# The derivation of verb initiality in Santiago Laxopa Zapotec\*

Jeff Adler Steven Foley
University of California, Santa Cruz University of California, Santa Cruz

Jed Pizarro-Guevara Kelsey Sasaki
University of California, Santa Cruz University of California, Santa Cruz

Maziar Toosarvandani University of California, Santa Cruz

#### 1 Introduction

Languages with verb-subject-object (vso) word order are amongst the most common in the world, and yet they pose a fundamental mystery. If the subject is structurally superior to the object, there is no way it can appear in underlying structure between the verb and object (Anderson & Chung 1977). A prominent solution in Irish, a language with rigid vso order, invokes head movement of the verb to a position on the left of the subject (McCloskey 1991, 1996).

For other languages, a different solution has been proposed. Most prominently, for Austronesian languages in which vso alternates with vos, phrasal movement is commonly thought to be responsible for verb-initial order (Pensalfini 1995, Massam 2001, among others). A verbal constituent containing the verb raises, giving rise to vos when it contains the object, and to vso when the object has escaped, possibly for reasons involving definiteness or specificity. (For alternatives, see Chung 1990 on Chamorro, Holmer 2005 on Seediq, or Otsuka 2000 on Tongan.)

Which route a language takes might seem, then, to be a relatively straightforward choice. If vso alternates with vos, it uses phrasal movement; if it has rigid vso order, it uses head movement. However, as Clemens & Coon (to appear) propose for several Mayan languages, head movement can still give rise to alternating word order if the resulting vso order is manipulated postsyntactically,

<sup>\*</sup>We are extremely grateful to Alberto Diaz Robles, Raul Diaz Robles, Fe Silva Robles, and two other native speakers for teaching us about their language. We are also thankful to audiences at 2017 Annual Meeting of the Society for the Study of the Indigenous Languages of the Americas in Austin and at UC Santa Cruz. And, of course, we are greatly indebted to Jim McCloskey for his mentoring and advice in so many different capacities.

through operations reordering the subject and object.

We describe the inverse scenario. Santiago Laxopa Zapotec (slz) is, like other Zapotec languages, rigidly vso (see Sonnenschein 2004: 125 and López Nicolás 2016: 266 on closely related varieties).<sup>1</sup>

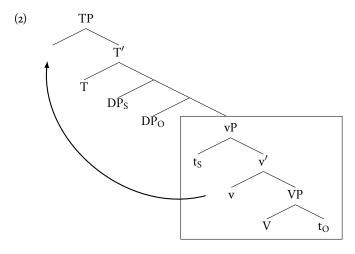
(1) Dzut nu'ule='n bene' xyage'=n. hit.cont woman=DEF CL man=DEF

"The woman is hitting the man."

Not possible: 'The man is hitting the woman.' (FSR, SLZ<sub>57a</sub>-s, 1)

Nonetheless, we argue that it uses phrasal movement to derive its verb-initial word order, paralleling Lee's (2006) account of San Lucas Quiaviní Zapotec (*pace* Black 2000: 92–95, Foreman 2006: 246–248). The absence of any word order alternation arises because all the verb's arguments must evacuate the constituent that moves.

The basic clause structure that we propose for SLZ is the one in (2). The subject and object—and any other verb-phrase internal constituents that can move—raise out of vP, which subsequently undergoes movement to Spec-TP.



This rather abstract *predicate raising* analysis might seem difficult, if not impossible, to distinguish from a more concrete *verb raising* analysis, in which the verb alone raises to T. But we take inspiration from Jim McCloskey's work—say, on the number and type of subject positions (McCloskey 1997) or the derivational mechanism undergirding A'-dependencies (McCloskey 2002)—which shows how it is often possible to tease apart very similar analytical possibilities by examining subtle patterns of data in detail and with careful and precise argumentation.

 $<sup>^{1}</sup>$ The abbreviations we use are: An = animal, CAUS = causative, CL = classifier, CONT = continuous aspect, COMP = completive aspect, DEF = definite, EL = elder, FREQ = frequentative aspect, HU = non-elder human, IN = inanimate, INCH = inchoative, HU = informal, INT = intensive, REP = repetitive aspect, SG = singular, STAT = stative aspect, POT = potential aspect.

### 2 Some background on Santiago Laxopa Zapotec

Santiago Laxopa Zapotec (SLZ) is a Northern Zapotec (Oto-Manguean) language spoken in the Sierra Norte of Oaxaca, Mexico. We present data from three speakers from the town of Santiago Laxopa itself. We also include data from two speakers from the nearby towns of San Sebastián Guiloxi and Santa María Yalina. There are dialectal differences amongst these speakers, but we have observed no significant variation with respect to the syntactic phenomena under consideration. These southeastern Sierra varieties are most closely related to those of San Jerónimo Zoochina (López Nicolás 2016) and San Bartolomé Zoogocho (Long & Cruz 2000, Sonnenschein 2004).

In sLz, the subject is structurally superior to the direct object: it is able to asymmetrically bind an R-expression in that position, inducing a violation of Condition C (which has been shown to be active in other Zapotec varieties as well; Lee 2003).

