VP-movement in a VSO language: A case study from San Juan Piñas Mixtec

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Introduction

Many languages display **verb-initial word order (e.g. VSO or VOS)**:

(1) a. **Leanann** an t-ainmní an braithar i nGaeilge
          follow.PRES the subject the verb in Irish
          'The subject follows the verb in Irish.'   (Irish; VSO)
          (Carnie, 1995)

   b. **N-ahita** ny voalavo ny akoho
       PST-see DET rat DET chicken
       'The chicken saw the rat.'   (Malagasy; VOS)
       (Clemens and Polinsky, 2017)

▸ An ongoing debate concerns how these verb-initial word orders should
  be modeled syntactically—and if a single approach to verb-initiality could
  account for <u>both</u> VSO and VOS.

Introduction

Two general approaches to verb-initiality highlighted here, unified in the idea that the **verb undergoes movement** to a position above the subject:

1. V^0 undergoes head movement to some position past the subject.[1]

(2)   a.
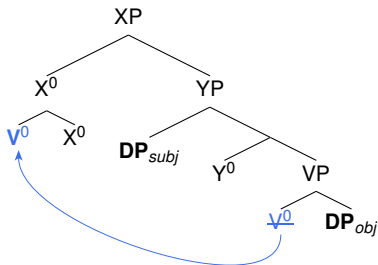
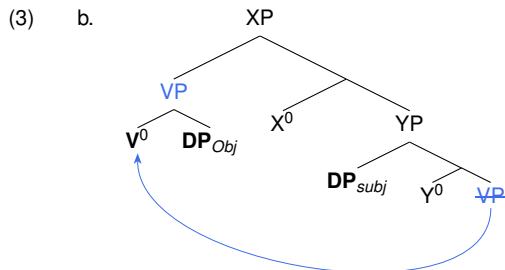→ This account straightforwardly derives **VSO** word order.

[1]McCloskey (1996) on Irish (VSO), Clemens (2019) on Niuean (VSO/VOS),
Clemens and Coon (2018) on Mayan (VSO/VOS), Eberhardt (1999) on Ocotepec Mixtec,
Macaulay (2005) on Chalcatongo Mixtec, Ostrove (2020) on San Martín Peras Mixtec.

Introduction

Two general approaches to verb-initiality highlighted here, unified in the idea that the **verb undergoes movement** to a position above the subject:

2. VP undergoes phrasal movement to some position past the subject.[2]

(3) b.

→ This account straightforwardly derives **VOS** word order.

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[2]Massam (2001) and Clemens (2014) on Niuean (VSO/VOS), Pearson (2001) on Malagasy (VOS), Lee (2006) on San Lucas Quiaviní Zapotec (VSO), Adler et al. (2018) on Santiago Laxopa Zapotec (VSO), van Urk (to appear) on Imere (SVO) and on VSO/VOS languages cross-linguistically.

Introduction

Note: Within the family of VP-movement analyses, there is not consensus in the **exact size/category** of the raising constituent (e.g. whether it is genuinely a VP or a larger constituent such as a *v*P or PredP).

▸ This talk will use "VP" throughout as a placeholder, abstracting away from these different possibilities.

Introduction

It has also been proposed that **V^0-movement** is compatible with **VOS** word order, and that **VP-movement** is compatible with **VSO** word order.

- However, such approaches require additional steps to accommodate the otherwise unexpected position of the object.

Introduction

Against this backdrop, this talk investigates the derivation of **VSO word order** in the San Juan Piñas variety of Mixtec (Tò'òn Ndā'ví).

(4) a. **ka⁵ndi³ta³** ɲa⁵   Pa³lo³ma⁵
         PRES.jump CL.3SG.F Paloma
         'Paloma is jumping.'   (VS)

   b. **ni¹-ta³ʔvi⁵** ɲa⁵   Ga³bi⁵ ɲa¹   ʒoo³
         PST-break CL.3SG.F Gaby   CL.3.N water.jug
         'Gaby broke the water jug.'   (VSO)

Introduction

I suggest that a **VP-fronting analysis** is more empirically adequate for SJPM than a V^0-movement analysis—despite the general lack of VOS word order in the language.

- ▸ This is contrary to previous approaches to VSO word order in other Mixtec varieties (Eberhardt, 1999; Macaulay, 2005; Ostrove, 2020).
- ▸ However, this type of analysis has been proposed for distantly related Zapotec varieties, also VSO (Lee, 2006; Adler et al., 2018), based on a different set of arguments.

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Evidence for this approach for SJPM comes from:

▸ The distribution of adverbs in the VP-domain
▸ The surface position of reciprocals
▸ The possibility of quantifier stranding inside the VP

Introduction

Typological implications: We will also see that SJPM displays various syntactic properties also found in other "VP-raising" languages (Austronesian in particular).

1. SJPM lacks a VP-external subject position for DPs, i.e. no A-movement to Spec-TP.[3]

2. SJPM displays structural asymmetries in the extractability of wh-elements.[4]

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[3] e.g. Alexiadou and Anagnostopoulou (1998), Massam (2001), Oda (2005), Coon (2010a).
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1. SJPM lacks a VP-external subject position for DPs, i.e. no A-movement to Spec-TP.[3]

2. SJPM displays structural asymmetries in the extractability of wh-elements.[4]

Finally, this talk <u>does not</u> substantively address the question of why certain VP-internal elements (e.g. objects) do not surface within the fronted VP.

