP and then fronting the VP. The first step, which is illustrated in diagram (74), is object movement. It moves the object out of the VP prior to verb fronting, resulting in a VP whose head is internal but without a complement. This is the same configuration where *i*- is triggered elsewhere, as discussed thus far. Consequently, *i*- should be realized on *v* at Spellout.

(74)



The second step is Remnant VP fronting, as represented in (75). The result should be a clause-initial *i*-marked verb in all instances of clause-initial verbs.

(75)



This prediction is not correct, however, as example (76) demonstrates — as well as all other instances of clause-initial verbs except with unaccusative verbs, which bear *i*.

(76)

- *I-’u ki jie pira ko.
 i-eat PST 1.SG fish REAL
 ‘I ate fish.’

4.1.6 Interim summary

This section presented evidence against the idea that the creation of a Remnant VP is involved in Kawahíva V1 clauses, given that there is a morphological reflex of object movement with the prefix *i*. The prediction under the Remnant VP account that V1 clauses would surface with *i*- is not confirmed, however.

A note is in order about the pattern of *i*-prefixation across the Tupí-Guaraní family in regards to the formation of V1. We saw that at least the related language Tenetehára exhibits the V1 pattern (Duarte 2012), and the analysis proposed is the Remnant VP. Given that Tenetehára also shows the pattern of *i*-prefixation (Duarte 2007), the discussion in this section would suggest that Tenetehára V1 clauses should show *i*-. This is not confirmed, however, as the examples in Duarte (2012) demonstrate. However, as far as I can tell, an alternative analysis compatible with the facts presented in Duarte (2012) is possible. In it, the verb head undergoes syntactic head movement, and the bare NP object is prosodically reordered next to the verb in the postsyntactic component, thus resulting in the

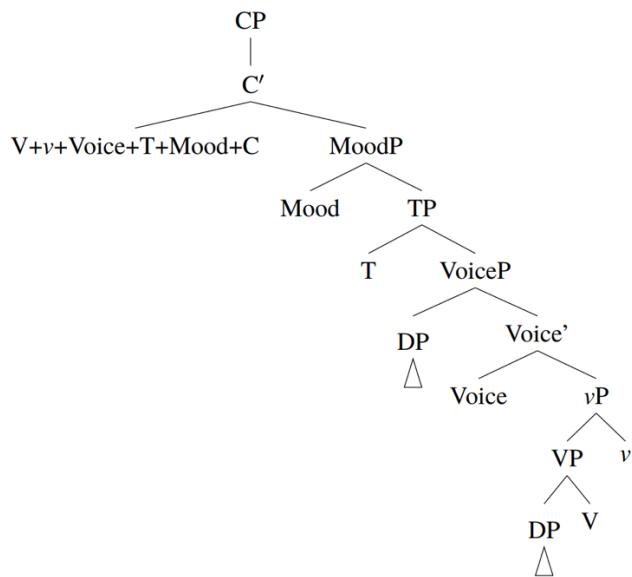
VOS order. If syntactic head movement is the actual means that derives V1 in Tenetehára, then the absence of *i*-prefixation in Tenetehára V1 is actually expected. A prosodic reordering analysis for alternating VSO/VOS languages is proposed for a subgroup of Mayan languages (Clemens and Coon 2018) and the Polynesian language Niuean (Clemens 2019).

5 Morphological amalgamation

Kawahíva V1 clauses might be the result of morphological amalgamation. This view has been proposed in the account of the V1 pattern of several languages (see Carnie and Guilfoyle (2000); Carnie et al. (2005)). We will see here that this analysis is not only empirically inadequate, but verb fronting in Kawahíva does not show the crosslinguistic hallmarks of morphological amalgamation.

Under the idea that Kawahíva V1 is created via morphological amalgamation (Harizanov and Gribanova 2019), the verb moves locally through all intermediate heads on its way up to the clause-initial position, as diagram (77) illustrates, assuming the Kawahíva matrix clause structure proposed in Section 3:

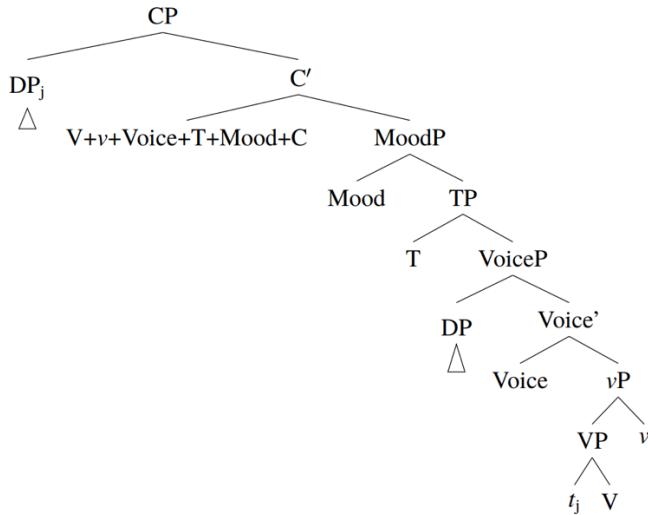
(77)



The first issue with the morphological amalgamation analysis is a failed prediction that a verb fronted to C should be able to co-occur with overt elements in Spec,CP. After all, in the head movement demonstrated in (77), the verb landing in C and the filling in of Spec,CP should have been compatible. However, we have seen this is not possible, and, in fact, informational prominent phrases and verbs are in complementary distribution for the clause-initial position.

One alternative compatible with these facts would be to assume this complementary distribution follows from a version of the Doubly-Filled Comp filter (Chomsky and Lasnik 1977), which rules out sentences like *I wonder who (*that) they saw* in English, for instance. To illustrate, this proposal says that Kawahíva does not allow matrix clause configurations like (78), where both Spec,CP and C are filled in – the former with an extracted object, and the latter, with the verb after verb movement.

(78)



Appealing to the Doubly-Filled Comp constraint as an alternative to the mentioned complementarity is, at best, a stipulation since its structural properties in English are not found in Kawahíva. So, while the Doubly-Filled Comp restriction in English is exclusive to dependent clauses and involves *wh*-words and complementizers, in contrast, it would be a root phenomenon in Kawahíva, would not involve only *wh*-words, and would never implicate complementizers.

Another strong piece of evidence against this analysis is the absence of the hallmarks of morphological amalgamation in Kawahíva verb fronting. The core properties of this movement are listed below, following Harizanov and Gribanova (2019):

- (i) Morphological amalgamation obeys the Head Movement Constraint (HMC) (Travis 1984).
- (ii) Morphological amalgamation directly reflects syntactic structure (Baker (1985)'s Mirror Principle).
- (iii) Morphological amalgamation creates a head that functions as a unit for the purposes of phonology and syntax (Harizanov and Gribanova 2019).³²

³² I do not discuss here a fourth aspect of morphological amalgamation, that morphological amalgamation is clause-bound. In Section 6.2, I discuss some data showing that embedded verbs do not front to the upstairs clause, which suggests this verb movement is clause-bound. I show this aspect can be accommodated in the syntactic head movement account I advocate for Kawahíva V1 in Section 6. Additionally, its clause-boundedness might also suggest that Kawahíva V-fronting is a type of A-movement – which is typically clause-bounded –

Note how the HMC – which states that a head may only move to the next head up, or in other words, a head cannot skip the next head up (Travis 1984) – contributes to morphological amalgamation to obey the “mirror generalization” – that is, the order of syntax structure is reflected in the affix ordering.

Firstly, Kawahíva verb fronting does not obey the HMC and does not yield mirror effects because it skips at least the T head; we will see shortly that it also skips Mood. This is one way to see (79), where the particle *po* ‘irrealis’ is closer to the verb stem than *txi* ‘future’.