(3) a. Bdi'inn [beku' tse **Pedro**<sub>1</sub>] **lleba'**<sub>1/2</sub>.

bite.comp dog of **Pedro** 3.HU

'Pedro<sub>1</sub>'s dog bit him<sub>1/2</sub>'

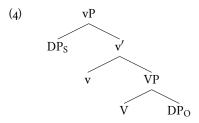
(FA/RM, GZYZo<sub>19</sub>, 1:30)

b. Betw=ba'\*<sub>1/2</sub> [beku' tse **Pedro**<sub>1</sub>].

hit.comp=3.HU dog of **Pedro**'He\*<sub>1/2</sub> hit Pedro<sub>1</sub>'s dog.'

(FA/RM, GZYZo<sub>19</sub>, 13:20)

Assuming that phrases are endocentric, and that the clause is the extended projection of the verb (Chomsky 1970, Grimshaw 2005), the verb and the direct object must form a constituent to the exclusion of the subject (*pace* Broadwell 2005).



Assuming a fairly articulated structure for the verb phrase, the external argument is introduced in the specifier of a functional head, Spec-vP (Kratzer 1996).

There is evidence that the subject occupies a surface position outside of vP. The subject of an unaccusative verb (5) occupies the same position relative to manner adverbs that the subject of a transitive verb does (6).

(5) a. Dz-i-yag Pedro **xtidao**'.

CONT-INCH-be.cold Pedro **quickly**'Pedro is getting cold quickly.' (FA/RM, GZYZo19, 1:19:07)

b. \* Dz-i-yag **xtidao**' Pedro.

CONT-INCH-be.cold **quickly** Pedro (FA/RM, GZYZO19, 1:19:20)

(6) a. Udoo Juan=a' yet=e'n **xtido'-yes**.

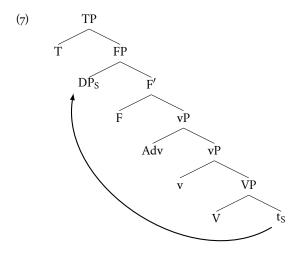
eat.COMP Juan=DEF tortilla=DEF quickly-INT

'Juana ate tortillas very quickly.' (FSR, SLZ1009-s, 21)

b. \* Udoo **xtido'-yes** Juan=a' yet=e'n.
eat.comp quickly-int Juan=def tortilla=def

(FSR, SLZ1009, 31:15)

Regardless of how verb initiality is derived, then, subjects must raise to a position below the surface position of the verb (see Lee 2006: 49 for additional arguments).



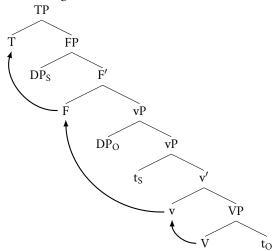
We call this projection simply FP. The subject raises into its specifier presumably to satisfy an EPP feature, receiving nominative case from T in that position.

The clause in sLz is probably even more articulated than this, since verbs bear rich inflectional morphology, including aspectual, directional, number, and voice prefixes (Sonnenschein 2004: 118, López Nicolás 2016: 153). If these are heads, they must attach to the root in some way. We remain agnostic about whether this happens through head movement or a postsyntactic operation (see Lee 2006: 53–62).

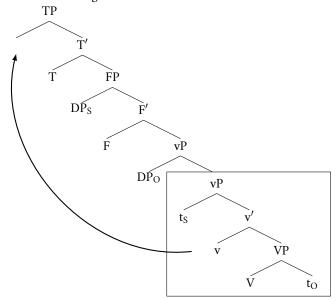
# 3 Two paths to verb initiality

With this clause structure, there are at least two ways for the verb to surface in initial position. Either the verb undergoes head movement to T (8a), or a somewhat larger verbal constituent—say, vP—undergoes phrasal movement into Spec-TP (8b).

#### (8) a. Verb raising



# b. Predicate raising



In the absence of a DP in Spec-TP, it is the verb or verb phrase that frequently is thought to satisfy the EPP on T (Massam & Smallwood 1997, a.o.).

As schematized above, the verb raising and predicate raising accounts share the assumptions laid out in Section 2. In particular, the subject must raise to a functional projection, FP, below the landing site of the verb. The difference between them, of course, is the size of the moved constituent. But to derive rigid vso word order, the predicate raising account further requires that the vP contain just the verb before it moves to Spec-TP. That is, any elements that cannot

appear between the verb and subject, such as an object, must evacuate this constituent before it raises to Spec-TP. As we show next, this kind of movement is independently available in the language.

While the position of the subject is fixed—it must be the first postverbal argument in the clause—the order of other clausal elements is flexible. Direct and indirect objects are more or less freely ordered amongst one another (9), as are any clausal complements (10) or adjunct PPs (11).

- (9) a. Ba be Maria **beku' bidao' ni.**already give.comp Maria **dog child this**'Maria already gave the dog to this child.' (RM/FA, GZYZ015, 18:13)
  - b. Ba be Maria **bidao' ni beku'**.

    already give.comp Maria **child this dog**'Maria already gave the dog to this child.' (RM/FA, GZYZo15, 18:46)
- (10) a. Dze Pedro Maria [bdi'inn beku' xna'=a'].

  tell.cont Pedro Maria bite.comp dog mother=1sG

  'Pedro told Maria that the dog bit my mother'.

  (FA/RM, GZYZ020, 2:07)
  - b. ?? Dze Pedro [bdi'inn beku' xna'=a'] Maria.

    tell.cont Pedro bite.comp dog mother=1sG Maria

(FA/RM, GZYZ020, 4:45)

- (11) a. Blo'ed Maria bidao' ni beku' **lo' yo'o**.

  show.comp Maria child this dog **in house**'Maria showed the dog to the child in the house.'