▸ But I show that certain existing analyses (whether syntactic or prosodic) cannot straightforwardly account for the full range of SJPM facts.

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[3]e.g. Alexiadou and Anagnostopoulou (1998), Massam (2001), Oda (2005), Coon (2010a).

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Roadmap

Background; key properties of SJPM

San Juan Piñas Mixtec (Oto-Manguean) is spoken in the Santiago Juxtlahuaca municipality of Oaxaca, MX, and diaspora communities in California and beyond.

- ▶ Classified as within the Southern Baja Mixtec linguistic region (see dialect map here).

San Juan Piñas, Oaxaca, México (map from Google Earth)

The SJP variety of Mixtec is previously undocumented.

The data presented here stem from ongoing collaborative work (Jan. 2020–present) with **Claudia Juárez Chávez**, **Gabriela Caballero**, and other members of our SJPM language project at UCSD.

- Other project goals: The development of linguistic resources for language reclamation (led by C.J.C.), as well as the documentation and analysis of lexical and grammatical tone in the language.[5]

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[5] See e.g. Caballero et al. (submitted).

A note on transcription:

- There is no standardized orthography for SJPM; this talk uses IPA.[6]
- Three level tones ($H = V^5$, $M = V^3$, $L = V^1$), which may combine to form various rising and falling contours (e.g. $LH = V^{15}$, $ML = V^{31}$, etc.).

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[6]Though see Caballero et al. (submitted) on the preliminary development of an orthographic convention for SJPM.

Background; key properties of SJPM

The base word order of SJPM (as well as other Mixtec varieties and related Oto-Manguean languages) is **Verb-Subject-Object**.

Pronominal subjects and objects are often realized as **enclitics** and are also in VSO order; full nominals are often accompanied by a classifier/determiner.

- *Assumption:* These pronominal enclitics occupy the same structural positions as their full nominal counterparts, and "lean" on whatever immediately precedes them (Caballero et al., 2021).

(5) a. ni^1-ta^{3}ʔvi^5 **ɲa^5** **Ga^{3}bi^5 ɲa^1 ʒoo^3**
         PST-break CL.3SG.F Gaby CL.3.N water.jug
         'Gaby broke the water jug.'   (V S O)

  b. ni^1-ta^{3}ʔvi^5=**ɲa^5**=**ɲa^3**
         PST-break=CL.3SG.F=CL.3.N
         'She broke it.'   (V S$_{Cl}$ O$_{Cl}$)

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Background; key properties of SJPM

SVO is also commonly attested in SJPM, especially in elicitation contexts, (6); in such cases the preverbal subject usually co-occurs with a postverbal pronominal enclitic.

(6)   a.   ni^1-ta^{3}ʔvi^5 **ɲa^5**   **Ga^{3}bi^5** ɲa^1 ʒoo^3
                PST-break CL.3SG.F Gaby CL.3.N water.jug
                'Gaby broke the water jug.'   (V S O)

       b.   **ɲa^5**   **Ga^{3}bi^5** ni^1-ta^{3}ʔvi^5=**ɲa^5**   ɲa^1 ʒoo^3
                CL.3SG.F Gaby   PST-break=CL.3SG.F CL.3.N water.jug
                'Gaby broke the water jug.'   (S V=Cl$_{Subj}$ O)

Background; key properties of SJPM

I assume that SVO word order arises from subject topicalization to Spec-CP,[7] and that the postverbal enclitic realizes the tail of this movement chain (i.e. partial copy spell-out[8]).

▸ As expected, when some other element occupies this topic position, the subject is obligatorily postverbal (~V2 effect).

(7)   a.   ɲa⁵   Ma³ri³a⁵ nda³kʷa³tu³=ɲa⁵   **tʃa³aⁿ¹**
           CL.3SG.F Maria   IRR.pray=CL.3SG.F tomorrow
           'Maria will pray tomorrow.'   (S V=Cl*subj* Adv)

      b.   **tʃa³aⁿ¹**   nda³kʷa³tu³ ɲa⁵   Ma³ri³a⁵
           tomorrow   IRR.pray   CL.3SG.F Maria
           'Tomorrow Maria will pray.'   (Adv V S)

→ Thus, I will sometimes use S [V=CL*subj* O] examples to illustrate "verb-initiality" when necessary.

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[7] See also Macaulay (2005).

[8] e.g. Kandybowicz (2007), Harizanov (2014), van Urk (2018).

Background; key properties of SJPM

The order of pre-verbal morphemes (including tonal morphemes) maps straightforwardly to the order of projections in a standard left-headed structure: **C > T > V**.

(8)   COMP TNS/ASP CAUS/INCH verb = (CL_{subj} = CL_{obj})

      a. a^5 ni^1-si^1so^1=ra^5

          Q PST-boil=3SG.LIQ

          'Did it (the water) boil?'

      b. $t\int i^{n3}$ sa^{15}-kaa^5n=o^5=ηa^3

          because PST.CAUS.throw=2SG=3SG.N

          '. . . because you threw it.'