(79)

- A-hepiang **po** **txi** jie gã nãhẽ.
1.SG.A-see IRR FUT 1.SG 3.PL POT
‘I perhaps see them.’ (Juma: Elicit)

If Kawahíva verb fronting were HMC-compliant, which would also create mirror effects, the exponent of T, *txi* ‘future,’ would surface closer to the verb stem than (one of) the exponent(s) of Mood, *po* ‘irrealis.’ In fact, we would expect the following order to be grammatical:

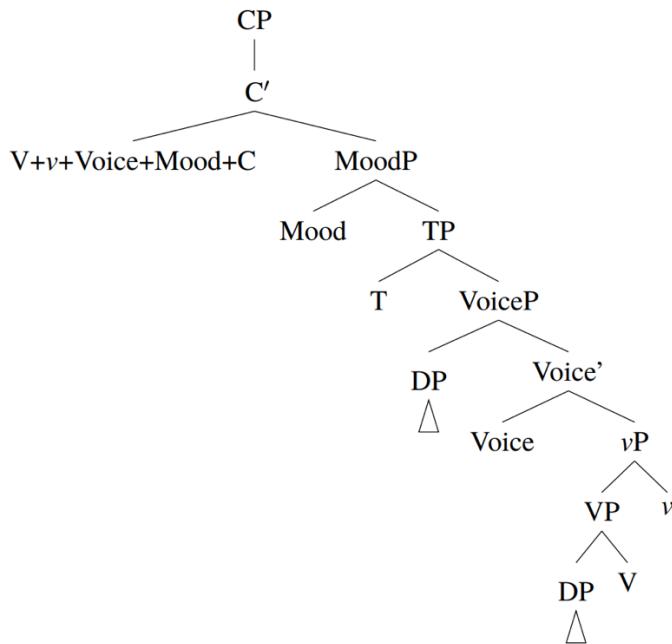
(80)

- *A-hepiang **txi** **po** jie gã nãhẽ.
1.SG.A-see FUT IRR 1.SG 3.PL POT
‘I perhaps see them.’ (Juma: Elicit)

However, if we assumed the movement that derives V1 skips at least T, then (79) above would follow straightforwardly. To illustrate concretely the structure that underlies (79), we could schematically represent it in (81).

which comes without surprise since it is not A'-movement, as discussed in Section 6.3. All in all, the clause-boundedness of Kawahíva V-fronting is unexpected under the idea that it is syntactic and non-A'-movement, as proposed in this paper.

(81)



In sum, (79) and (80) strongly suggest that verb fronting in Kawahíva is not local (non-HMC compliant) and yields anti-mirror effects. These properties are unlike morphological amalgamation, which is strictly local and has a tendency to generate mirror effects.³³

Finally, verb fronting in Kawahíva does not result in a syntactic or prosodic unit. To see that the clause-initial verb is not a syntactic unit, consider (82), where the adverbial *tūhūi* ‘really, even’ appears between the clause-initial verb and irrealis particle.

(82)

V-eruri **tūhūi** po ka o-pira, 'i ki ji ko=ra.
 3.A-bring INDEED IRR 3.SG.MASC 3.COR-cloth say PST 1.SG REAL=TODAY.PST
 ‘He indeed brought his own clothes, I said.’ (Juma: Text)

Assuming morphological amalgamation creates a head that is a complex syntactic unit (Harizanov and Gribanova 2019), it is a surprise that the adverbial can interrupt the sequence with the verb and irrealis particle, both of which are on C, following the idea that V1 is the result of amalgamation (77).

Furthermore, the initial-clause verb fails to show the expected prosodic behavior of heads created via morphological amalgamation, as not only does the verb bear stress in clauses where it is initial but so does the irrealis particle. If prosodic constituents generally match

³³ There are certainly cases where anti-mirror effects arise, as in Kītharaka (Muriungi 2008), but these are not as frequent as one might expect.

syntactic constituents (Selkirk 2011), the sequence verb and particle would map into one single prosodic constituent, contrary to fact.

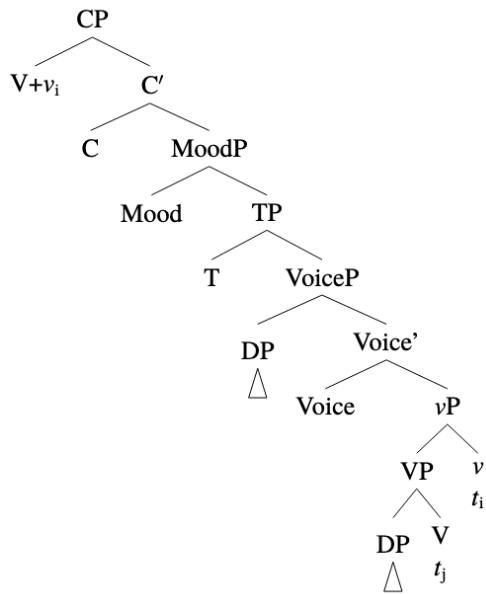
Additionally, the breakup between the initial verb and the irrealis particle, both syntactically and prosodically, strongly suggests they are not on the same head (i.e., C). I take this to mean that the verb also skips MoodP on its way to C, lending further support that Kawahíva V1 does not involve movement that is strictly local.

In this section, I have shown that Kawahíva verb fronting does not show the properties generally associated with morphological amalgamation crosslinguistically, as it does not comply with the Head Movement Constraint (Travis 1984), nor the Mirror Principle (Baker 1985), and does not show the syntactic or prosodic hallmarks of heads created via this type of movement (Harizanov and Gribanova 2019). Therefore, I conclude that Kawahíva V1 clauses do not involve morphological amalgamation.³⁴

6 Syntactic head movement (or Head-to-Specifier movement)

I consider syntactic head movement as an ultimate means to derive VSO in Kawahíva. In particular, VSO results from verb fronting to Spec,CP, as illustrated in (83):

(83)



³⁴ A reviewer also raises an interesting point related to the possibility of tense drop in Kawahíva (see Subsection 2.4) and how it might also argue against morphological amalgamation. The argument is that, impressionistically to the reviewer, tense drop is only possible in languages where tense is not an affix, i.e. not part of the inflectional system, but rather, it is a particle, not attached to the verb by head movement. If so, tense-drop would add to the evidence from this section against a morphological amalgamation analysis.

A core piece of this proposal is that the landing site of V-fronting is a specifier position. In essence, this is equivalent to long head movement. Precursors to this line of research date back to Koopman (1984), but it has been argued for elsewhere (Fukui and Takano 1998; Toyoshima 2001; Matushansky 2006; Vicente 2007; 2009, among others), including in more recent work by Harizanov (2019) and Preminger (2019).

This type of movement had once been considered incongruent with a general condition on syntactic movement, the Chain Uniformity Condition (CUC) — “a chain is uniform with regards to phrase structure status” (Chomsky 1995: 253). Together with a distinction between minimal (i.e., a terminal node) and maximal (i.e., a maximal projection) syntactic objects, the CUC rules that links of a movement chain will have the same status, as a head or a phrase. In practice, the CUC ensures that phrases move to specifiers as their landing sites and heads adjoin to a head position.

Several scholars, however, have pointed out that the CUC is, at least, theoretically problematic (Fukui and Takano 1998; Toyoshima 2001; Matushansky 2006; Vicente 2007; 2009). For one, the CUC is redundant: the uniformity condition on the shape of a movement chain can be derived via another independently motivated principle, the Extension Condition (Chomsky 1995). This condition ensures that an XP lands in a specifier position since Merge has to target the root of the syntactic tree (i.e., the position where a syntactic object is not dominated by another syntactic object). There are, therefore, reasons to drop this condition on the shape of movement. Doing so would leave us with a scenario where no restrictions are imposed on the input of Merge. As a result of that, Merge should apply to minimal and maximal syntactic objects alike. Once these assumptions are in place, head-to-specifier movement is ruled in.