  (FA/RM, GZYZ019, 14:40)
  - b. Blo'ed Maria bidao' ni **lo' yo'o** beku'. show.comp Maria child this **in house** dog

(FA/RM, GZYZ020, 6:53)

c. Blo'ed Maria **lo' yo'o** bidao' ni beku'. show.comp Maria **in house** child this dog

(FA/RM, GZYZ020, 7:03)

This freedom recalls scrambling in the Germanic middlefield, which has been variously analyzed as base generation with flexible linearization and as movement to a functional projection or to adjoin to the verb phrase (see the survey in Haider 2006).

To maintain a straightforward mapping from syntax to phonology, we assume that the sentence constituents that exhibit flexible word order in (9)–(11) undergo movement to positions that are higher in the clause and are not internally ordered. For simplicity, we will allow them to simply adjoin to vP, though we are open to the possibility that they are instead specifiers of one or more functional projections. Importantly, for the predicate raising account, this movement must be obligatory, so that vP contains just the verb before it itself moves. While the

need for this additional assumption could be interpreted as an argument in favor of the alternative verb raising account, we reemphasize that the real question here is why major sentence constituents other than subjects are freely ordered. For similar facts in other languages, e.g., Germanic scrambling, the answer is not clear cut and often depends on higher, framework-level assumptions. So, in the absence of decisive arguments to the contrary, we see no harm in assuming that this movement in SLZ is obligatory.

Crucially, wherever these elements move to, it cannot be to a position that intervenes between the subject in Spec-FP and the position of the verb. A direct or indirect object cannot intervene between the subject and verb (12a–b); nor can an adjunct PP (13) or clausal complement (14).

(12) a. \* Ba be **beku**' Maria bidao' ni.

already give.comp **dog** Maria child this

Intended: 'Maria gave the dog to the child.'

(RM/FA, GZYZ015, 18:46)

b. \* Ba be **bidao' ni** Maria beku'.

already give.comp **child** this Maria dog

(RM/FA, GZYZ015, 19:51)

- (13) \* Blo'ed **lo' yo'o** Maria bidao' ni beku'.

  show.comp **in house** Maria child this dog

  Intended: 'Maria showed the dog to this child in the house.'

  (FA/RM, GZYZ019, 15:18)
- (14) \* Dze [bdi'inn beku' xna'=a'] Pedro Maria.

  tell.cont bite.comp dog mother=ISG Pedro Maria

  Intended: 'Pedro told Maria that the dog bit my mother.'

  (FA/RM, GZYZ020, 5:00)

We state this constraint on postverbal material as in (15); it prohibits any element from moving or adjoining between the verb and the subject.

(15) Adjacency Requirement in Santiago Laxopa Zapotec

No element can merge or move into a position between Spec-FP and
T.

While this adjacency requirement might be a language-specific property, stemming from the simple absence of landing sites for movement between the verb and subject, this would not explain a potential crosslinguistic correlation with verb initiality.

McCloskey (1991: 260) observes that Irish exhibits a nearly identical restriction. He links it to case assignment: T must be adjacent to the DP to which it assigns nominative case, just as other case assigners—e.g., V, P, or C—must be adjacent to their assignees (Stowell 1981: 110–112 et seq.). We leave it to future work to determine the source of this constraint, though it will play an important role in choosing between the verb and predicate raising accounts of verb initiality.

Returning to the main issue at hand, it might now seem impossible to distinguish between the verb raising and predicate raising accounts, if all the elements inside vP can move out except V, thereby conflating the difference between moving a head and moving a phrase. But, in what follows, we identify several elements that can or must remain within vP: aspectual adverbs (Section 4), the adjectival predicate in a copular clause (Section 5), and the nonverbal element in a light verb construction (Section 6). These elements are able to move along with the verb, sometimes appearing between the verb and the subject, just as the predicate raising account predicts.

# 4 The position of aspectual adverbs

Adverbs fall into at least three classes depending on their distribution. First, temporal adverbs, such as *neje* 'yesterday', *yuge' zha* 'every day', and *ne'ezha* 'today', can occur preverbally (16a) or anywhere postverbally (16c–d) except between the verb and the subject (16b).

- (16) a. **Neje** be'eye' Maria='n yetgu'=n. **yesterday** steam.comp Maria=DEF tamale=DEF

  'Maria steamed the tamales yesterday.' (FSR, SLZo62-s, 50)
  - b. \* Be'eye' **neje** Maria='n yetgu'=n. steam.comp **yesterday** Maria=DEF tamale=DEF

(FSR, SLZ062, 1:02:03)

c. Be'eye' Maria='n **neje** yetgu'=n. steam.comp Maria=DEF **yesterday** tamale=DEF

(FSR, SLZ062, 1:02:29)

d. Be'eye' Maria='n yetgu'=n **neje**.

steam.comp Maria=def tamale=def **yesterday** 

(FSR, SLZ062-s, 49)

Then there are manner adverbs, such as *xtido'* (or *xtidao'*) 'quickly', *cholazhe'e* 'slowly', and *zishje'* 'loudly', which have a superficially similar distribution to temporal adverbs.