Background; key properties of SJPM

Finally, **V and O form a syntactic constituent** at <u>some</u> level of representation (as one can assume given standard assumptions about argument structure).

- *Independent evidence:* A handful of verbs in SJPM display root allomorphy, conditioned by the number of the <u>internal argument</u> (unaccusative subject or transitive object).[9]

(9) *'to stand up (*SG*)':*

    a.   i⁵-**ndi³tʃi³¹**   <u>**na⁵**</u>   <u>**Ga³bi⁵**</u>
        PRES-stand.up.SG CL.3SG.F Gaby
        '<u>Gaby</u> is standing up.'   (sg. form)

    b.   tʃi⁵-**ndi³tʃi³**=na¹   <u>**na¹**</u>   <u>**li³bro⁵**</u>
        PRES.CAUS-stand.up.SG=CL.3PL.N CL.3.N book
        'They are standing up <u>the book</u>.'   (sg. form)

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[9]See e.g. Bobaljik and Harley (2017) for discussion.

Background; key properties of SJPM

Finally, **V and O form a syntactic constituent** at <u>some</u> level of representation (as one can assume given standard assumptions about argument structure).

- ▸ *Independent evidence:* A handful of verbs in SJPM display root allomorphy, conditioned by the number of the <u>internal argument</u> (unaccusative subject or transitive object).[10]

(10)   *'to stand up (*PL*)':*

     a. **ndi⁵ta³**=**na⁵**
         PRES.stand.up.PL=CL.3PL.N
         '<u>They</u> are standing up.' (pl. form)

     b. tʃi⁵-**ndi³ta³**=ɲa⁵   **ɲa¹**   **li³bro⁵**
         PRES.CAUS-stand.up.PL=CL.3SG.F CL.3.N book
         'She is standing up <u>the books</u>.' (pl. form)

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[10] See e.g. Bobaljik and Harley (2017) for discussion.

Thus, we can assume **syntactic locality** between the verb and internal argument, despite the surface VSO order.

Roadmap

Verb-initiality in SJPM

As noted, there are two primary syntactic approaches to deriving verb-initial word order: **V^0-movement** and **VP-movement**.

- Previous work on Mixtec syntax has proposed to derive this word order via head movement of V^0, (11).[11]

(11)
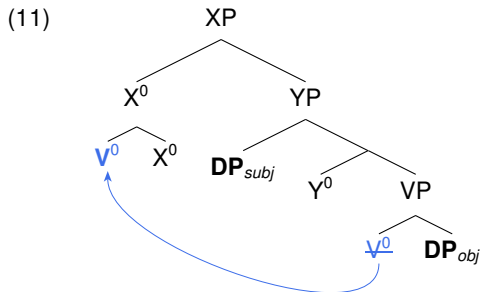
[11] Eberhardt (1999), Macaulay (2005), Ostrove (2020).

Verb-initiality in SJPM

At first blush, a head movement analysis <u>does</u> seem most straightforward for SJPM. . .

- ▸ It would capture the VSO word order relatively straightforwardly, and is consistent with the fact that VOS is not possible in most contexts:

(12)   a.   ni¹-ta³ʔvi⁵ ɲa⁵   Ga³bi⁵ **ɲa¹**   **ʒoo³**
            PST-break CL.3SG.F Gaby   CL.3.N water.jug
            'Gaby broke the water jug.'   (VSO)

       b.   *ni¹-ta³ʔvi⁵ **ɲa¹**   **ʒoo³**   ɲa⁵   Ga³bi⁵
            PST-break CL.3.N water.jug CL.3SG.F Gaby
            Intended: 'Gaby broke the water jug.'   (*VOS)

Verb-initiality in SJPM

At first blush, a head movement analysis <u>does</u> seem most straightforward for SJPM. . .

- ▸ Similarly, VP-internal PPs generally do not front with the verb (*V PP S O).

(13) a. kʷa^{1}ʔa^3 ɲa^5 　　Pa^{3}lo^{3}ma^{51} i^{3}ta^{31} **nda^{3}ʔa^5 ɲa^5** 　　**Ga^{3}bi^5**
　　　IRR.give CL.3SG.F Paloma 　　flower hand 　　CL.3SG.F Gaby
　　　'Paloma will give the flower to Gaby.' 　　　　　　(V S O PP)

　　b. *kʷa^{1}ʔa^3 **nda^{3}ʔa^5 ɲa^5** 　　**Ga^{3}bi^5** ɲa^5 　　Pa^{3}lo^{3}ma^{51} i^{3}ta^3
　　　IRR.give hand 　　CL.3SG.F Gaby CL.3SG.F Paloma 　　flower
　　　Intended: 'Paloma will give the flower to Gaby.' 　　(*V PP S O)

Verb-initiality in SJPM

At first blush, a head movement analysis <u>does</u> seem most straightforward for SJPM...

