Deriving VSO in San Juan Piñas Mixtec (and some puzzles along the way)*

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1 Introduction

- Many languages display **VSO/VOS** word order alternations, (1). An ongoing debate concerns how such alternations should be modeled syntactically.

(1) *Niuean (Massam, 2001)*

a. **Ne kai** [$_S$ **he pusi ia**] [$_O$ **e moa**]
PST eat ERG cat that ABS bird
'That cat ate the chicken.' (VSO)

b. **Ne inu** [$_O$ **kofe kono**] [$_S$ **a Mele**]
PST drink coffee bitter ABS Mele
'Mary drank bitter coffee.' (VOS)

- **Two families of proposals:**

1. V^0 undergoes **head movement** to some position past the subject (Clemens 2019 on Niuean, Clemens & Coon 2018 on Mayan, Bossi & Diercks 2019 on Kipsigis, Eberhardt 1999 on Ocotepec Mixtec, Macaulay 2005 on Chalcatongo Mixtec, Ostrove 2020 on San Martín Peras Mixtec).
   - ∗ This account straightforwardly derives *VSO* word order; VOS can be achieved by prosodic incorporation (or a right-branching specifier position for subjects).

2. VP undergoes **phrasal movement** to some position past the subject (Massam 2001 on Niuean, Pearson 2001 on Malagasy, Lee 2006 on San Lucas Quiavini Zapotec, Medeiros 2013 on Hawaiian, Collins 2017 on Samoan, Adler et al. 2018 on Santiago Laxopa Zapotec, van Urk to appear on Imere and VSO/VOS languages cross-linguistically).[1]
   - ∗ This account straightforwardly derives *VOS* word order; VSO can be achieved by object shift followed by remnant VP movement.

- Against this backdrop, this talk investigates the derivation of **VSO word order** in the San Juan Piñas variety of Mixtec (Tò'ōn Ndā'ví), illustrated in (2).
  - – VOS is also available, but quite restricted (moreso than other languages with VSO/VOS alternations).

(2) a. **ka^{5}ndi^{3}ta^3** ŋa^5 Pa^{3}lo^{3}ma^5
PRES.jump CL.3SG.F Paloma
'Paloma is jumping.' (VS)

b. **ni^1-ta^{3}ʔvi^5** ŋa^5 Ga^{3}bi^{51} ŋa^1 ʒoo^3
PST-break CL.3SG.F Gaby CL.3.N jug
'Gaby broke the jug.' (VSO)

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[1]The exact size/category of the raising constituent varies by analysis and may also vary by language. This talk will use "VP" throughout as a placeholder, abstracting away from these different possibilities.

Proposal: Verb-initial word order in SJPM is derived by VP-movement.

- 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, based on a different set of arguments (Lee, 2006; Adler et al., 2018).

- **But how to account for the stranding of the object?** In progress, but so far:
  - Evidence for A-movement of the object out of VP.
  - Evidence that recent prosodic approaches to VSO/VOS (Clemens, 2014, 2019; Richards, 2016; van Urk, to appear) cannot account for SJPM.

Roadmap:

2 Overview of SJPM

2.1 Language background

- 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.), including a Talking Dictionary, as well as the documentation and analysis of lexical and grammatical tone in the language (see e.g. Caballero, Juárez Chávez, & Yuan (submitted) and Duarte Borquez & Juárez Chávez (2022)).

- **A note on transcription:**
  - There is no standardized orthography for SJPM; this talk uses IPA.[2]
  - 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.).

  → Tone will play a role in the analysis later (§4).

2.2 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**. No morphological case distinctions.
- **Left-headed structure:** Preverbal morphemes (including grammatical tones) are Mirror Principle-obeying: **C > T > *v***.

(3) COMP TNS/ASP CAUS INC verb = (CL$_{subj}$ = CL$_{obj}$)

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

b. sa^{5}-nda^{3}-ʒaa^{3}=ŋa^{5}=to^{n5}
PRES.CAUS-INC-dry=CL.3SG.F=CL.3SG.ARB
'She is drying it (e.g. flower).'