- (17) a. **Xtido'-yes** udoo Juan=a' yet=e'n. **quickly-int** eat.COMP Juan=DEF tortilla=DEF

  'Juan ate tortillas very quickly.' (FSR, SLZ1009-s, 20)
  - b. \* Udoo **xtido'-yes** Juan=a' yet=e'n.
    eat.comp quickly-INT Juan=DEF tortilla=DEF

(FSR, SLZ1009, 31:15)

c. Udoo Juan=a' **xtido'-yes** yet=e'n.
eat.COMP Juan=DEF **quickly-INT** tortilla=DEF

(FSR, SLZ1009, 29:10)

d. Udoo Juan=a' yet=e'n **xtido'-yes**.

eat.comp Juan=def tortilla=def **quickly-int** 

(FSR, SLZ1009-s, 21)

Finally, aspectual adverbs, such as *chintje'* 'just (now)', *ba* 'already', and *ne'e* 'still', can only appear immediately before the verb.

- (18) a. Chintje' bta Sonia='n zah.

  just stir.comp Sonia=DEF bean

  'Sonia just stirred the beans.' (RD, SLZ2012-S, 17)
  - b. \* Bta **chintje**' Sonia='n zah.

    stir.comp **just** Sonia=DEF bean (RD, SLZ2012, 43:14)
  - c. \* Bta Sonia='n **chintje**' zah.

    stir.comp Sonia=DEF **just** bean (RD, SLZ2012, 43:24)
  - d. \* Bta Sonia='n zah **chintje**'.

    stir.comp Sonia=def bean **just** (RD, SLZ2012, 43:28)

We call these aspectual adverbs, following Tenny (2000), because they appear sensitive to the internal structure of the event described by the verb. They can be contrasted with temporal adverbs, which simply locate the event in time.

We propose to account for the distributions of these three classes by adjoining them in different, albeit partially overlapping, positions.

- (19) The position of adverbs in Santiago Laxopa Zapotec
  - i) Temporal adverbs can adjoin to vP or to CP.
  - ii) Manner adverbs can adjoin to vP or fill Spec-CP.
  - iii) Aspectual adverbs can only adjoin inside vP.

Under our present assumptions, both temporal and manner adverbs must be able to adjoin to vP, since they can be freely interleaved amongst any nonsubject arguments or adjunct PPs.

- (20) a. Blo'ed Maria **cholazhe'e** bidao' ni beku' lo' yo'o.

  show.comp Maria **slowly** child this dog in house

  'Maria showed the dog to this child in the house slowly.'

  (FA/RM, GZYZO20, 49:53)
  - b. Blo'ed Maria bidao' ni **cholazhe'e** beku' lo' yo'o.

    show.comp Maria child this **slowly** dog in house

    (FA/RM, GZYZo2o, 49:33)
  - c. Blo'ed Maria bidao' ni beku' **cholazhe'e** lo' yo'o. show.comp Maria child this dog **slowly** in house
    (FA/RM, GZYZO20, 49:11)
  - d. Blo'ed Maria bidao' ni beku' lo' yo'o **cholazhe'e**. show.comp Maria child this dog in house **slowly**

(FA/RM, GZYZ020, 48:52)

- (21) a. Blo'ed Maria **neje** bidao' ni beku' lo' yo'o.

  show.comp Maria **yesterday** child this dog in house

  'Yesterday, Maria showed the dog to the child in the house.'

  (FA/RM, GZYZ019, 16:23)
  - b. Blo'ed Maria bidao' ni **neje** beku' lo' yo'o.

    show.comp Maria child this **yesterday** dog in house

    (FA/RM, GZYZ019, 1:45)
  - c. Blo'ed Maria bidao' ni beku' **neje** lo' yo'o. show.comp Maria child this dog **yesterday** in house (FA/RM, GZYZ019, 17:03)
  - d. Blo'ed Maria bidao' ni beku' lo' yo'o **neje**. show.comp Maria child this dog in house **yesterday**

(FA/RM, GZYZ019, 17:19)

The two classes come apart in preverbal position. While temporal adverbs adjoin to CP, appearing before a wh-phrase (23a-b), manner adverbs occupy Spec-CP, since they cannot cooccur before the verb either preceding or following a wh-phrase (22a-b). (In wh-questions, manner adverbs only surface postverbally.)

- (22) a. **Neje** bi de'e udoo Juan?

  yesterday which thing eat.comp Juan

  'What did Juan eat yesterday?' (ADR, SLZ1015, 7:23)
  - b. \* Bi de'e **neje** udoo Juan?

    which thing **yesterday** eat.COMP Juan (ADR, SLZ1015, 7:39)
- (23) a. \* **Xtido**' bi behle' dzoo Juan?

  quickly which meat eat.cont Juan

  Intended: 'Which meat is Juan eating quickly?'

  (ADR, SLZ1015, 4:03)
  - b. \*Bi behle' **xtido**' dzoo Juan?

    which meat quickly eat.CONT Juan (ADR, SLZ<sub>1015, 4:25</sub>)

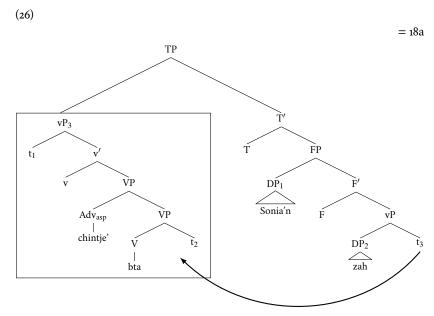
Returning now to the aspectual adverbs, their surface distribution is somewhat mysterious. Crosslinguistically, such adverbs typically occur below temporal adverbs (Cinque 1999, a.o.). This tendency is illustrated in 24–25: *today* can only adjoin high—to TP or CP—while *still* can only adjoin lower—to vP or below, perhaps.