- ▶ Finally, SJPM has several lexicalized verb+noun compounds, with the noun as a direct object or instrument.
  - ▶ These constructions always involve bare nominals, so are still compatible with a head movement analysis (assuming V^0+N^0 movement).[12]

(14)   a.   **ka^{5}ta^5**   **so^{1}ko^5**   ɲa^5 Pa^{3}lo^{5}ma^5
             PRES.itch neck   CL.3SG.F Paloma
             'Paloma is coughing.'   ([V N] S)

       b.   **ko^{5}o^{n13}**   **nda^{3}ʔa^5**   ɲa^5 Pa^{3}lo^{3}ma^{51} ti^5 vi^{3}lu^5
             PRES.spread hand   CL.3SG.F Paloma   CL.3SG.ZOO cat
             'Paloma is petting the cat.'   ([V N] S O)

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[12]Baker (1988), Baker et al. (2005).

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Verb-initiality in SJPM

However: There are other elements in SJPM that systematically move with the verb. Moreover, these elements can be shown to be **phrasal**.

Verb-initiality in SJPM

However: There are other elements in SJPM that systematically move with the verb. Moreover, these elements can be shown to be **phrasal**.

Thus, a VP-movement analysis fares better overall—though we require an explanation for why the object generally does not front with the VP.

Verb-initiality in SJPM: Adverb order

Generalization #1: VP-internal adverbs front with the verb, resulting in **V Adv S O** word order.

▸ *Note:* SJPM has both preverbal and postverbal manner adverbs; *only the latter* are discussed here.[13]

(15) a. ʃi⁵ta³   **tʃe⁵ʔe⁵** ɲa⁵   Pa³lo³ma⁵
          PRES.sing loud   CL.3SG.F Paloma
          'Paloma is singing loudly.'   (V Adv S O)

      b. tu⁵tu⁵   ʒu³ʔu⁵ **ʒaa¹**=ɲa⁵
          PRES.whistle mouth still=CL.3SG.F
          'She is still whistling.'   (V Adv S)

      c. vi¹ʃin³ **ku⁵tʃon³** ra⁵   ru¹kʷi³⁵
          cold   very   CL.3SG.LIQ water
          'The water is very cold.'   (Adj Adv S)

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[13] Secondary predicates also front with the verb.

Verb-initiality in SJPM: Adverb order

The fronting of a VP-internal adverb is moreover **obligatory**:

(16) a. ʃi⁵ta³   **tʃe⁵ʔe⁵** ɲa⁵   Pa³lo³ma⁵
         PRES.sing loud   CL.3SG.F Paloma
         'Paloma is singing loudly.'   (V Adv S O)

     b. *ʃi⁵ta³   ɲa⁵   Pa³lo³ma⁵ **tʃe⁵ʔe⁵**
         PRES.sing CL.3SG.F Paloma   loud
         Intended: 'Paloma is singing loudly.'   (*V S O Adv)

Verb-initiality in SJPM: Adverb order

In contrast, **VP-external adverbs** (e.g. temporal adverbs) never front with the verb—they either surface clause-finally or they are topicalized.

(17) a. ɲa⁵   Ma³ri³a⁵ nda³kʷa³tu³=ɲa⁵   **tʃa³aⁿ¹**
       CL.3SG.F Maria   IRR.pray=CL.3SG.F tomorrow
       'Maria will pray tomorrow.'   (S V=Cl*Subj* Adv)

     b. **tʃa³aⁿ¹**   nda³kʷa³tu³ ɲa⁵   Ma³ri³a⁵
       tomorrow IRR.pray   CL.3SG.F Maria
       'Tomorrow Maria will pray.'   (Adv V S)

Verb-initiality in SJPM: Adverb order

That a VP-internal adverb may **linearly intervene** between a verb and its object is quite unexpected from the perspective of a language like English *ate quickly the cheese*).

- But it is commonly attested in various verb-fronting languages (e.g. Austronesian), and can be accommodated under both V^0-movement and VP-movement approaches.
  - e.g. in one recent V^0-movement approach of Niuean (Clemens, 2019), adverbial particles are treated as Adv^0s along the clausal spine that V^0 can move to, (18):

(18)
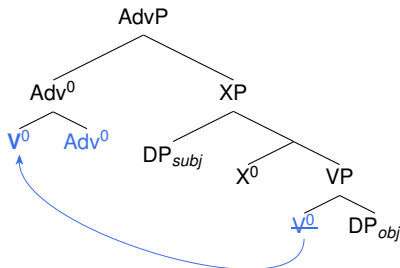
Verb-initiality in SJPM: Adverb order

However, in SJPM, the VP-internal adverbs are **phrasal**—as evidenced by the fact that they may themselves by modified.

(19)   ʃi⁵ta³   **tʃe⁵ʔe⁵ ku⁵tʃoⁿ³** ɲa⁵   Pa³lo³ma⁵
        PRES.sing loud   very   CL.3SG.F Paloma
        'Paloma is singing very loudly.'

- ▸ This <u>cannot</u> be accommodated by a V^0-movement analysis—but is fully expected if adverbs are AdvPs that right-adjoin to a VP.