- In SJPM, pronouns are often realized as **enclitics** (§4); full nominals are often accompanied by a determiner-like element indicating noun class (and in some cases number).
  - These pronominal enclitics occupy the same structural positions as their full nominal counterparts, and are <u>often</u> (not always) identical to their determiner counterparts (Caballero, Juárez Chávez, & Yuan, 2021).

(4) a. ni^{1}-ta^{3}ʔvi^{5} **ŋa^{5}** **Ga^{3}bi^{51}** **ŋa^{1}** **ʒoo^{3}**
PST-break CL.3SG.F Gaby CL.3.N jug
'Gaby broke the jug.' (V S O)

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

- **SVO** is also commonly attested in SJPM, especially in elicitation contexts; in such cases the preverbal subject usually co-occurs with a postverbal pronominal enclitic (not present in VSO).

(5) **ŋa^{5}** **Ga^{3}bi^{51}** ni^{1}-ta^{3}ʔvi^{5}=**ŋa^{5}** ŋa^{1} ʒoo^{3}
CL.3SG.F Gaby PST-break=CL.3SG.F CL.3.N jug
'Gaby broke the jug.' (S V=Cl$_{Subj}$ O)

- I assume that SVO arises from subject topicalization to Spec-CP (Macaulay, 2005).
  - I also assume that the postverbal enclitic is the partial realization of a lower copy (Kandybowicz, 2007; van Urk, 2018) (it could also be from clitic-doubling but I haven't looked into this).
  - As expected, when some other element occupies this topic position, the subject is postverbal (in situ).

(6) a. **ŋa^{5}** **Ma^{3}ri^{3}a^{51}** nda^{3}k^{w}a^{3}tu^{3}=**ŋa^{5}** **tʃa^{3}a^{n1}**
CL.3SG.F Maria IRR.pray=CL.3SG.F tomorrow
'Maria will pray tomorrow.' (S V=Cl$_{subj}$ Adv)

[2] Though see Caballero, Juárez Chávez, & Yuan (submitted) on the preliminary development of an orthographic convention for SJPM.

b. **tʃa^{3}a^{n1}** nda^{3}k^{w}a^{3}tu^{3} **ɲa^{5}** **Ma^{3}ri^{3}a^{5}**
tomorrow IRR.pray CL.3SG.F Maria
'Tomorrow Maria will pray.' (Adv V S)

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

- Finally, **V and O form a syntactic constituent** at some level of representation (as one can assume given standard assumptions about argument structure).
  - *Evidence from root allomorphy (displayed by various motion/positional verbs)*: Conditioned by the number of the internal argument (unaccusative subject or transitive object) (Bobaljik & Harley, 2017, a.o.).

(7) a. tʃi^{5}-**ndi^{3}tʃi^{31}**=ɲa^{5} **ɲa^{1}** **li^{3}bro^{5}**
PRES.TR-stand.up=CL.3SG.F CL.3.N book
'She is standing up the book.' (sg. form)

b. tʃi^{5}-**ndi^{3}ta^{3}**=ɲa^{5} **ɲa^{1}** **li^{3}bro^{5}**
PRES.TR-stand.up=CL.3SG.F CL.3.N book
'She is standing up the books.' (pl. form)

3 VP-movement 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}*, (8) (Eberhardt, 1999; Macaulay, 2005; Ostrove, 2020).
- At first blush, a head movement analysis does seem most straightforward for SJPM...
  1. It would capture the VSO word order relatively straightforwardly, and is consistent with the fact that VOS is not possible in most contexts:

(8) a. ni^{1}-ta^{3}ʔvi^{5} ɲa^{5} Ga^{3}bi^{51} **ɲa^{1}** **ʒoo^{3}**
PST-break CL.3SG.F Gaby CL.3.N jug
'Gaby broke the jug.' (VSO)

b. *ni^{1}-ta^{3}ʔvi^{5} **ɲa^{1}** **ʒoo^{3}** ɲa^{5} Ga^{3}bi^{5}
PST-break CL.3.N jug CL.3SG.F Gaby
Intended: 'Gaby broke the jug.' (*VOS)