- (24) a. **Today** Max is taking the bar exam.
  - b. \* Max is **today** taking the bar exam.
- (25) a. \* **Still** Max is taking the bar exam.
  - b. Max is **still** taking the bar exam.

While we do not fully understand the source of this pattern, one not implausible explanation is semantic. Since aspectual adverbs are sensitive to the internal

structure of the event described by the verb, they must be adjoined closer to it (Tenny 2000).

Under the predicate raising account, however, the inverted order of aspectual adverbs relative to temporal adverbs is unsurprising. If aspectual adverbs only adjoin inside vP, they always raise with the verb to Spec-TP, thereby appearing only to its left.



Moreover, aspectual adverbs are correctly predicted, unlike temporal adverbs, to be ungrammatical before a wh-phrase (27a), and unlike manner adverbs to be grammatical between a wh-phrase and the verb (27b).

\* Chintje' nu nule'n ble'e Sonia='n? (27)which girl see.comp Sonia=def Intended: 'Which girl did Sonia just see?' (FSR, SLZ1014, 2:55) nule'n **chintje**' ble'e b. Nu Sonia='n? which girl just see.comp Sonia=def 'Which girl did Sonia just see?' (FSR, SLZ1014-s, 2)

By contrast, under the verb raising account, the inverted pattern of aspectual adverbs in SLZ is unexpected. If they only adjoin inside vP, then the grammatical sentence in (18a) would incorrectly be predicted to be ungrammatical and the ungrammatical sentence in (18d) to be grammatical. The only recourse would be to assume that aspectual adverbs adjoin higher than temporal adverbs—for instance, to TP—but this would cut against the robust generalization about the hierarchical position of adverbs across languages. So, the position of aspectual adverbs, immediately preceding the verb in initial position, supports the predicate raising account over the verb raising account.

# 5 COPULAR CLAUSES

There are two copulas: -*sua* (or - *soo*) 'be, live' and -*ak* 'be, happen'.<sup>2</sup> We focus on just the first here. In a copular clause, an adjectival predicate can either follow (28a) or precede (28b) the subject.

(28) a. Zua Pedro wen.

be.CONT Pedro good

'Pedro is well.' (FSR, SLZ1014-s, 30)

b. Zua wen Pedro.

be.CONT good Pedro

'Pedro is well.' (FSR, SLZ1014-s, 28)

We take the copula to be a verb, as it can host a subject clitic (29a) and aspectual morphology (29b). But it takes a small clause complement, comprised of the subject and a predicate.

(29) a. Zoo-to' wen.

be.CONT-IPL:EXCL good

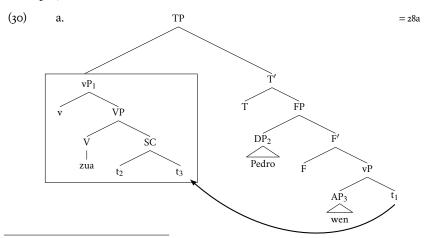
'We are well.' (RM, GZYZ001-s, 5)

b. Ga bzu-e'?

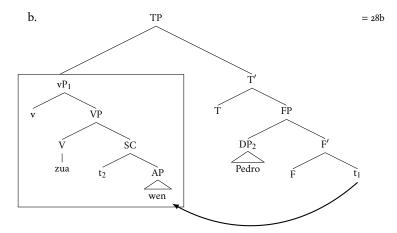
where live.comp-3EL

'Where did s/he live?' (RM, GZYZ040-s, 4)

The variable word order in (28a-b) follows straightforwardly under the predicate raising account if AP predicates can optionally undergo the same scrambling operation that DPs and PPs undergo obligatorily. When it moves out of vP, subject-predicate order arises (30a); when it does not, predicate-subject order arises (30b).



 $<sup>^{2}\</sup>mbox{Verbs}$  in Zapotec have several aspectual forms; the citation form is a bound morpheme lacking aspectual morphology.



There is independent evidence that the adjectival predicate is capable of moving. Just like the subject (31a), it can move into a preverbal focus position (31b).

Importantly, there is no violation of the adjacency requirement in (15) when the adjectival predicate intervenes between the copula and subject. As shown in (30b), it is contained within the constituent in Spec-TP.

This constraint is clearly still in effect in copular clauses. With subject-predicate order, a temporal adverb can occur in any position except between the vP in Spec-TP and the subject.

(32)	a.	Neje [zua] Pedro wen. yesterday be.cont Pedro good	
		'Yesterday, Pedro was well.'	(FSR, SLZ1014-s, 39)
	b.	* [Zua] <b>neje</b> Pedro wen. be.cont <b>yesterday</b> Pedro good	(FSR, SLZ1014, 55:28)
	c.	[Zua] Pedro <b>neje</b> wen. be.cont Pedro <b>yesterday</b> good	(FSR, SLZ1014, 55:34)
	d.	[Zua] Pedro wen <b>neje</b> . be.cont Pedro good <b>yesterday</b>	(FSR, SLZ1014, 55:42)

Similarly, with predicate-subject order, a temporal adverb is possible in initial (33a) or final (33d) position. But it is ungrammatical between the phrase in Spec-TP and the subject (33c).