Verb-initiality in SJPM: Adverb order

Indeed, as expected under a right-adjunction approach, multiple postverbal co-occurring adverbs take scope in a **right-to-left manner** (Adv1 < Adv2).[14]

- ▸ Moreover, this relative ordering is obligatory.

(20) a. tu⁵tu⁵   ʒu³ʔu⁵ **tʃe⁵ʔe⁵ ʒaa¹**=ɲa⁵
          PRES.whistle mouth loud   still=CL.3SG.F
          'She is still whistling loudly.'   (still > loudly)

     b. *tu⁵tu⁵   ʒu³ʔu⁵ **ʒaa¹ tʃe⁵ʔe⁵**=ɲa⁵
          PRES.whistle mouth still loud=CL.3SG.F
          Intended: 'She is still whistling loudly.'   (*loudly > still)

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[14]See also Rackowski and Travis (2000), Massam (2001), van Urk (to appear) for discussion of this point in various Austronesian languages.

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Verb-initiality in SJPM: Adverb order

Thus, structurally higher adverbs surface to the right of structurally lower ones:

(21)
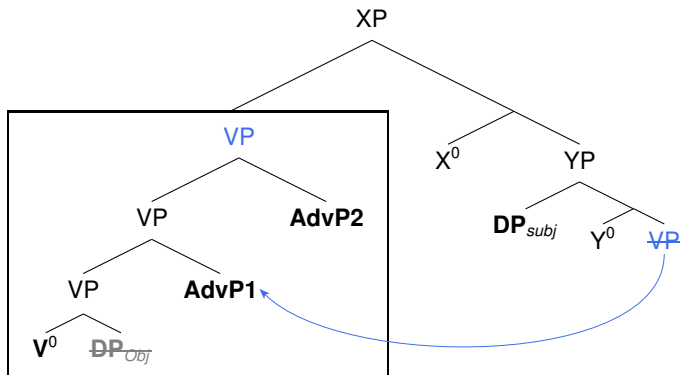
▸ (The "DP_{Obj}" represents the unpronounced but syntactically present object.)

Verb-initiality in SJPM: Reciprocals

Generalization #2: Reciprocal objects (*ta⁵ʔa^{n3}* 'each other') must raise with the verb, yielding VOS order.[15]

(22) a. no³mi³ ʒoo⁵=**ra³**
          IRR.hug 1PL.IN.PRON=CL.3SG.M
          'We will hug him.'   (V S O)

    b. no³mi³ __ta⁵ʔ__=e^{n5}
          IRR.hug each.other=CL.1PL.IN
          'We will hug each other.'   (V O_{Recip} S)

- *Note:* This pattern does not result in a Principle A violation, presumably because the reciprocal reconstructs in its base position.

Verb-initiality in SJPM: Reciprocals

Importantly, reciprocals enclosed within PPs similarly require that the **entire PP** front with the verb—though recall that PPs otherwise <u>do not</u> front.

- ▸ This fact rules out possible alternative analyses, e.g. immediate adjacency between the verb and the reciprocal (via compounding), etc.

(23) a. $k^w a^1 ʔa^3\ ɲa^5$ $Pa^3 lo^3 ma^{51}\ i^3 ta^{31}$ **[nda^{3}ʔa^5 ɲa^5**
IRR.give CL.3SG.F Paloma   flower hand   CL.3SG.F
Ga^{3}bi^5]
Gaby
'Paloma will give flowers to Gaby.'   (V S O PP)

  b. $k^w a^1 ʔa^3$ **[nda^{3}ʔa^5 <u>ta^{5}ʔa^{n3}]</u>**=na^5 $i^3 ta^3$
IRR.give hand   each.other=CL.3PL.N flower
'They will give flowers to each other.'   (V PP$_{Recip}$ S O)

The reciprocal pattern shows that phrasal elements (e.g. PPs) may, in certain contexts, front with a verb—again, suggesting a **VP-movement analysis**.

(24)
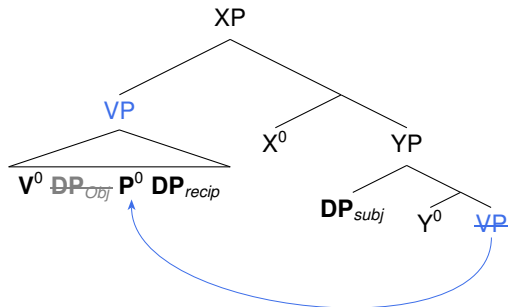
Verb-initiality in SJPM: Reciprocals

Note: At this time, I do not have an account of <u>why</u> this pattern holds. . .

- ▶ Perhaps it is indicative of a local relationship with the verb (specifically, v^0?), as in certain Agree-based accounts of binding.[16]

- ▶ But even so, this pattern must be determined **postsyntactically**: it affects the surface realization of the reciprocal, not its syntactic position (assuming that it is syntactically present within the raised VP constituent in all contexts).

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[16]e.g. Kratzer (2009), Murphy and Meyase (2020).

Generalization #3: Quantifiers associated with objects may display what appears to be **quantifier float**.[17]

- *One common treatment (adopted here):* The quantifier and its associate form a constituent underlyingly; moving the associate may strand the quantifier in its base position.[18]

(25)   **[We]**$_i$ are **[__$_i$ all/both]** enjoying this meal.