  2. Other VP-internal elements, e.g. PPs, generally do not front with the verb (*V PP S O).

(9) 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}** **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. *k^{w}a^{1}ʔa^{3} **nda^{3}ʔa^{5}** **ɲa^{5}** **Ga^{3}bi^{51}** 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)

  3. There is no (pseudo) noun incorporation (Massam, 2001, a.o.):[3]

(10) a. ta^{3}va^{5}=na^{1} **tʃa^{1}ka^{3}**
IRR.take.out=CL.3PL.N fish
'They will go fishing.' (V S O$_{NP}$)

b. *ta^{3}va^{5} **tʃa^{1}ka^{3}**=na^{1}
IRR.take.out fish=CL.3PL.N
Intended: 'They will go fishing.' (V O$_{NP}$ S)

[3]However, does SJPM has several verb+noun compounds, as shown below. These are highly lexicalized and the noun is necessarily a body part and bare (e.g. unmodified).

(i) **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)

- **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 (§4).

3.1 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.[4]

(11) a. tu^{5}tu^{5} ʒu^{3}ʔu^{5} **ʒaa^{1}**=ɲa^{5}
PRES.whistle mouth still=CL.3SG.F
'She is still whistling.' (V-N Adv S)

b. vi^{1}ʃi^{n3} **ku^{5}tʃo^{n3}** ra^{5} ru^{1}k^{w}i^{35}
cold very CL.3SG.LIQ water
'The water is very cold.' (Adj Adv S)

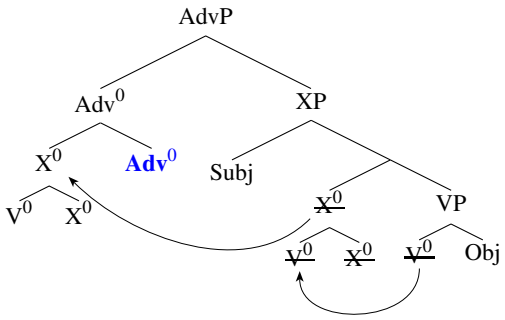
- The fronting of a VP-internal adverb is moreover **obligatory**, (12).[5]

(12) a. ʃi^{5}ta^{3} **tʃe^{5}ʔe^{5}** ɲa^{5} Pa^{3}lo^{3}ma^{5}
PRES.sing loud CL.3SG.F Paloma
'Paloma is singing loudly.'
(V Adv S O)

b. *ʃi^{5}ta^{3} ɲa^{5} Pa^{3}lo^{3}ma^{51} **tʃe^{5}ʔe^{5}**
PRES.sing CL.3SG.F Paloma loud
Intended: 'Paloma is singing loudly.'
(*V S O Adv)

- That a VP-internal adverb may **linearly intervene** between the verb and the postverbal nominals is commonly attested in 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, (13):

(13)



- However, in SJPM, the VP-internal adverbs are **phrasal**—as evidenced by the fact that they may themselves by modified.
  - This cannot be accommodated by a V^0-movement analysis—but is fully expected if adverbs are AdvPs that *right-adjoin* to a VP.

[4] See also the Appendix for other elements that can front with the verb.

[5] In contrast, *VP-external adverbs* (e.g. temporal adverbs) never front with the verb—they either surface clause-finally or they are topicalized, shown earlier in (6).

(14) ʃi^{5}ta^{3} **tʃe^{5}ʔe^{5} ku^{5}tʃo^{n3}** ɲa^{5} Pa^{3}lo^{3}ma^{5}
PRES.sing loud very CL.3SG.F Paloma
'Paloma is singing very loudly.'

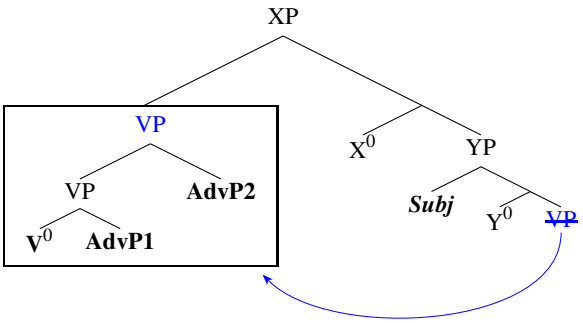
- Indeed, as expected under a right-adjunction approach, multiple postverbal co-occurring adverbs take scope in a **right-to-left manner** (Adv1 < Adv2).[6]
  - Moreover, this relative ordering is obligatory.