(33) a. **Neje** [zua wen] Pedro. **yesterday** be.cont good Pedro

'Yesterday, Pedro was well.' (FSR, SLZ1014, 56:00)

b. \* [Zua **neje** wen] Pedro.

be.cont **vesterday** good Pedro

(FSR, SLZ1014, 56:20)

c. \* [Zua wen] **neje** Pedro be.cont good **yesterday** Pedro

(FSR, SLZ1014, 56:27)

d. [Zua wen] Pedro **neje**. be.cont good Pedro **yesterday** 

(FSR, SLZ1014, 56:34)

Note that, under this account, (33b) is ungrammatical because a temporal adverb cannot adjoin inside vP, in keeping with the proposal in (19).

While the verb raising account can derive subject-predicate order in (28a) through head movement of the copula, it cannot derive predicate-subject order in (28b). To do so, the adjectival predicate would have to move independently to a position between the copula in T and the subject, thereby violating the adjacency requirement. This, then, is another argument in favor of the predicate raising account.

### 6 Light verb constructions

There are light verb constructions in sLz built from a *light verb*, -un (or -on) 'do, make' plus a *nonverbal element*, e.g. -un yeze' 'boast', -un lazhe 'lie', and -un tsgwa 'show off' (lit. 'make much').<sup>3</sup>

(34) a. **Dzun yeze**' Pedro kar tse=ba'=n.

do.cont boastful Pedro car of=3.HU=DEF

'Pedro is boasting about his car.'

(FSR, SLZ1013-s, 11)

b. **Dzon lazhe** Pedro nada'. **do.cont lying** Pedro 18G

'Pedro is lying to me.'

(FA/RM, GZYZ018, 1:25:03)

(FA/RM, GZYZ018, 57:34)

b. **Dzun shchaj** Pedro=n. **do.cont noise** Pedro=DEF

'Pedro is making noise.'

(FSR, SLZ1014, 1:30:56)

We set these light verb constructions aside because they allow for the nonverbal element to move independently, e.g., to a preverbal position. As expected, they also allow for the nonverbal element to intervene between the verb and subject, just as in a copular construction.

<sup>&</sup>lt;sup>3</sup>This class of light verb constructions contrasts with another, superficially similar class that exhibits a different behavior (see Broadwell 2004 for a parallel contrast in another Zapotec language).

c. **Dzon tsgwa** Pablo kar tse=ba'. **do.cont much** Pablo car of=3.HU

'Pablo is showing off his car.' (lit. 'Pablo is making much of his car.')

(FA, GZYZO18, 45:50)

Crucially, the nonverbal element in these light verb constructions must occur immediately following the light verb, preceding the subject.

- (35) a. \* **Dzun** Pedro **yeze**' kar tse=ba'=n. **do.cont** Pedro **boastful** car of=3.HU=DEF

  Intended: 'Pedro is boasting about his car.' (FSR, SLZ1013, 20:11)
  - b. \* Dzon Pedro lazhe.

    do.cont Pedro lying

    Intended: 'Pedro is lying.' (RM/FA, GZYZo18, 1:18:01)
  - c. \* **Dzon** Pedro **tsgwa** kar tse=ba'. **do.cont** Pedro **much** car of=3.HU

    Intended: 'Pablo is showing off his car.' (FA/RM, GZYZo18, 51:35)

Broadwell (2004) proposes that parallel light verb constructions in San Dionicio Ocotepec Zapotec are compounds. This seems unlikely for sLz because some incorporated adverbs can intervene between the light verb and nonverbal element.<sup>4</sup>

- (36) a. Dzun-**tek** yeze' Pablo kar tse=ba'=n.

  do.cont-a.lot boastful Pablo car of=3.HU=DEF

  'Pablo is boasting a lot about his car right now.'

  (FSR, SLZ1016, 14:54)
  - b. Dzon-tek lazhe Pedro.

     do.cont-a.lot lying Pedro

     'Pedro is lying a lot right now.' (FA, GZYZo2o-s, 27)

(i) Dzun yez=**a**' kar tsi=a'=n.
do.cont boastful=**isG** car of=isG=DEF

'I am boastful of my car.' (FSR, SLZ1013-s, 12)

(ii) \* Dzun=**a**' yeze' kar tsi=a'=n.

do.CONT=**ISG** boastful car of=ISG=DEF (FSR, SLZ1014, 59:07)

At least for the pronominal clitics, these are weak elements which must be licensed syntactically (Foley, Kalivoda & Toosarvandani, to appear-a, b). They are also selective about what their phonological host can be, which need not be a verb (Marlett 1993: 95). While they can attach to another clitic, forming a clitic cluster, they cannot, for instance, attach to an R-expression (Toosarvandani 2017: 131). While the licensing conditions for incorporated adverbs and pronominal clitics are germane here, we leave off further consideration for reasons of space.

<sup>&</sup>lt;sup>4</sup>Two kinds of elements can encliticize to the verb: "incorporated" adverbs and pronominal clitics. While the former attach to the light verb (36a–c), the latter attach only to the nonverbal element.

c. Dzon**-tek** tsgwa Pedro kar tse=ba'.

do.cont-a.lot much Pedro car of=3.HU

'Pedro is showing off his car a lot right now.'