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[17] Again, I thank Jason Ostrove (p.c.) for first alerting me to similar facts in San Martín Peras Mixtec.

[18] Sportiche (1988, a.o.).

Verb-initiality in SJPM: Quantifier stranding

Quantifiers in SJPM form a constituent with a following nominal associate.

- ▸ Most clearly shown with VP-external subjects—quantifiers obligatorily topicalize with their associates in SVO constructions (no quantifier float).

(26) a. ʃi⁵tʃi³   **ndi³ʔi³ ʒoo⁵**
          PRES.swim/bathe all   1PL.IN.PRON
          'All of us are swimming/bathing.'   (V S)

      b. **ndi³ʔi³ ʒoo⁵**   ʃi⁵tʃ=i⁵
          all   1PL.IN.PRON PRES.swim/bathe=CL.1PL.IN
          'All of us are swimming/bathing.'   (S V=CL$_{Subj}$)

(27) **ndi³u¹vi¹ na¹   va⁵li³**   ʃi⁵tʃi³=na³
      both   CL.3PL.N children PRES.swim/bathe=CL.3PL.N
      'Both of the children are swimming/bathing.'   (S V=CL$_{Subj}$)

Verb-initiality in SJPM: Quantifier stranding

However, quantifiers associated with objects may surface **within the fronted VP**.

► Whether this pattern is obligatory, optional, or impossible seems to depend on the quantifier in question.

(28) a. *ʃa^{13}ʃi^5 ɲa^5 Pa^{3}lo^{3}ma^5 **ndi^{3}ʔi^3 ɲa^1 ti^{1}ko^{3}o^{13}**
PST.eat CL.3SG.F Paloma all CL.3.N tamale
Intended: 'Paloma ate all of the tamales.' (*V S [all O])

b. ʃa^{13}ʃi^5 **ndi^{3}ʔi^3** ɲa^5 Pa^{3}lo^{3}ma^5 **ɲa^1 ti^{1}ko^{3}o^{13}**
PST.eat all CL.3SG.F Paloma CL.3.N tamale
'Paloma ate all of the tamales.' ([V all] S O)

Verb-initiality in SJPM: Quantifier stranding

However, quantifiers associated with objects may surface **within the fronted VP**.

- ▸ Whether this 'quantifier float' pattern is obligatory, optional, or impossible seems to depend on the quantifier in question.

(29) a. $\int a^{13}\int i^5$ ηa^5 Pa^{3}lo^{3}ma^5 **k^{w}a^{1}ʔa^3 ti^{1}ko^{3}o^{13}**
        PST.eat CL.3SG.F Paloma   many   tamale
        'Paloma ate many tamales.'   (V S [many O])

   b. $\int a^{13}\int i^5$ **k^{w}a^{1}ʔa^3** ηa^5 Pa^{3}lo^{3}ma^5 **ti^{1}ko^{3}o^{13}**
        PST.eat many   CL.3SG.F Paloma   tamale
        'Paloma ate many tamales.'   ([V many] S O)

Verb-initiality in SJPM: Quantifier stranding

However, quantifiers associated with objects may surface **within the fronted VP**.

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(30) a. ʃa^{13}ʃi^5 ɲa^5 Pa^{3}lo^{3}ma^5 **<u>ndi^{3}u^{1}vi^1</u> ɲa^1 ti^{1}ko^{3}o^{13}**
   PST.eat CL.3SG.F Paloma both CL.3.N tamale
   'Paloma ate both of the tamales.' (V S [both O])

b. *ʃa^{13}ʃi^5 **<u>ndi^{3}u^{1}vi^1</u>** ɲa^5 Pa^{3}lo^{3}ma^5 **ɲa^1 ti^{1}ko^{3}o^{13}**
   PST.eat both CL.3SG.F Paloma CL.3.N tamale
   Intended: 'Paloma ate both of the tamales.' (*[V both] S O)

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Verb-initiality in SJPM: Quantifier stranding

Under a stranding analysis: The quantifier portion of the object may be realized within the VP, even though its restrictor may not.

- ▸ Thus, moving the VP may result in the quantifier fronting with the verb.

Verb-initiality in SJPM: Interim summary

Generalization #1: VP-internal adverbs front with the verb, resulting in V Adv S O word order.

- ▸ Moreover, these adverbs are phrasal.

Generalization #2: Reciprocal objects ($ta^5ʔa^{n3}$ 'each other') must front with the verb.

- ▸ Moreover, in certain contexts, the fronted reciprocal may be contained in a larger constituent, e.g. a PP.

Generalization #3: Quantifiers associated with objects may display what appears to be quantifier float.

- ▸ This may be analyzed as the quantifier being stranded within the VP.

Roadmap

Typological implications

Having established that SJPM word order is derived by VP-fronting, I now explore some of **typological and theoretical corollaries** of such an account.

In particular, SJPM shares a number of syntactic properties with unrelated verb-initial languages, in particular Austronesian...

1. Like many Austronesian languages, SJPM seems to lack a VP-external subject position (i.e. no A-movement to Spec-TP for DPs).
2. Like many Austronesian languages, SJPM displays argument vs. adjunct asymmetries in wh-questions.