(15) a. tu^{5}tu^{5} ʒu^{3}ʔu^{5} **tʃe^{5}ʔe^{5} ʒaa^{1}**=ɲa^{5}
PRES.whistle mouth loud still=CL.3SG.F
'She is still whistling loudly.'
(still > loudly)

b. *tu^{5}tu^{5} ʒu^{3}ʔu^{5} **ʒaa^{1} tʃe^{5}ʔe^{5}**=ɲa^{5}
PRES.whistle mouth still loud=CL.3SG.F
Intended: 'She is still whistling loudly.'
(*loudly > still)

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

(16)



3.2 Reciprocals

- **Generalization #2:** Reciprocal objects (*ta^{5}ʔa^{n3}* 'each other') must raise with the verb, yielding VOS order.[7]
  - *Note:* This pattern does not result in a Principle A violation, presumably because the reciprocal reconstructs in its base position?

(17) a. [no^{3}mi^{3} **ta^{5}ʔ**]=e^{n5}
IRR.hug each.other =CL.1PL.IN
'We will hug each other.' (V O$_{Recip}$ S)

b. [ʃa^{5}ʃi^{5} ʒu^{5} **ta^{5}ʔa^{n3}**] ʒoo^{5}
PRES.eat mouth each.other 1PL.IN.PRON
'We are kissing each other.' (V O$_{Recip}$ S)

- Importantly, reciprocals enclosed within PPs similarly require that the **entire PP** front with the verb, (18)-(19)—though recall that PPs otherwise do not front.[8]
  - This fact rules out possible alternative analyses, e.g. immediate adjacency between the verb and the reciprocal (via compounding), etc.

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

[7] I thank Jason Ostrove (p.c.) for bringing this to my attention; San Martín Peras Mixtec displays a very similar pattern (Ostrove, 2018, fn. 10).

[8] Ostrove (2018, fn. 10) also shows that, in San Martín Peras Mixtec, reciprocals serving as possessors of complex DPs similarly force the complex DP to front with the verb. I have not investigated this in SJPM yet (but I will!).

(i) *San Martín Peras Mixtec (Ostrove, 2018):*
Yé [kôni **se'e tá'àn** -k] yé
we.INCL like.PRES child each.other -INTR we.INCL
'We like each other's children.'

(18) a. kʷa¹ʔa³ ŋa⁵ Pa³lo³ma⁵¹ i³ta³¹ **[nda³ʔa⁵ ŋa⁵ Ga³bi⁵]**
IRR.give CL.3SG.F Paloma flower to CL.3SG.F Gaby
'Paloma will give flowers to Gaby.' (V S O PP)

b. kʷa¹ʔa³ **[nda³ʔa⁵ ta⁵ʔaⁿ³]**=na⁵ i³ta³
IRR.give to each.other=CL.3PL.N flower
'They will give flowers to each other.' (V PP_{Recip} S O)

(19) a. ʒu¹ʔu¹ ni¹-ka¹ʔ=e¹ **[ʃiⁿ⁵ ŋa⁵ si³ʔi⁵]**
1SG.PRON PST-speak=CL.1SG with CL.3SG.F woman
'I spoke with the woman.' (S V=Cl_S PP)

b. ʒoo⁵ ka⁵ʔaⁿ¹ **[ʃiⁿ⁵ ta⁵ʔ]**=eⁿ⁵
1PL.IN.PRON PRES.speak with each.other=CL.1PL.IN
'We are talking with each other.' (S V PP_{Recip}=Cl_S)

- The reciprocal pattern shows that phrasal elements (e.g. PPs) may, in certain contexts, front with a verb—again, suggesting a **VP-movement analysis**.
- **Note:** At this time, I do not have an account of why this pattern holds...
  - Perhaps it reflects a local relationship between the reciprocal and the verb (specifically, v^0?), as in certain Agree-based accounts of binding (e.g. Kratzer, 2009; Murphy & Meyase, 2020).
  - 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 verbal constituent in all contexts).