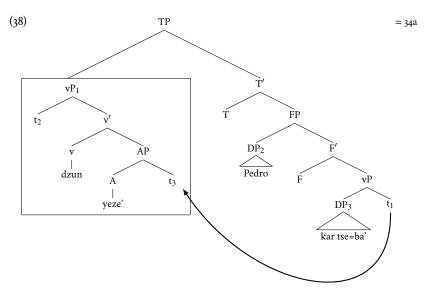
(FA/RM, GZYZ019, 1:25:20)

Instead, we might draw a parallel—somewhat speculatively—to light verb constructions in other languages, and in particular in Persian where they can be built from the light verb *kardan* 'do' and a nonverbal element.

(37) Pâpâr Kimeâ=ro **bidâr kard**. *Papar Kimea*=овј *awake do.PAST.3SG*'Papar woke up Kimea.' (Folli et al. 2005: 1375)

In Persian, the light verb is typically analyzed as the realization of v, since simply switching out *kardan* 'do' for another light verb can yield an unaccusative predicate. Its complement, then, is headed by the nonverbal element (Folli et al. 2005).

With this structure, the position of the nonverbal element immediately after the light verb follows directly from the predicate raising account. The nonverbal element can move along with the light verb.



The nonverbal element always occurs immediately following the light verb, as it cannot move on its own.

(39) a. \* Yeze' dzun Pablo kar tse=ba'.

boastful do.cont Pablo car of=3.HU

Intended: 'Pablo is boasting about his car'. (FSR, SLZ1016, 0:30)

b. \* Lazhe dzon Pedro nada'.

lying do.cont Pedro 18G

Intended: 'Pedro is lying to me.' (FA/RM, GZYZ019, 1:21:39)

c. \* **Tsgwa** dzon Pedro kar tse=ba'. *a.lot* do.cont Pedro car of=3.HU

Intended: 'Pedro is showing off his car.' (FA/RM, GZYZ019, 1:21:19)

By contrast, under the verb raising account, there is no way to understand how the nonverbal element ends up between the light verb and subject. Unlike with copular clauses, movement of the nonverbal element on its own appears to be blocked. And even if it could move, doing so would violate the adjacency requirement in (15), as it would involve movement of the nonverbal element to a position between T and the subject in Spec-FP. This is a final argument in favor of the predicate raising account.

# 7 FUTURE PROSPECTS

Verb initiality in sLZ is derived, then, through predicate raising. This is perhaps somewhat more difficult to see than in Austronesian, where the object can sometimes surface inside the constituent that moves, yielding vos. If objects and other non-subject constituents obligatorily move because they are freely ordered amongst one another, then the evidence for predicate raising has to come from other elements with a more restricted distribution: some adverbs and some predicates.

So, not all languages with rigid vso word order use verb raising. While this correlation may not turn out to be crosslinguistically robust, adopting predicate raising for verb initiality in sLz allows us to maintain other generalizations, including the fixed ordering of temporal and aspectual adverbs. And, it revealed another possible generalization—the adjacency requirement between the sentence-initial predicate and the subject—which we will hopefully gain a better understanding of through closer scrutiny of other verb-initial languages.

# References

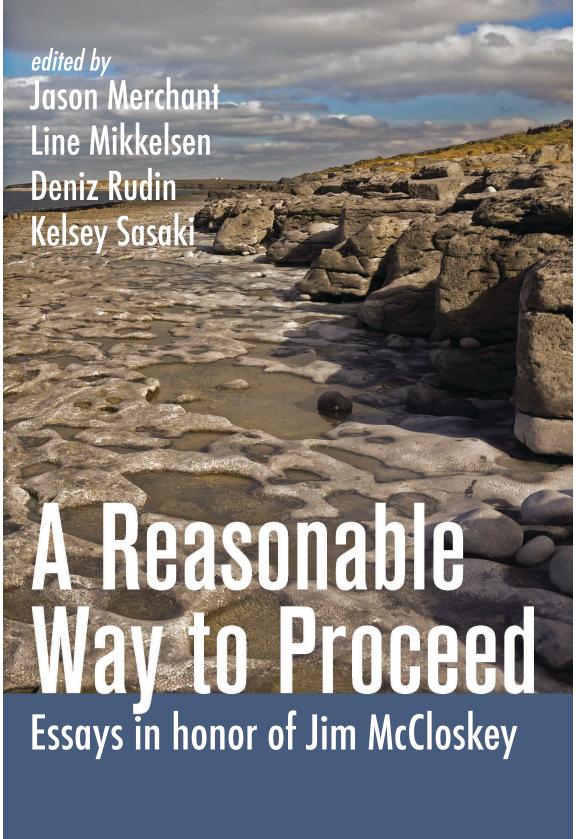
Anderson, Stephen R. & Sandra Chung. 1977. On grammatical relations and clause structure in verb-initial languages. In Peter Cole & Jerry M. Sadock (eds.), *Grammatical relations*, vol. 8 Syntax and Semantics, 1–25. New York: Academic Press.

Black, Cheryl A. 2000. Quiegolani Zapotec syntax: A principles and parameters account. Arlington, TX: SIL International.

Broadwell, George Aaron. 2004. The morphology of Zapotec pronominal clitics. In Rosemary Beam de Azcona & Mary Paster (eds.), *Conference on Otomanguean and Oaxacan languages*, vol. 14 Survey Reports, 15–36. Berkeley, CA: Survey of California and Other Indian Languages.