The theoretical possibility of a head-to-specifier movement has prompted scholars to analyze some head-fronting phenomena as such. For example, some scholars, like Vicente (2009) and Harizanov (2019), argued that a head-to-specifier movement is empirically attested in Spanish predicate cleft (84a) and Bulgarian participle fronting (84b), respectively.

(84)

- a. **Leer**, Juan ha leído un libro.
read.INF Juan has read a book
‘As for reading, Juan has read a book.’ (Vicente 2009:159)
- b. **Pročel** bjah knigata.
read be.1.SG.PST the.book
‘I had read the book.’ (Harizanov 2019:5)

These scholars argue that, in either case above, a head – a bare verb (84a) or a participle (84b) – fronts and lands in the specifier of a higher functional projection – Spec, TopicP

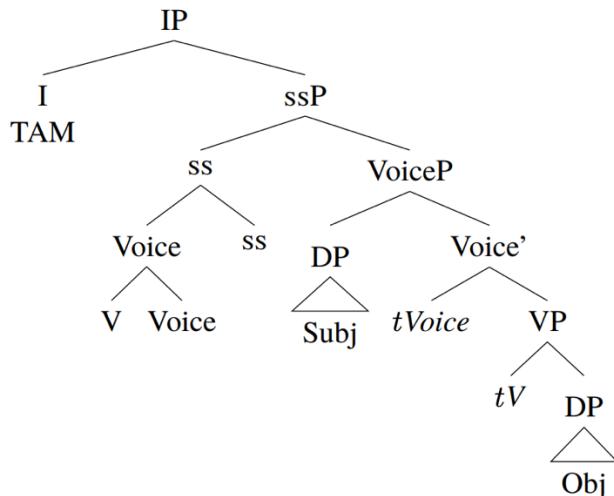
or Spec,AuxP – by virtue of an A' feature with the EPP property for movement.

Spanish and Bulgarian represent a growing list of languages where a head-fronting phenomenon has been successfully analyzed as the result of a head-to-specifier phenomenon; others include predicate fronting/cleft in Brazilian Portuguese (Bastos-Gee 2009), Yiddish (Bleaman 2022), Hebrew (Landau 2006; Harbour 1999), Finnish (Brattico 2021); see Harizanov (2019: 29) for a larger list of phenomena that are potentially amenable to this approach.

Yet, this approach has not been widely proposed as a way of deriving V1 order as a general principle of clausal structure. To my knowledge, only Mayan (Clemens and Coon 2018), Otomanguean (Lee 2005; Macaulay 2005; Eberhardt 1999) and, under one proposal, the Polynesian language Niuean (Clemens 2019) have received explicit accounts that verb-initial orders result from syntactic head movement.³⁵

Similar to Kawahíva, in informationally neutral clauses, Mayan languages show the V1 pattern. However, while some Mayan languages show VSO order in this context, another group of Mayan languages alternate VSO/VOS orders. According to Clemens and Coon (2018), the verb head moves through Voice to a position above the subject position in Spec, Voice, as demonstrated in Tree (85). This straightforwardly captures the VSO languages of the family.

(85)



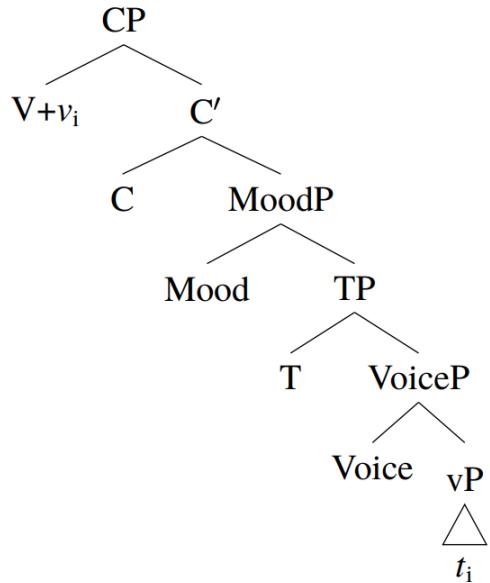
Additionally, the authors posit that this analysis can also account for the alternating VOS order in VSO/VOS languages by arguing that the surface position of the object in VOS order follows from three other phenomena, i) rightward subject topics, ii) heavy-NP shift of

³⁵ The Nilotc language Kipsigis also shows a pattern of V1 analyzed as the result of head movement of the verb to a position higher than its arguments, as proposed by Bossi and Diercks (2019). However, since the authors explicitly state that “syntactic and postsyntactic analyses of head movement both derive the appropriate word order patterns in the language” (Bossi and Diercks 2019: 17, footnote 17 in the original), I will not consider the V1 pattern in Kipsigis on a par with the pattern of V1 found in the other languages listed above nor Kawahíva.

phonologically heavy subjects, and iii) prosodic reordering of bare NP objects; see Clemens and Coon (2018) for a detailed discussion about how the effects of these phenomena lead to VOS.

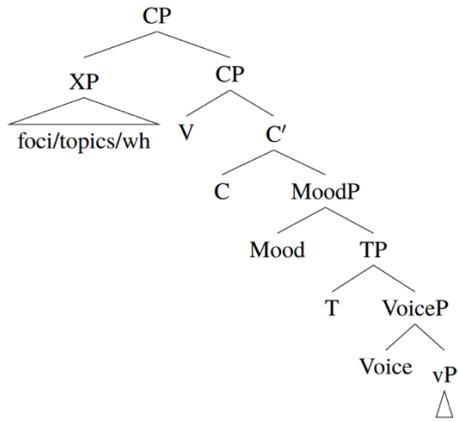
I argue that a similar analysis can derive Kawahíva V1. Unlike the head landing site of the verb in (85), the landing site of Kawahíva V1 is Spec,CP, as illustrated in (86) below.

(86)



The exact feature triggering the movement of the verb will be discussed in Section 6.3. This analysis would immediately explain the complementary distribution between verbs and phrases in the initial position of the clause. Simply put, this distribution is due to a competition for Spec,CP, as illustrated in the diagram below.

(87)



In the remainder of this section, I discuss other properties of this verb movement that strongly support the idea that it is syntactic movement.

6.1 The hallmarks of syntactic head movement

The discussion about the properties of syntactic head movement in Kawahíva V1 assumes the type of movement proposed in Harizanov and Gribanova (2019). To foreshadow these properties, they are briefly described below:

(88)

- a. Syntactic head movement leads to interpretive semantic effects (Harizanov and Gribanova 2019).
- b. Syntactic head movement does not obey the Head Movement Constraint (HMC) (Travis 1984).
- c. Syntactic head movement does not need to directly reflect syntactic structure (Baker (1985)'s Mirror Principle 1985).
- d. Syntactic head movement does not create a head that functions as a unit for the purposes of phonology and syntax (Harizanov and Gribanova 2019).

As one can see, and as also discussed by those authors, the properties of syntactic head movement contrast with the properties of its post-syntactic kin, (morphological) amalgamation, which we had discussed in Section 5.

6.1.1 Semantic effects

The most telling piece of evidence that verb fronting in Kawahíva is syntactic head movement is the semantic import associated with it. To see this, consider examples with

universal quantification, which is expressed via the adverbial suffix *-pam* ‘completely,’³⁶ and its scope relative to a focused bare noun in subject position:

(89)

Javatxinga ki	o-mõnhã-pam	mbarakaja'ia ko.
dog	PST 3.A-corral-COMpletely	cat REAL
'It was a/the dog that corralled all the cats.' ($\exists > \forall$)		
'#It was all the dogs that corralled a/the cat.' (# $\forall > \exists$) (Juma: Elicit)		

In this SVO clause wherein the clause-initial subject bears (contrastive) focus and the clause-medial verb is suffixed with *-pam* ‘completely,’ the latter cannot scope over the bare noun in subject position; the resulting reading is infelicitous. Instead, the only element over which *-pam* ‘completely’ can have scope is the bare noun in object position.