Interim summary:

- VSO in SJPM involves **VP-movement**—even though VOS is not possible in most cases.
- Why then does the object not move with the verb?

4 Object stranding: Competing approaches

- Many previous analyses tie VSO/VOS alternations to whether the object is a **DP vs. NP** (Massam, 2001; Medeiros, 2013; Clemens, 2014, 2019; Collins, 2017; Clemens & Coon, 2018; van Urk, to appear, a.o.).
  - In contrast to DP objects (VSO), NP objects must surface adjacent to the fronted verb (VOS)—i.e. pseudo noun-incorporation.

(20) *Niuean (Massam, 2001)*

a. Ne kai [he pusi ia] [e **moa**]
PST eat ERG cat that ABS bird
'That cat ate the chicken.' (V S O_{DP})

b. Ne inu [**kofe kono**] [a Mele]
PST drink coffee bitter ABS Mele
'Mary drank bitter coffee.' (V O_{NP} S)

(21) *Ch'ol (Clemens & 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)

- **However:** In SJPM, whether the object is a DP or (what could be a) NP does not seem to affect word order:

(22) a. ʃa^{5}ɲo^{1}=ti^{5} **i^{3}t=e^{31}**
PRES.step=CL.3PL.ZOO flower=CL.1SG
'They are trampling my flowers.' (V S O_{DP})

b. ta^{3}va^{5}=na^{1} **tʃa^{1}ka^{3}**
IRR.take.out=CL.3PL.N fish
'They will go fishing.' (V S O_{NP})

(23) a. ni^{1}-ta^{3}ʔvi^{5}=ra^{1} **ɲa^{1}** **ʒoo^{3}**
PST-break=CL.3SG.M CL.3SG.N jug
'He broke the jug.' (V S O_{DP})

b. ni^{1}-ta^{3}ʔvi^{5}=ra^{1} **ʒoo^{3}**
PST-break=CL.3SG.M jug
'He broke the jug.' (V S O_{NP}(?))

- Setting this factor aside, the remainder of this talk nonetheless evaluates two competing families of analyses:
  1. **Syntactic:** Object shift + remnant VP movement (Massam, 2001; Collins, 2017, a.o.)
  2. **Prosodic:** V(P) movement + prosodic noun incorporation (Clemens, 2014, 2019; van Urk, to appear, a.o.)

  … and concludes that **1.** may fare better overall—though some residual issues remain.

4.1 Object shift + remnant movement

- **Evidence for object shift?** An object vs. non-object asymmetry in the availability of **quantifier float**.
  - Suggestive of **movement-derived quantifier stranding** (Sportiche, 1988; Merchant, 1996; McCloskey, 2000; Zyman, 2018, a.o.), rather than an adverbial account (Doetjes, 1992; Bobaljik, 2003, a.o.).

(24) **[We]$_{i}$** are **[$\_\__{i}$ all]** enjoying this meal.

- Quantifiers in SJPM form a constituent with a following nominal associate, regardless of position of the nominal.
  - Most clearly shown with **subjects**—quantifiers obligatorily topicalize with their associates in SVO constructions (no quantifier float).[9]

(25) a. ʃi^{5}tʃi^{3} **ndi^{3}ʔi^{3}** **ʒoo^{5}**
PRES.swim/bathe all 1PL.IN.PRON
'All of us are swimming/bathing.' (V [all S])

b. **ndi^{3}ʔi^{3}** **ʒoo^{5}** ʃi^{5}tʃ=i^{5}
all 1PL.IN.PRON PRES.swim/bathe=CL.1PL.IN
'All of us are swimming/bathing.' ([all S] V=CL_{Subj})

c. ***ʒoo^{5}** ʃi^{5}tʃi^{3} **ndi^{3}ʔi^{3}**
1PL.IN.PRON PRES.swim/bathe all
Intended: 'All of us are swimming/bathing.' (*S V all)

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

(26) a. ʃa^{13}ʃi^{5} ɲa^{5} Pa^{3}lo^{3}ma^{51} **ndi^{3}ʔi^{3}** **ɲa^{1}** **ti^{1}ko^{3}o^{13}**
PST.eat CL.3SG.F Paloma all CL.3.N tamale
'Paloma ate all of the tamales.' (V S [all O])