- Broadwell, George Aaron. 2005. It ain't necessarily S(V)O: Two kinds of VSO languages. *Proceedings of the LFG Conference*.
- Chomsky, Noam. 1970. Remarks on nominalization. In Roderick A. Jacobs & Peter S. Rosenbaum (eds.), *Readings in English Transformational Grammar*, 184–221. Waltham, MA: Ginn and Company.
- Chung, Sandra. 1990. VP's and verb movement in Chamorro. *Natural Language* and *Linguistic Theory* 8. 559–619.
- Cinque, Guglielmo. 1999. Adverbs and functional heads: A crosslinguistic perspective. Oxford: Oxford University Press.
- Clemens, Lauren Eby & Jessica Coon. To appear. Deriving verb-initial word order in Mayan. *Language* .
- Foley, Steven, Nick Kalivoda & Maziar Toosarvandani. To appear-a. Forbidden clitic clusters in Zapotec. *Chicago Linguistic Society (CLS)* 53.
- Foley, Steven, Nick Kalivoda & Maziar Toosarvandani. To appear-b. Gender—Case Constraints in Zapotec. Workshop on Structure and Constituency in Languages of the Americas (WSCLA) 22.
- Folli, Raffaella, Heidi Harley & Simin Karimi. 2005. Determinants of event type in Persian complex predicates. *Lingua* 115. 1365–1401.
- Foreman, John Olen. 2006. *The morphosyntax of subjects in Macuiltianguis Zapotec*: University of California, Los Angeles dissertation.
- Grimshaw, Jane. 2005. Extended projection. In Words and structures, 1–73. Stanford, CA: CSLI.
- Haider, Hubert. 2006. Mittelfeld phenomena (Scrambling in Germanic). In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell companion to syntax*, vol. 3, 204–274. Oxford: Blackwell.
- Holmer, Arthur. 2005. Seediq: Antisymmetry and final particles in a Formsan VOS language. In Andrew Carnie, Heidi Harley & Sheila Ann Dooley (eds.), *Verb first: On the syntax of verb-initial languages*, 175–201. Amsterdam: Benjamins.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase structure and the lexicon*, 109–137. Dordrecht: Kluwer.
- Lee, Felicia. 2003. Anaphoric R-expressions as bound variables. *Syntax* 6(1). 84–
- Lee, Felicia. 2006. Remnant raising and VSO clausal architecture: A case study of San Lucas Quiaviní Zapotec. Amsterdam: Springer.
- Long, Rebecca & Sofronio Cruz. 2000. *Diccionaria Zapoteco de San Bartolomé Zoogocho Oaxaca*. Mexico City: Instituto Lingüístico de Verano.
- López Nicolás, Oscar. 2016. Estudios de la fonología y gramatica del zapoteco de Zoochina: Centro de Investigaciones y Estudios Superiores en Anthropología Social dissertation.
- Marlett, Stephen A. 1993. Zapotec pronoun classification. *International Journal of American Linguistics* 59(1). 82–101.
- Massam, Diane. 2001. Psueo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19. 153–197.

- Massam, Diane & Carolyn Smallwood. 1997. Essential features of predication in English and Niuean. *North East Linguistic Society (NELS)* 27. 263–272.
- McCloskey, James. 1991. Clause structure, ellipsis and proper government in Irish. *Lingua* 85. 259–302.
- McCloskey, James. 1996. On the scope of verb movement in Irish. *Natural Language and Linguistic Theory* 14. 47–104.
- McCloskey, James. 1997. Subjecthood and subject positions. In Liliane Haegeman (ed.), *Elements of grammar*, 197–235. Dordrecht: Kluwer.
- McCloskey, James. 2002. Resumption, successive cyclicity, and the locality of operations. In Samuel David Epstein & T. Daniel Seely (eds.), *Derivation and explanation in the Minimalist Program*, 184–226. Malden, MA: Blackwell.
- Otsuka, Yuko. 2000. Ergativity in Tongan: University of Oxford dissertation.
- Pensalfini, Robert. 1995. Malagasy phrase structure and the LCA. In Robert Pensalfini & Hiroyuki Ura (eds.), *Papers on Minimalist syntax*, vol. 27 MIT Working Papers in Linguistics, 245–260. Cambridge, MA: MITWPL.
- Sonnenschein, Aaron. 2004. *A descriptive grammar of San Bartolomé Zoogocho Zapotec*: University of Southern California dissertation.
- Stowell, Timothy. 1981. *Origins of phrase structure*: Massachusetts Institute of Technology dissertation.
- Tenny, Carol L. 2000. Core events and adverbial modification. In Carol L. Tenny & James Pustejovsky (eds.), *Events as grammatical objects*, 285–334. Stanford, CA: CSLI Publications.
- Toosarvandani, Maziar. 2017. On reaching agreement early (and late). In Jason Ostrove, Ruth Kramer & Joseph Sabbagh (eds.), *Asking the right questions: Essays in honor of Sandra Chung*, 124–138. Santa Cruz, CA: Department of Linguistics, University of California, Santa Cruz.



# A reasonable way to proceed

Essays in honor of Jim McCloskey

Jason Merchant, Line Mikkelsen, Deniz Rudin, and Kelsey Sasaki (eds.)

Typesetting by Kelsey Kraus Illustration by Kim Bennett Cover design by Nicholas Merchant Cover photo by Catherine Cronin

This book is an open access publication made possible by the University of California's eScholarship Repository. Its contents are the intellectual property of the authors, licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.