However, if the verb marked with *-pam* ‘completely’ is in clause-initial position, thus resulting in a VSO clause, then the reading where universal quantification scopes above the bare noun in subject position becomes felicitous. Interestingly, the bare noun in subject position cannot outscope *-pam* ‘completely.’

(90)

O-mõnhã-pam	ki	javatxinga mbarakaja'ia ko.
3.A-corral-COMpletely	PST dog	cat REAL
'All the dogs corralled the cat.' ($\forall > \exists$)		
'#A/the dog corralled all the cats.' (# $\exists > \forall$) (Juma: Elicit)		

In the analysis developed in this paper, the clause-initial position of a pragmatically prominent constituent, like the focused phrase in (89), as well as the clause-initial position of the verb in (90), is achieved through syntactic movement to Spec,CP. The distinct scope readings resulting from the varied positions of the verb suffixed with *-pam* ‘completely’ relative to the subject nominal provide evidence for the syntactic nature of the verb’s movement. Given that only movement within narrow syntax, therefore movement prior to LF can yield these semantic distinctions, it follows that the movement of

³⁶ Several adverbial meanings, including (some types of) aspect, evaluative mood, speech act mood, among others, are realized through adverbial suffixes (e.g., *-pam* ‘completely,’ *-aha* ‘unfortunately,’ *-ete* ‘really’). Furthermore, a cursory exploration of their ordering on the verb complex reveals that almost all of them have a fixed order, with a few being able to occupy different positions in the verbal stem complex. Negation is also realized through bound morphemes, specifically the circumfix *n(da)-...-i*. I assume these suffixes can be optionally merged onto the verb, which accounts for the fact that they are not required, and their almost fixed ordering is the result of certain combinations being ruled out because they produce semantically ill-formed structures, following the Scopal Theory approach to the syntax of adverbials (Ernst 2020).

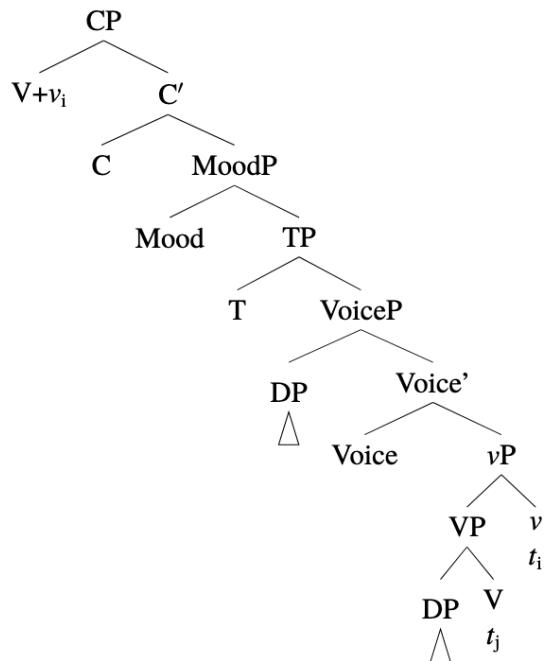
Kawahíva verbs to the clause-initial position in VSO clauses must be syntactic in nature.

The result of this section – verb head movement in Kawahíva is syntactic because it leads to semantic effects – also accords with the results in a growing body of literature on syntactic head movement that has shown similar semantic effects of movement of quantificational heads (Lechner 2006; Lee 2022.).

6.1.2 Non-locality

We expect syntactic head movement to be non-local in the sense of being able to skip heads and, therefore, disobey the Head Movement Constraint (HMC) (Travis 1984). Consequently, we would expect the fronted verb to skip an intervening head. Tree (91) demonstrates the conclusion from Section 5 that the moving head skips T and Mood.

(91)



The ability to skip T and Mood shows that Kawahíva V1 fronting is non-local and it does not abide by the Head Movement Constraint (HMC) (Travis 1984), another trait of this type of movement (Harizanov and Gribanova 2019).³⁷

³⁷ The non-local aspect of verb movement in Kawahíva brings it close to the so-called Long Head Movement (LHM) discussed in several works by Lema and Rivero (1990, among many others publications by Rivero) based mostly on Slavic languages. However, the cases of LHM discussed in their work seem to differ from the present LHM in Kawahíva in at least two aspects. One is the landing site: as opposed to landing in a specifier position, the moving head, in their case, is a head position. The other is nonlocality: Kawahíva LHM has some intermediate steps of local movement, such as V-to-v, while LHM in Slavic does not seem to. Curiously, in a proposed typology of V(P)-movement, Travis and Massam (2021) identify two types of LHM,

6.1.3 Absence of mirror effects

A further consequence of the syntactic movement of the verb in (91) is that it will not pick up the content on T and Mood, thus in an apparent violation of Baker (1985)'s Mirror Principle and rendering anti-mirror effects. This is so because, for instance, given the representation in the diagram in (91), and assuming an instance where only Mood and T are overtly exponed, we would see the morpheme order V-v-Voice followed by Mood and T. As suggested, these anti-mirror effects are only apparent. This resulting morpheme order is simply a consequence of the complex V-v not moving through these heads since the moving head skips them.

6.1.4 Absence of properties of a phonological/syntactic head

Finally, the resulting head of a head-to-specifier movement does need to form a syntactic unit with the head of the surrounding projection. Given the tree in (91), the C head would not have been part of V-v at Spellout in the post-syntactic component. This fact would predict, for instance, that the V-v and C heads may not form a prosodic unit because each of them, for instance, bears their own stress. This prediction is also fulfilled in Kawahíva, as it has been shown in Section 5 that the V-v does not form a prosodic constituent with the C head because they each are stressed.

6.2 Kawahíva verb fronting is not A-bar movement

The identity of the featural trigger of V fronting remains to be discussed, given that movement is feature-driven (Chomsky 1995; 2001). I first consider the option where this feature is an A'-feature in this section. I demonstrate this alternative overgenerates. Then, in the following section, I propose the relevant feature is the lexical feature [V]. I show this option does not suffer from the overgeneration issue raised in the A'-feature competing alternative and can also be extended to cases where the clause-initial element is not a verb.

Analyses of predicate fronting where the verb lands in a specifier position have proposed the trigger is an A' feature. This is true for predicate fronting/cleft in Brazilian Portuguese (Bastos-Gee 2009), Spanish (Vicente 2007; 2009), Yiddish (Bleaman 2022), Hebrew (Landau 2006; Harbour 1999), Finnish (Brattico (2021), as well as participle fronting in Bulgarian (Harizanov 2019), among others. The major reason for an A'-feature as the movement-inducing feature has been that some of its properties can be associated with the properties of A'-movement, which are laid out in Table (10) for convenience,

one of which they exemplify with the LHM of Slavic languages. The other one is exemplified by pronominal cliticization in Romance languages. I leave a full comparison and discussion of Kawahíva LHM and the LHMs identified by Travis and Massam (2021) for future work.

based on Richards (2014)'s overview.

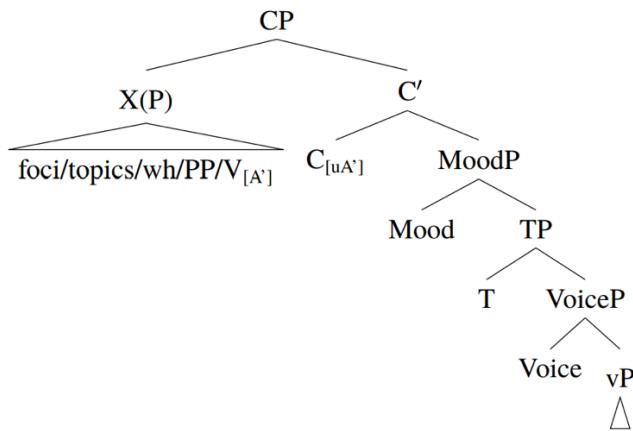
PROPERTIES	A-PROPERTIES	A'-PROPERTIES
Local	✓	✗
Restricted to nominals	✓	✗
No reconstruction for Condition C	✗	✓
No Weak Crossover	✓	✗
New antecedents for anaphors	✓	✗
Parasitic gap licensing	✗	✓

Table 10. Summary of the A/A' distinctive properties of movement.