[9] I have thus far tested quantifier float with the following quantifiers: *ndi^{3}ʔi^{3}* 'all', *k^{w}a^{1}ʔa^{3}* 'many', *ndi^{3}u^{1}vi^{1}* 'both', *tʃaa^{5}* 'few', *ni^{3}ʔit^{n3}* 'none'. The first two always permit quantifier float with objects; the others do not. There has also been some variation (across different elicitation sessions) for the floatable quantifiers regarding whether they may also surface next to their object associates. I thank Jason Ostrove (p.c.) for bringing quantifier float in Mixtec varieties to my attention.

b. [$_{VP}$ ʃa^{13}ʃi^{5} **ndi^{3}ʔi^{3}**] ɲa^{5} Pa^{3}lo^{3}ma^{51} **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)

- Crucially, this alternation is available only for **direct objects**—quantifiers associated with objects of prepositions may not float, either.

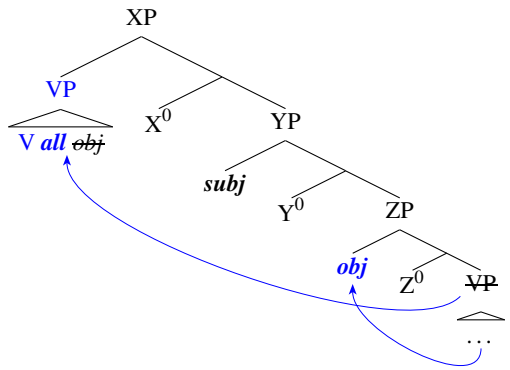
(27) a. ni^{1}-na^{1}ʔa^{1}=ɲa^{5} ti^{5} vi^{3}lu^{5} **no^{1}o^{5}** **ndi^{3}ʔi^{3}** **na^{1}** **va^{5}li^{3}**
PST-show=CL.3SG.F CL.3SG.ZOO cat to all CL.3PL.N child
'She showed the cat(s) to all the children.' (V=Cl$_S$ DO [P all IO])

b. #[$_{VP}$ ni^{1}-na^{1}ʔa^{1} **ndi^{3}ʔi^{3}**]=ɲa^{5} ti^{5} vi^{3}lu^{5} **no^{1}o^{5}** **na^{1}** **va^{5}li^{3}**
PST-show all =CL.3SG.F CL.3SG.ZOO cat to CL.3PL.N child
Intended: 'She showed the cat(s) to all the children.' (#[V all]=Cl$_S$ DO [P IO])
Only means: 'She showed all the cats to the children.'

- This **object vs. non-object asymmetry** can be captured if:
  - Quantifier float in SJPM involves **stranding**, and is licensed by A-movement, not Ā-movement
  - Only objects undergo A-movement (see **Appendix** on the lack of A-movement of 'subjects')

- If object shift is able to strand the quantifier, remnant VP movement will allow the quantifier to front with the verb.

(28)

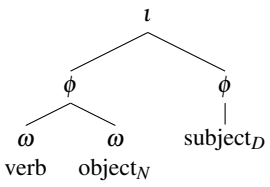


- **However, the object shift account also faces some issues, when we look beyond DPs:**
  - NP objects appear in VSO word order (should we say that they too undergo object shift?)
  - **PPs and CPs** are also stranded (Chung, 2005; Medeiros, 2013; van Urk, to appear, a.o.) (see **Appendix**)
  - (And what is going on with reciprocals?)

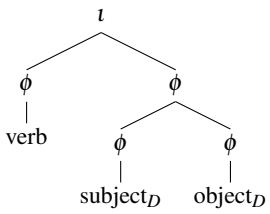
4.2 Against prosodic accounts

- **A prosodic alternative:** The surface distribution of the object in VSO/VOS languages reflects its **prosodic status** (Clemens, 2014, 2019; Richards, 2016; van Urk, to appear).
  - Objects that are structurally reduced (i.e. NPs) undergo **"prosodic noun incorporation"**, with V^0 and the object surfacing within a single ϕ, (29a).
  - In contrast, DPs (and other phasal XPs) form their own ϕ, (29b).