Typological implications: Interactions with T^0

For some verb-initial languages (most explored with Austronesian), it has been proposed that T^0's [EPP] feature can be (or must be) satisfied by the **verb** (via V^0-movement or VP-movement).[19]

▸ Under this view, DPs do not raise to Spec-TP (some approaches instead suggest a vP-internal derived position[20]).

---

[19] Alexiadou and Anagnostopoulou (1998), Davies and Dubinsky (2001), Massam (2001), Aldridge (2002), Oda (2005), Coon (2010b).

[20] e.g. Longenbaugh and Polinsky (2018).

SJPM lacks A-movement of DPs: No evidence for the existence of passives, raising-to-subject, or raising-to-object.[21]

(31) a. ʃi¹ni³i³=na¹ ɲa¹ **ʒu⁵ʃi¹ni³**
PST.carry=CL.3PL.N CL.3SG.N hat
Attempted: 'The hat was carried.'
Lit.: 'They carried the hat.'

b. tu⁵va¹ʔa³ra³ ko⁵oⁿ³ **sa¹vi⁵**
probably PRES.fall rain
Attempted: 'It seems to be raining' / 'Rain seems to be falling.'
Lit.: 'Probably rain is falling.'

c. ɲa⁵ Ma³ri³a⁵ ko¹³ni³=ɲa⁵ ka³ʃa⁵ʔa³ **ra¹** **Juan⁵¹**
CL.3SG.F Maria PST.want=CL.3SG.F IRR.eat CL.3SG.M Juan
'Maria wanted Juan to eat.'

---

[21] See also Ostrove (2018) for a similar point about San Martín Peras Mixtec.

Typological implications: Interactions with T^0

Extending the cross-linguistic parallel further, we may want to take VPs in SJPM to move to Spec-TP.

- ▸ If so, we need to account for how heads such as T^0 linearly precede the VP in Spec-TP (not insurmountable, but requires some fleshing out).

(32)   a. a^5 ni^1-si^1so^1=ra^5
           Q   PST-boil=3SG.LIQ
           'Did it (the water) boil?'

       b.
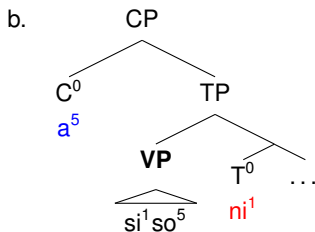
Typological implications: Wh-question formation

Previous work on verb-initiality in Austronesian has drawn a connection between **wh-extraction** and **VP-movement**.[22]

- ▸ Many VP-raising languages solely rely on wh-in situ or wh-clefts to form wh-questions (e.g. Malagasy, Seediq); others permit only adjuncts to undergo wh-movement (e.g. Toba Batak, Malay, Indonesian).

(33) *Toba Batak (VOS) (Hermon, 2009):*

    a. Mang-atuk biang **ise**?
        ACT-hit   dog   who
        'Who hit the dog?'   (wh-subj.)

    b. Mang-atuk **aha** si-John?
        ACT-hit   what HON-John
        'What did John hit?'   (wh-obj.)

    c. **Tu ise** mang-alean buku si-John?
        to who ACT-give   book HON-John
        'To whom did John give a book?'   (wh-adjunct)

---

[22] Oda (2005), Potsdam (2009), Hermon (2009), Hsieh (2020).

Typological implications: Wh-question formation

SJPM displays a similar asymmetry: Wh-arguments require fronting via clefting; wh-adjuncts may undergo wh-movement.[23]

(34) a. **ndʒa⁵ ku⁵=na¹**   ʃa¹³ʔndʒa³ ɲa¹   paaⁿ⁵¹
      WH PRES.be=CL.3PL.N PST.cut   CL.3SG.N bread
      'Who (pl.) cut the bread?'   (wh-subj.)

   b. **ndʒa⁵ ku⁵=ɲa¹**   ʃa¹³ʔndʒa³ ra¹   Josh³
      WH PRES.be=CL.3SG.N PST.cut   CL.3SG.M Josh
      'What did Josh cut?'   (wh-obj.)

   c. **ndʒa⁵ ki¹i³** ʃa¹³ʔndʒa³ ra¹   Josh³ ɲa¹   paaⁿ⁵¹
      WH day PST.cut   CL.3SG.M Josh CL.3SG.N bread
      'What day did Josh cut the bread?'   (wh-adjunct)

   d. **ndʒa⁵ ʃi⁵ʔiⁿ³** ʃa¹³ʔndʒa³ ra¹   Josh³ ɲa¹   paaⁿ⁵¹
      WH with PST.cut   CL.3SG.M Josh CL.3SG.N bread
      'With what did Josh cut the bread?'   (wh-adjunct)

---

[23] This observation is attributed to Jung (2020) in his term paper for LIGN 240 Field Methods.

Typological implications: Wh-question formation

This asymmetry is moreover evident in **P-stranding vs. PP-fronting** (both possible in SJPM):

- ▸ P-stranding requires clefting; PP-fronting involves genuine wh-movement (with inversion).