In particular, this A'-movement of a head is non-local in the sense of non-local A'-movement, wherein the moving element can cross finite clausal boundaries in long-distance extraction. Additionally, it can be associated with pragmatic effects such as focus, as in Brazilian Portuguese predicate cleft (Bastos-Gee 2009), or topic, as in the Spanish infinitive predicate topicalization (Vicente 2007; 2009). I discuss the locality of this movement shortly.

As for the association of this movement with pragmatic effects, this idea might initially receive some support from the fact that verbs compete for the clause-initial position with A'-feature-driven elements (e.g., topics, foci, and questions). Furthermore, this view would offer a unified account of V-fronting and A'-movement in the matrix clause, in that movement to Spec,CP would be triggered by a generalized A'-feature on C – we can call this feature as [A']. (92) demonstrates this alternative in a diagram:

(92)



However, the parallel between Kawahiva V fronting and instances of A'-movement of a predicate starts to break down when we consider locality, in particular, long-distance extraction – while long-distance movement is available and required of embedded XPs, it is not available for the embedded verb.

Long-distance movement of constituents out of (nominalized) dependent clauses is allowed

(see Section 2.5). Contrast the baseline example without extraction in (93a) to that with extraction in (93b).

(93)

- a. Ere-piang nde [akwemba'ea=ga pira pyhyk=a].
2.SG.A-see 2.SG man=3.SG.MASC fish catch=NMLZ
'You saw the man catching fish.' (Juma: Elicit)
- b. Gara nde ere-piang [akwemba'ea=ga i-pyhyk=a]?
what 2.SG 2.SG.A-see man=3.SG.MASC i-catch=NMLZ
'What did you see the man catching?' (Juma: Elicit)

I assume the driving force for the object extraction in the (b) example is an A'-feature on the matrix C head. It would only be natural to assume that this feature also drives short phrasal A'-movement within a matrix clause. Consequently, if it is also involved in verb fronting in matrix clauses, as one would propose under the account of V1 as A'-movement, the long-distance extraction over an embedded verb should also be possible. This prediction is not true, however.

Long-distance fronting of the dependent verb to the matrix clause is not allowed, as (94) shows. In particular, in B's response in (94b), the dependent verb is contrastively focused, and fronted to the matrix clause. The result is unacceptable. Therefore, the A'-driven movement overgenerates.

(94)

Context: *You were walking in the forest and saw your father kneeling next to a tapir lying on the ground who was squealing. You came back home and told me, your brother, that father was helping a tapir. I know that father was killing the tapir because he told me when he came back. My brother (person A) says, "I saw Father healing a tapir," to which I (person B) reply, "Nope! You saw Father killing a tapir".*

- a. A's comment
A-hepiang jie [apina=ga tapi'ira mõmberav=a].
1.SG.A-see 1.SG father=3.SG.MASC tapir heal=NMLZ
'I saw Father healing a tapir.' (Juma: Elicit)
- b. B's response with long-distance verb fronting.
Ahan! *Juka=a nde ere-piang [apina=ga tapi'ira].
Nope! kill=NMLZ 2.SG 2.SG.A-see father=3.SG.MASC tapir
'Nope! You saw Father KILLING a tapir.' (Juma: Elicit)

The repair strategy used by the speaker to convey corrective focus over the embedded verb in this scenario is demonstrated in example (95). This repair employs two independent clauses. The first negates the healing event, and the second uses an adverbial purpose clause (formally a nominalized verb with the corrected verb *juka* 'kill') in clause-initial

position to assert the correct event seen by the interlocutor according to the speaker.

(95)

A'ea=hāi nde repiak-i. I-juka=a te nde=repiak-i.

this.one=NEG 2.SG see-i i-kill=NMLZ REALLY 2.SG=see-i

'It was not this one you saw. To kill it, you did.' (Juma: Elicit)

An argument from the formal typological literature related to verb fronting (be it head fronting or verbal phrase fronting) can also be adduced, which is consistent with the idea that Kawahíva verb fronting does not involve an A'-feature. It has been shown that languages with verb head fronting or verb phrase fronting derived via A'-movement show two gap avoidance strategies: i) a copy of the displaced head or ii) a semantically vacuous dummy verb (Hein 2017; 2018). None of these effects are found in Kawahíva verb fronting.

This fact accords with the idea that A'-movement of the verb is not involved in the creation of V1 clauses in the language.

In the next section, I propose that the driving force of V fronting is a lexical [V] feature. Importantly, the issue of overgeneration does not arise in the analysis of V1 clauses as driven by this feature.

6.3 The feature trigger of verb fronting: a [V] feature

I propose the feature [V] drives verb fronting in Kawahíva. This idea follows a similar identity for the feature responsible for predicate fronting in the Polynesian languages Niuean (Massam 2020) and Imere (Van Urk 2024). This feature is hosted on the C head of regular declarative matrix clauses and comes with the EPP property, as defined in (96).

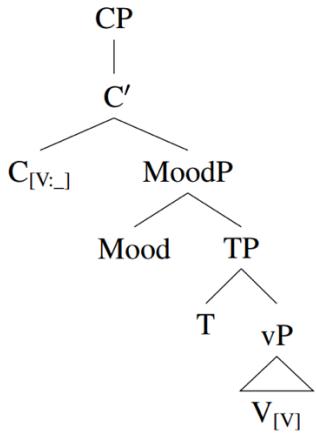
(96)

The [V] feature on C:

A [V]-bearing element must check off [V] on C by moving to Spec, CP.

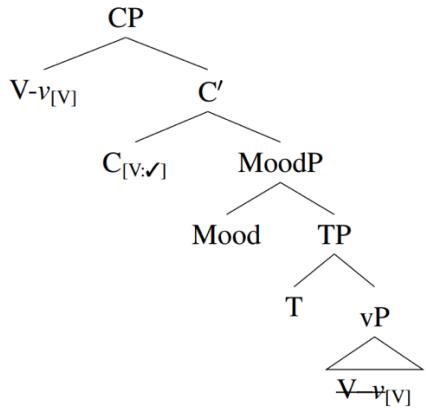
I posit that v comes with the [V] feature that can satisfy the EPP of [V] on C, and so will the verb head once it moves onto v. The relevant structure pre-movement of the verb is demonstrated in (97).

(97)



Once the C head endowed with the EPP-bearing [V] feature is merged, it will trigger the movement of a [V]-bearing element to its specifier. In Kawahíva, this is the complex head V-v, as shown in (98). In Section 7.3, I flesh out this analysis to account for a separate issue that it raises, namely, that the complex head carrying the [V] feature is targeted for movement, but not the more local target phrase vP that also carries [V]. For now, I ask the reader to bear with the idea that the target for movement to Spec,CP is V-v.

(98)



Additionally, I posit that this complex head M-merger with C (Matushansky 2006) in the PF component. This accounts for the realization of $[\Phi]$ -agreement morphology hosted on C onto the verb.

The proposal with [V] avoids the main issue raised by the A'-analysis of verb fronting. In the latter, there was no reason why phrases within a dependent clause, but not an embedded verb, could be extracted to the matrix clause. To see this again, consider the next examples.

In (99), the dependent verb is *in situ*, and the matrix verb is initial.

(99)

A-hepiang jie [apina=ga tapi'ira mōmberav=a].
1.SG.A-see 1.SG father=3.SG.MASC tapir heal=NMLZ
'I saw Father healing a tapir.' (Juma: Elicit)

In (100), however, the dependent verb appears initially. This configuration is unacceptable, as previously known from the discussion of the A'-analysis.