(29) a.



b.



- However, we have already seen that, in SJPM, NPs do not surface within the fronted VP.
- Notably, **pronominal enclitics** (prosodically deficient/monomoraic pronouns) are similarly stranded. Recall that these appear in VSO order as well.

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

- **These elements encliticize to (i.e. are prosodically dependent on) whatever immediately precedes them— regardless of syntactic constituency.**
  - This can be diagnosed by their tonal behaviour: e.g. phonologically toneless (phonetically [M] by default) clitics can be the target of a **word-internal**[10] rightward L-tone spreading process (Caballero, Juárez Chávez, & Yuan, 2021, submitted; Duarte Borquez & Juárez Chávez, 2022).

(31) a. le^{3}so^{3}=**ɲa^{3}**
rabbit=CL.3SG.N
'its rabbit' (N=Cl$_{Poss}$)

b. sa^{3}**a^{31}**=**ɲa^{1}**
bird=CL.3SG.N
'its bird' (N=Cl$_{Poss}$)

(32) a. ta^{1}ʔvi^{5}=**ɲa^{3}**
IRR.break=CL.3SG.N
'It will break.' (V=Cl$_S$)

b. i^{1}**tʃi^{1}**=**ɲa^{1}**
IRR.dry=CL.3SG.N
'It will dry.' (V=Cl$_S$)

(33) a. [nda^{13}si^{31} tu^{3}ku^{3}]=**ɲa^{3}**
PST.close again =CL.3SG.N
'It closed again.' (V Adv=Cl$_S$)

b. [kaa^{1}ʒu^{1} **ʒaa^{1}**]=**ɲa^{1}**
IRR.burn slow =CL.3SG.N
'It will burn slowly.' (V Adv=Cl$_S$)

- Crucially, **VSO word order persists**, even when the subject is a full DP and the object is pronominal: the object simply encliticizes to the subject.

(34) a. ko^{3}ni^{31} ti^{5} vi^{3}lu^{5}=**ɲa^{3}**
IRR.see CL.3SG.ZOO cat=CL.3SG.N
'The cat will see it.' (V S=O$_{Cl}$)

b. ko^{3}ni^{31} ti^{5} k^{w}a^{5}ʒu^{1}=**ɲa^{1}**
IRR.see CL.3SG.ZOO horse=CL.3SG.N
'The horse will see it.' (V S=O$_{Cl}$)

- **Existing prosodic approaches therefore make two incorrect predictions for SJPM:**
  - NP objects are expected to front with the verb
  - Prosodically weak elements are expected to front with the verb

[10] Toneless TBUs include certain pronominal enclitics (including CL.3SG.N *ɲa*) and certain so-called formatives (e.g. *ka* below) of trimoraic verbs. Importantly for our purposes, the particular L-tone process shown here does not apply across words.

(i) ti^{5} k^{w}a^{5}**ʒu^{1}** **ka^{3}**^{n}di^{3}ta^{5}=ti^{5}
CL.3SG.ZOO horse IRR.jump=CL.3SG.ZOO
'The horse will jump.'

5 Conclusion

- 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 quantifiers associated with objects.
- **Generalized object shift?** Perhaps objects (regardless of their structural or prosodic properties) vacate the VP prior to VP remnant movement?

→ 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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A Appendix

A.1 The landing site of VP-movement

- **Where does the VP move to?** For some verb-initial languages, 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) (Alexiadou & Anagnostopoulou, 1998; Davies & Dubinsky, 2001; Massam, 2001; Aldridge, 2002; Oda, 2005; Coon, 2010).
  - Under this view, DPs do not raise to Spec-TP.[11]
- Independent facts about SJPM are consistent with this approach:
  - SJPM lacks A-movement to Spec-TP; for instance, no evidence for the existence of passives or raising-to-subject.[12]

(35) a. ʃi^{1}ni^{3}i^{3}=na^{1} ŋa^{1} **ʒu^{5}ʃi^{1}ni^{3}**
PST.carry=CL.3PL.N CL.3SG.N hat
Attempted: 'The hat was carried.'
Lit.: 'They carried the hat.'

b. tu^{5}va^{1}ʔa^{3}ra^{3} ko^{5}o^{n3} **sa^{1}vi^{5}**
probably PRES.fall rain
Attempted: 'It seems to be raining' / 'Rain seems to be falling.'
Lit.: 'Probably rain is falling.'