(35) a. ɲa⁵   Ga³bi⁵ i⁵iⁿ³=ɲa⁵   **ʃi⁵ʔiⁿ³ a³mi³go⁵=ɲa¹⁵**
     CL.3SG.F Gaby PRES.be.LOC=CL.3SG.F with   friend=CL.3SG.F
     'Gaby is with her friends.'   (baseline)

     b. **ndʒa⁵ ku⁵=na¹**   iⁿ⁵=oⁿ⁵   **ʃi⁵ʔiⁿ³ __**
       WH   PRES.be=CL.3PL.N PRES.be.LOC=2SG with
       'Who (pl.) are you with?'   (P-stranding)

     c. **ndʒa⁵ ʃi⁵ʔiⁿ³** iⁿ⁵=oⁿ⁵   __
       WH   with   PRES.be.LOC=2SG
       'Who are you with?'   (PP-fronting)

Typological implications

While many details remain unclear, these SJPM data may potentially provide new insights into the syntax of verb-initial languages more generally.

Roadmap

Open question: The status of stranded objects

We have now seen that verb-initiality in SJPM is derived by
VP-movement—even though in most cases VOS is not attested.

> **Remainder of talk:** Why does the object typically not move with the
> verb? And where is it?

Open question: The status of stranded objects

Previous analyses draw a distinction between **DP vs. NP objects**.[24]

- ▸ This approach aims to account for VSO vs. VOS alternations, which typically correlates with whether the O is a DP vs. NP.

- ▸ NPs must surface adjacent to the fronted verb (VOS)—i.e. pseudo noun-incorporation (which may be derived syntactically and/or prosodically, depending on the account).

(36) *Ch'ol (Clemens and Coon, 2018):*

    a. Tyi=i-kuch-u   aj-Maria **ili si'**
         PRF=3.ERG-carry-SS CLF-Maria DEM wood
         'Maria carried this wood.'   (V S O$_{DP}$)

    b. Tyi=i-kuch-u   **si'** aj-Maria
         PRF=3.ERG-carry-SS wood CLF-Maria
         'Maria carried wood.'   (V O$_{NP}$ S)

---

[24]Massam (2001), Clemens (2014), van Urk (to appear); cf. Levin (2015), Clemens (2019), Clemens and Coon (2018).

Open question: The status of stranded objects

However, the **DP vs. NP distinction** is not a relevant factor in SJPM.

- ▸ Aside from verb+noun compounds, internal arguments interpreted akin to bare NPs (e.g. non-referential) <u>do not</u> front with the verb.

(37) a. ʃa⁵ɲo¹=ti⁵   **i³t=e³¹**
           PRES.step=CL.3PL.ZOO flower=CL.1SG
           'They (the two cats) are trampling my flowers.'   (V S O$_{DP}$)

     b. ta³va⁵=na¹   **tʃa¹ka³**
           IRR.take.out=CL.3PL.N fish
           'they will go fishing' (lit. 'take out fish')   (V S O$_{NP}$)

Open question: The status of stranded objects

Similarly, **prosodic heaviness/lightness** is not a relevant factor in SJPM.

- Pronominal enclitics—the most prosodically deficient nominal elements in the language—do not ever front with the verb.

(38) a. ko³ni³¹ ti⁵   kʷa⁵ʒu¹=**ɲa¹**
          IRR.see CL.3SG.ZOO horse=CL.3SG.N
          'The horse will see it.'   (V S O_{Cl})

     b. ka³tʃa³¹=ɲa⁵=**ɲa³**
          IRR.throw=CL.3SG.F=CL.3SG.N
          'She will throw it.'   (V S_{Cl} O_{Cl})

Open question: The status of stranded objects

Generalized object shift? Perhaps objects (regardless of their structural or prosodic properties) vacate the VP prior to VP-movement (essentially remnant movement)?[25]

(39)
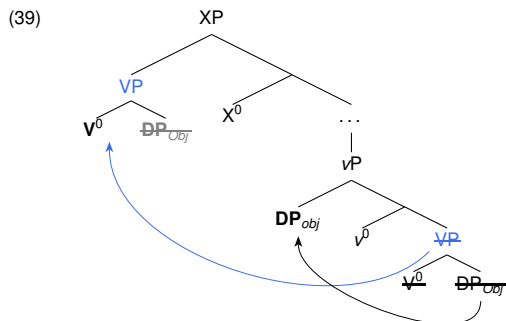
→ But more needs to be said about why PPs (and CPs) do not front with the verb, and why reciprocals obligatorily surface with the raised verb.

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[25]See Lee (2006) for this proposal for another Oto-Manguean language, SLQ Zapotec.

Open question: The status of stranded objects

In sum:

- Despite the rarity of VOS in SJPM, there is nonetheless evidence that a VP constituent raises to the pre-subject position.

- The fronted VP may contain phrasal adverbs and other phrasal elements (e.g. reciprocal-containing PPs), as well as floating object-associated quantifiers.

- The profile of verb-initiality in SJPM displays interesting parallels with unrelated verb-initial (specifically, VP-raising) languages, suggestive of deeper syntactic principles at play.

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