(100)

*Ahan! juka=a nde ere-piang [apina=ga tapi'ira].
Nope! kill=NMLZ 2.SG 2.SG.A-see father=3.SG.MASC tapir
'Nope! You saw Father KILLING a tapir.' (Juma: Elicit)

In the present account with the [V] feature, however, this result is expected: verbs in dependent clauses do not front to the matrix clause because there will always be a closer match for [V] to move (i.e., the matrix verb) than moving the dependent verb. Moving the dependent verb, as in (100), incurs a violation of a property of syntactic movement, the Relativized Minimality, by which movement targets the closest goal to the probe in terms of c-command (Rizzi 1900; Chomsky 1995).

The analysis with a [V] endowed with the EPP property might receive further support from the fact that Kawahíva shares properties with other languages that have been claimed to have a predicate fronting through [pred] endowed with the EPP property. In a recent typology of EPP features, Doner (2017; 2019) proposes there are two major types of EPP, predicate- and nominal-sensitive EPPs. The first type is found in Celtic (except Breton) (Biberauer 2010), Inuktitut (Doner 2017), Niuean (Massam and Smallwood 1997), a.o., while the nominal-sensitive EPP is found in English, for instance. Among the properties of languages with a predicate EPP, which are found in Kawahíva as well, are i) the raised constituent is not nominal, ii) non-verbal predicates also front (but non-functional verbal elements, i.e., auxiliaries, light verbs, and copulas, do not front) and iii) the existence of a defective D.³⁸ Although the current account does not propose that the feature trigger is [pred], I subsume the feature [V] to be a subtype of a [pred] feature. If this reasoning is accepted, then the Kawahíva properties discussed in the next paragraph are expected, given the properties found in predicate-sensitive EPP languages.

³⁸ In Doner's words (2019: 183), "a defective D [...] (corresponds to) the lack of a systematic definiteness contrast."

Properties i) and ii) are illustrated through examples (101) and (102), respectively. (102) also shows the lack of a systematic contrast of definiteness, which would support the existence of a defective D head in the language since there is no definiteness marking on the object *mbiara* ‘meat’; consequently, the object can receive either a definite or an indefinite reading.

(101)

Tapy'ynh=a jie.
non.indigenous=NMLZ 1.SG
'I am a non-indigenous (person).' (Juma: Elicit)

(102)³⁹

- a. O-'u ve-'e auhu ki hēa mbiara.
3.A-eat to-DIM seem PST 3.SG.FEM meat
 - b. *Auhu ki hēa o-'u (ve-'e) mbiara.
seem PST 3.SG.FEM 3.A-eat to-DIM meat
- 'It seems that she ate a/the meat.' (Juma: Elicit)

In short, the proposal that a [V] on C is involved in the creation of Kawahíva V1 clauses not only solves the main issue raised in the alternative analysis with an A'-feature but also fits in a typology of languages that have received an account with a feature which could be regarded as similar to [V].⁴⁰

The remainder of the paper demonstrates how this proposal extends to non-verbal initial clauses and addresses a connected debate about X (head) versus XP (phrasal) movement given the assumption within Bare Phrase Structure that both contain the same label and the latter should be a closer target for movement.

7 Extensions and consequences

7.1 Non-verb-initial clauses

We have seen in Section 2.4 cases where the verb is not the first element in the clause. In matrix clauses, in particular, they can also be medial and final depending on whether the

³⁹ Verbs like *auhu* ‘seem’ are referred to here ‘light’ verbs in the sense that they are functional elements; another verb that can be referred to as such is *rambuve* ‘begin.’ They do not behave as prototypical verbs in the Kawahíva, given that they do not show some core verbal properties, including the ability to bear agreement inflection. I conclude these ‘light’ verbs cannot undergo fronting because of their condition as functional elements, which preclude them from being combined with the [V] feature.

⁴⁰ Kawahíva also accords to Alexiadou and Anagnostopoulou (1998)’s typology of movement to check an EPP feature, whereby languages that move a head to check EPP do so by V-raising.

initial element is an extracted PP or DP. These word order changes are also accompanied by different morphological changes as summarized in Table (11).

CLAUSE-INITIAL X(P)	Verb position	agreement	<i>i</i> -suffixatoin
Verb	—	SETS A & B	✗
Extracted DPs	medial	SETS A & B	✗
Extracted PPs	final	SETS B	✓

Table 11. Summary of clause-initial elements and morphosyntactic properties.

Descriptively, when the clause-initial position is occupied by an extracted PP, the main verb i) is strictly in the final position, ii) is voided of subject marking, and iii) receives a special suffix *-i*.

In what follows, I demonstrate that the [V] feature with the EPP on C also explains the differences in Table (11). I argue these correlate with the ability of the initial element other than a verb to check off [V] on C – if it can, then it bleeds the movement of the verb, and if it cannot, then the movement of the verb should still be possible. I discuss clause-initial PP sentences to illustrate the first scenario, where verbs do not undergo movement at all. Then, I discuss (non-predicative) clause-initial DP sentences to illustrate the second scenario, wherein DPs are not able to check the [V] on C, and verbs still move to Spec,CP; however, verbs are not pronounced in Spec,CP due to a language-internal PF constraint to avoid spellout of multiple elements in Spec,CP. Consequently, a linearization algorithm leads to the spellout of the verb in an intermediate position.

7.1.1 PP-initial clauses

Starting with the instances where extracted PPs fill in the clause-initial, which are illustrated in (103-104), I propose that PPs can check the [V] feature on C, as in (105). Consequently, clause-initial PPs can bleed the movement of the verb as the former removes the feature trigger for verb fronting. I propose they do so because PP heads can merge with the [V] feature as well. In essence, this means that postpositions and verbs form a natural class.

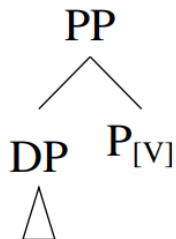
(103)

- a. A-hepia ki jie gã **oi'i=ve**.
1.SG.A-see PST 1.SG 3.PL some.time.ago=to
'I saw them the other day.' (Juma: Elicit)
- b. **Oi'i=ve** ki jie gã=repiak-**i**.
some.time.ago=to PST 1.SG 3.PL=see-i
'The other day, I saw them.' (Juma: Elicit)

(104)

- a. O-'u ki ga pira **ji=rapyja** pupe ko.
3.A-eat PST 3.SG.MASC fish 1.SG=house inside REAL
'He ate fish in my house.' (Juma: Elicit)
- b. **Märā=mē** po ga pira 'u-i?
where=to IRR 3.SG fish eat-i
'Where does he eat fish?' (Juma: Elicit)

(105)



The idea that postpositions and verbs form a natural class is not surprising when considering that postpositions share several morphosyntactic properties with verbs in Kawahíva. In particular, postpositions are able to host agreement markers (106), voice morphology (107), aspect morphology (108), and the *i*- prefix marking (109):

(106)

- O-mōpu ga **ji=rehe.**
3.A-shoot 3.SG.MASC 1.SG.B=at
'He shot at me.'

(107)

- Ere-mōpu nde e-**ji=ehe.**
2.SG.A-shoot 2.SG 2.SG.COR-REFL=at
'You shot at yourself.'

(108)

Oji ve-'i ki Takāi Bitate=ga rur-i avo ko.
 some.time.ago to-DIM PST Takāi Bitate=3.SG.MASC come-i LOC.DEM:PROX REAL
 'Just in the other day Takāi Bitate came here.' (Juma: Text)

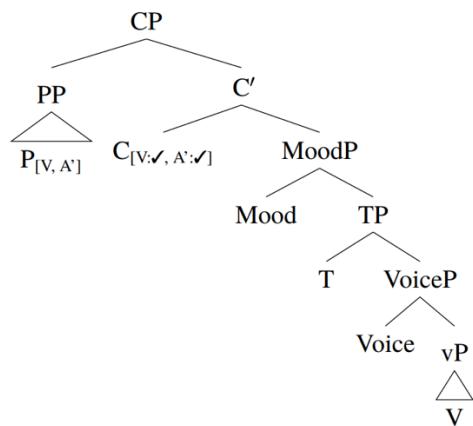
(109)

- a. Nd-a-jor-i j-uv*i*.
 NEG-1.SG.A-come-NEG i-from
 'I didn't come from (there).'
- b. Nd-o-ko-i i-pupe.
 NEG-3.A-be-NEG i-inside
 'It's not inside (it).'