- No restrictions on overt subjects of non-finite clauses (aside from being necessarily postverbal):

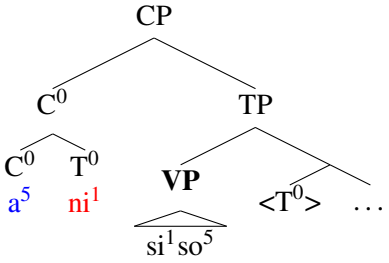
(36) ŋa^{5} si^{3}ʔi^{5} ku^{5}u^{3}=ŋa^{5} [ka^{3}ta^{3}=**ŋa^{5}**]
CL.3SG.F woman PRES.try=CL.3SG.F IRR.sing=CL.3SG.F
'The woman is trying to sing.'

- Therefore, I will assume that VPs in SJPM to move to Spec-TP.
  - **Note:** 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).

[11] However, some approaches instead suggest a *v*P-internal derived position (e.g. Longenbaugh & Polinsky, 2018)
[12] See also Ostrove (2018, to appear) for a similar point about San Martín Peras Mixtec.

– Similar facts in Polynesian languages are accounted for via T^0-to-C^0 head movement (Otsuka, 2005; Massam, 2010; Medeiros, 2013). For SJPM, this would look as in (37):

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

b.


A.2 What else can front with the verb?

- This needs to be tested more systematically/carefully, but so far:

– Secondary predicates front:

(38) [$_{VP}$ ʃa^{5}ʔa^1 **ɲo^{5}tʃi^5**]=ti^5
PRES.smell beautiful =CL.3SG.RND
'It (the mango) smells good.' (V Pred=Cl$_S$)

– Interestingly, there are also a few restructuring verbs that embed what appear to be *v*P-sized complements; in such constructions, the embedded verb (though not its object) must also front with the matrix verb:[13]

(39) a^5 [$_{VP}$ **ku^{3}vi^3** tu^{3}ku^3 **ka^{1}ʔ**]=o^{n15}=ɲa^1 (nda^{3}ʔvi^5=ʒu^1)
Q IRR.can again IRR.speak CL.2SG=CL.3SG.N humble=CL.1SG
'Can you say it again (please)?' (C [V Adv V]=Cl$_S$=Cl$_O$)

(40) a. [$_{VP}$ **ndi^{13}ʔi^3** **ʃi^{13}ka^3** k^{w}ee^{35}] ti^{15} ti^{13}na^3
PST.finish PST.walk slow CL.3SG.ZOO dog
'The dog finished walking slowly.' ([V V Adv] S)

b. ɲa^5 Ma^{3}ri^{3}a^{51} [$_{VP}$ **ndi^{13}ʔi^3** **nda^1-ka^{3}tʃa^3**]=ɲa^5 ko^{1}ʔo^3
CL.3SG.F Maria PST.finish PST.REP-wash CL.3SG.F bowl
'Maria finished washing the dishes.' (S [V V]=Cl$_S$ O)

– In contrast, TP complements and CP complements do not (as indicated by the presence of an intervening subject).

(41) a. ni^1-ku^{3}too^{35} ɲa^{15} si^{3}ʔi^5 [$_{TP}$ ka^{3}ta^3=ɲa^5]
PST-like CL.3SG.F woman IRR.sing=CL.3SG.F
'The woman liked to sing.' (V S TP)

b. ʒu^{1}ʔu^1 ʃi^{5}n=i^1 [$_{CP}$ tʃi^{n3} ʃi^{13}ta^3=ɲa^5]
1SG.PRON PRES.know=CL.1SG C PST.sing=CL.3SG.F
'I know that she sang.' (S V=Cl$_S$ CP)

[13] Although the embedded verb can bear tense morphology, the tense on the embedded verb must match—and is determined by—the tense of the matrix verb. Note that when the complement is a TP or CP, there is no such tense-matching requirement.