I posit the verbal behavior of postpositions is straightforwardly explained under the idea that the postposition categorizing functional head also contains a [V] feature and that the affixes above all are subcategorized to only occur on [V]-bearing heads.

In addition, PPs also bear an A'-feature when they are extracted. Given that C heads can optionally bear the A'-feature, extracted PPs will be able to satisfy both features on C at once. Consequently, when PPs are initial, they remove the trigger for verb fronting, as demonstrated below:

(110)



Additionally, the verb stays in its base position within the VP — which equates with the sentence-final position on the surface — and it cannot expone subject agreement morphology — which is the spellout of a probe on C (see Section 3.3) for how verbal agreement is derived).

A final aspect of PP-initial clauses is the pattern of *-i* suffixation. This suffix is only and

always triggered in the context of clause-initial PPs in matrix clauses.⁴¹ I suggest this verbal morphology realizes the [V] feature on *v* in cases where the verb is trapped within the vP.⁴² More technically, I propose the following rules for Vocabulary Insertion.

$[V, v]$	\leftrightarrow	-i
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Table 12. Vocabulary items for V+ *v*.

This idea should capture the fact that this suffix is only employed in cases where the verb does not leave the vP, and therefore, the verb will move as far as to *v*.

7.1.2 DP-initial clauses

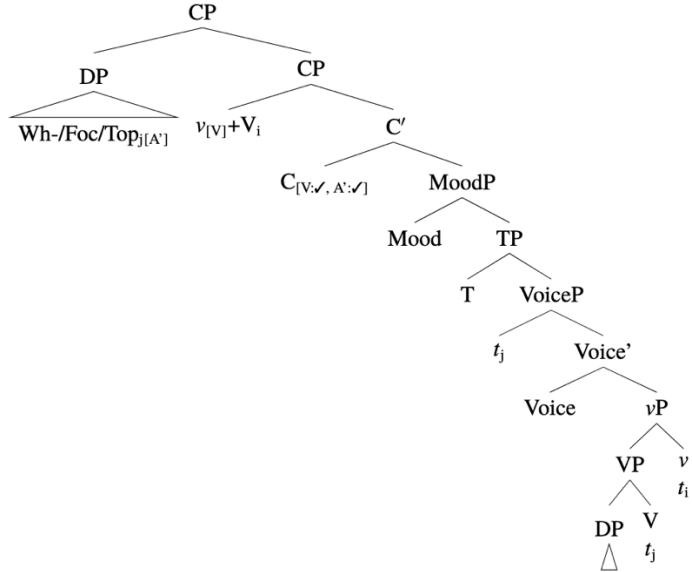
In contrast to PP-initial clauses, extracted DPs cannot check off the [V] on C. In these cases, I propose that despite its inability to occur in an initial position, the verb undergoes covert movement to Spec,CP to check off [V] on C, as schematized in (111). This claim is supported by the fact that the verb can bear subject agreement morphology (112), which is located on C (as discussed in 3.3).

⁴¹ The adverbial PP is optionally dropped in natural speech. Therefore, examples in this paper where the suffix -*i* is observed without an overt PP should be interpreted as having a covert PP clause-initially.

⁴² The pattern of -*i* suffixation and its structural condition is also attested in other members of the Tupí-Guaraní family (for a language family overview, see Jensen (1999: 156)). However, I am not aware of any analyses for this pattern in any language within the Tupí-Guaraní family or related language families. Some labels used by scholars to refer to -*i*, such as *oblique-topicalization/oblique-topicalized verb* (Jensen 1999; Vieira 2014), suggest an approach wherein the suffix -*i* is a morphological reflex of oblique extraction (i.e., *wh*-agreement morphology). However, it seems unlikely that there would be distinctive agreement morphology to cross-reference oblique topics but not argument topics. This is significant in Kawahíva, which exhibits *wh*-agreement morphology for Case in relative clauses, and this paradigm includes agreement markers for both arguments and obliques, none of which are -*i* (dos Santos, in prep.).

Additionally, there has been an attempt to reanalyze the structures with -*i* as a nominalized clause where -*i* is a nominalizer (Praça et al. 2017). The argument for this proposal is the absence of subject agreement markers in these structures, just like other dependent clauses, consistently analyzed as nominalized in the literature of this family. However, the absence of subject agreement in structures with -*i* would be the only shared property with truly nominalized clauses. This parallel breaks down when other morphological properties are considered, such as the exponent of negation and availability of coreferential markers – the structures with -*i* suffixation use the same negative exponent as matrix clauses, which is unlike dependent clauses. Furthermore, coreferential markers are not available in structures with -*i* suffixation, the opposite pattern found with truly nominalized clauses.

(111)



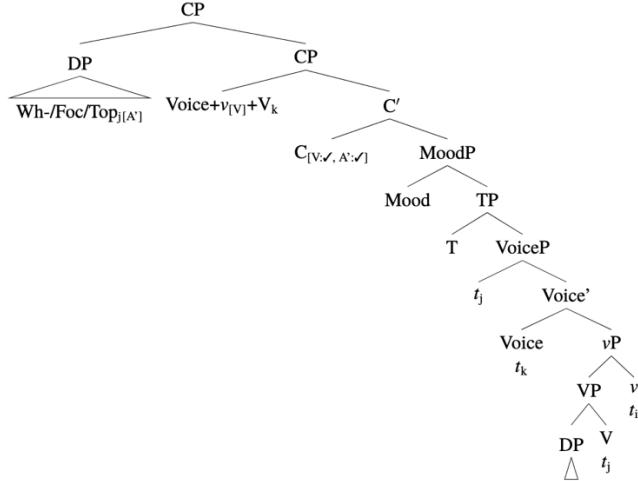
Notably, the verb is not realized before T and Mood, contrary to what the representation in (111) would presuppose. This has already been shown with a DP subject question in (27) and is also seen with a DP object focus in (112). In such cases, the verb surfaces below the subject, in Spec, Voice, according to the clause structure proposed for Kawahíva.

(112)

- a. Pirapetxinguhua **ki** hēa o-pyhy-pyhy ko.
pirapetxinguhua.fish PST 3.SG.FEM 3.A-RED-catch REAL
 ‘It was *pirapetxinguhua* fish that she caught.’ (Juma: Text)
- b. Māngā **po** ji=ruvyra v-epiang rimba’e?
 who IRR 1.SG=uncle 3.A-see NWIT.REM.PST
 ‘Who did my uncle see back in the day?’ (Juma: Text)

To account for the surface position of the verb in clause-initial (non-predicative) DP sentences, I posit that what surfaces is an intermediate copy of the verb. Given that this intermediate copy spells out below the reality particles (i.e., MoodP), tense particles (i.e., T), and subject (i.e., Spec, VoiceP), but above the object (i.e., vP/VP), I propose it is spelled out on the Voice head, as schematized below:

(113)



Furthermore, I posit that there are two lexical Voice heads. One is selected for cases wherein the verb is spelled out in an intermediate position and it has the ability to trigger head movement of the head $v+V$ onto it. In contrast, a different Voice head will be merged for those cases where the verb is spelled out lower, following the object (i.e., PP-initial clauses). This head does not attract the head $v+V$.

This idea captures the fact that, in DP-initial clauses, the verb undergoes movement through Voice on its way up to Spec,CP, while in PP-initial clauses, it does not, which is evidenced by its strict final position within the clause. Additionally, a PF constraint, to be elaborated shortly, precludes spellout of both the verb and extracted DPs in Spec,CP. Consequently, the intermediate copy of the verb on Voice is pronounced at PF.⁴³

With these ideas in mind, I propose extracted DPs and verbs cannot co-occur in Spec,CP due to a language-internal PF constraint that forbids spellout of multiple specifiers in Spec,CP, as defined in (114):⁴⁴

(114)

The Kawahíva Doubly-Filled Spec,CP PF Constraint: Spec,CP cannot spell out more than one specifier.

⁴³ One might raise a concern that this account amounts to a conspiracy – the verb moves to Voice only when it might end up being spelled out on this head. However, this issue is not exclusive to Kawahíva. Harizanov and Gribanova (2019: 500) also noted a reviewer’s reaction to their alternative approach to the account of German V2 that maintains V-to-T. As the authors pointed out, the traditional account of German V2 also leads to a conspiracy, wherein v attracts V, and then, T attracts v . The upshot is that even for well-studied phenomena like German V2, the mainstream account exhibits a flavor of conspiracy.

⁴⁴ Additional evidence that Spec,CP does not allow multiple specifiers comes from the existence of multiple *wh*-words in a sentence, as in “who saw what?”, in which the subject, but not the object, always fronts.

The PF component then must spell out a lower copy of the verb. I propose this is just the highest copy of the complex head V+v before reaching Spec,CP, that is, the copy on Voice.⁴⁵⁴⁶

A question that arises concerns the choice to realize the verb in a lower position: why is it the verb, and not the extracted DP, that must be realized lower? I suggest the choice where the extracted DP surfaces lower is ungrammatical because it violates the linearization ordering established between the extracted DP and the verb in earlier spell-out domains. This idea builds on Fox and Pesetsky (2005)'s linearization algorithm for the syntax-phonology mapping. This algorithm prohibits contradictions between the orderings of words fixed in an earlier spell-out domain. For our purpose here, it will be assumed that the spell-out domains in Kawahíva correspond to the complement of the phasal heads C and v.

Consider the different orderings established in scenarios of co-occurring DP extraction and verb fronting, starting with subject extraction, which is illustrated in (115). The expression “A < B” should be read as “A precedes B”:

(115)

Spell-out applies to CP

[_{CP} DP_{subj} < V < Mood < T < ~~DP_{subj}~~ < V [_{vP} < DP_{obj} < V]]

In subject extraction, the relevant spell-out domain is the CP; the relative ordering within the VP is non-relevant because the subject argument is not merged at the point when Spellout applies to the VP.

Within the CP are the DP subject and verb, in this order – I assume the verb tucks in beneath the verb (Richards 2014), thus keeping the relative order between the two prior to movement to Spec,CP unchanged. However, the PF constraint in (114) rules out spellout of both of the initial constituents in this algorithm. Spelling out V lower rather than the subject DP allows the relative ordering of the subject DP and V to be maintained, so only the initial V is deleted.

Consider now object extraction. In these cases, both CP and VP count for the evaluation of relative ordering by the linearization algorithm. First of all, the relative ordering of the object relative to the verb is such that the object precedes the verb in the VP, as demonstrated in (116).

⁴⁵ A similar pattern of spelling out a lower copy of a fronted verb just in case the original landing site has been taken is found in Classical Hebrew predicate clefts (Harbour 1999). Harbour shows that verbs move to T in non-predicate cleft constructions. In predicate cleft constructions, the verb moves to C. However, if C is taken by a head that must occur in this position – such as a frame-setting adverbial like ‘in the beginning’ – then the verb cannot raise to C anymore and spells out lower.

⁴⁶ The creation of copies as the verb moves up is also consistent with the current hypothesis that Kawahíva V1 results from syntactic movement, as syntactic movement, but not morphological amalgamation, can create copies (Harizanov and Gribanova 2019: 487).

(116)

Spell-out applies to VP

$DP_{obj} < V$

Subsequently, the object is moved to Spec,CP. The verb moves to Voice and then to Spec,CP. The final order between the two at the moment when Spell-out applies to CP is represented in (117).

(117)

Spell-out applies to CP

$[_{CP} DP_{obj} < V < Mood < T < DP_{subj} < V [_{vP} < DP_{obj} < V]]$

As it can be seen, realizing the verb in Spec,CP instead of the DP object would contradict the relative order established when Spell-out applied to VP. Spelling out a lower copy of V instead of the initial copy maintains the relative order between the extracted object and verb established within the VP.

In sum, choosing to realize the extracted DP rather than the verb in Spec,CP is a consequence of the mapping from syntax to phonology, in particular, an effect of the order preservation monotonic property of Spell-out proposed by Fox and Pesetsky (2005).

7.2 An alternative to the complementary distribution between phrases and verbs

In footnote (17), an alternative approach to the competition between informationally prominent phrases and verbs for the clause-initial position was raised. In it, this distribution is due to different C-heads hosting different feature triggers.

This alternative would also have to take into account the morphosyntactic differences that arise depending on the syntactic category of the initial element when it is not the verb. Specifically, we would have a C-head that is endowed with the feature that leads to extraction of DPs, one for PPs, and yet a different one for verb fronting. Then, it could still be maintained that phrases land in the usual position for phrases, namely a specifier. In Kawahíva, this would be Spec,CP. In contrast, the verb lands in the usual position for a head. This position would be the C head in cases of verb fronting. Under this view, the complementary distribution between these elements, therefore, boils down into there being a different trigger on the different C-heads for each type of fronting, rather than a competition for the same position.

The discussion in the preceding section has shown that a single explanation is possible if we posit that the feature triggers can actually co-exist on C. Positing that they co-occur on C when extraction is involved in matrix clauses straightforwardly accounts for the

morphosyntactic differences observed on the verb depending on the syntactic category of the element in clause-initial position (i.e., DPs vs. PPs). In the competing account, however, we would miss the generalization that extracted PPs, but not DPs, remove the ability of the verb to undergo fronting.

7.3 The XP vs. X movement debate

The proposed analysis of verb movement for Kawahíva V1 circumvents an issue that arises in other case studies of verb fronting wherein the head X of XP fronts despite the fact that XP is the maximal projection of X and should be a closer target for fronting. This condition of a closer target follows from the standard assumption in Bare Phrase Structure (BPS) that a phrase and its head share the same label. If V-v and the vP that it is the head of bear the same features, they both should be eligible goals for fronting triggered by [V] on C. That is, if v has the [V] feature, so does vP. However, if that is the case, and without introducing additional assumptions, the system would appear to predict — contrary to fact — that vP should undergo movement rather than V-v because vP is closer to the probe than V-v.

This issue does not arise in the creation of Kawahíva V1, according to the present proposal. This is so because once V-v moves to Voice, they become a closer target for movement to Spec,CP than vP. Additionally, in instances where V-v does not front, the trigger for this fronting has been removed by a clause-initial PP. Consequently, vP cannot be eligible for fronting either.

8 Conclusion

I hope to have presented a compelling case that the creation of verb-initial (V1) clauses in informationally neutral matrix clauses in Kawahíva (Tupí-Guaraní; Brazil) involves (long) syntactic head movement of the verb to a position above its arguments. Arguments for this idea came from the properties associated with syntactic movement, including semantic effects, nonlocality, and a specifier landing site.

Competing alternatives, such as the Remnant VP movement and Morphological amalgamation, were considered but ultimately set aside due to their core predictions not being realized. Notably, these include the movement of the object prior to the movement of the remnant VP under the Remnant approach and a strictly local movement under the morphological amalgamation account. However, positive evidence that Kawahíva V1 does not involve object movement prior to verb movement strongly argues against the first alternative. In addition, the nonlocal property of the movement that leads to V1 discourages the amalgamation analysis.

This analysis contributes to the growing list of languages where syntactic head movement is a general mechanism for deriving verb-initial order. Such languages include Mayan (Clemens and Coon 2018), Otomanguean (Lee 2005; Macaulay 2005; Eberhardt 1999) and, under one proposal, the Polynesian language Niuean (Clemens 2019).

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