

Preverbs in Yucatec Maya*

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1 Introduction

- Cross-linguistically, we think of adverbs as a very flexible class with certain characteristics

Morphology: may have characteristic derivational morphological marking such as English *-ly*, Spanish *-mente*.

Syntax: occur in various positions in the sentence, including in languages like English which ordinarily have fairly rigid word order.

Semantics: heterogeneous modifiers – temporal, manner, domain, speaker-oriented, etc.

- (1) (**Happily**,) Floyd would (**happily**) play the tuba (**happily**).
- (2) (**Cuidadosamente**,) Mario escribió (**cuidadosamente**) la carta (**cuidadosamente**).

- Adverbs in Yucatec Maya have a similarly flexible set of properties:

Morphology: often bear a derivational suffix *-il*

Syntax: can occur as preverbal topics, foci, and in postverbal position

Semantics: heterogeneous modifiers – temporal, locative, manner, etc.

- | | | | |
|-----|----|---|-------------------|
| (3) | a. | Jujump’ítíl =e’ k-u wéek-el ja’
bit.by.bit=TOP HAB-A3 spill-ITV.INC water
‘Bit by bit, the water spilled’ | Topic |
| | b. | Jujump’ítíl (k)-u wéek-el ja’
bit.by.bit HAB-A3 spill-ITV.INC water
‘It is bit by bit tha thte water spills’ | Focus |
| | c. | K-u wéek-el ja’ jujump’ítíl
HAB-A3 spill-ITV.INC water bit.by.bit
‘The water spills bit by bit.’ | Postverbal |

This talk: we argue that in addition to adverbs like *jujump’ítíl* above, Yucatec Maya has another more restriction adverbial category which we call PREVERBS:

- (4) a. K-a **jáan** p’o’-ik in nook’
HAB-A2SG wash wash-TR.INC A1SG clothes
‘You wash my clothes quickly’

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- b. Yaan in **ka'a** pak'-ik le xixim=o'
 OBL 1SG again plant-TR.INC DEF corn=DIST
 'I will re-plant my corn'
- c. Táan u **túutus** wen-el
 PROG A3 de mentira dormir-ITV.INC
 'She is fake sleeping/pretend sleeping.' (Sp. 'Está durmiendo de mentira')

Morphology: Primarily bare roots, though extremely not always and extremely diverse roots

Syntax: Always occur in a specific position between the verb root and the otherwise immediately preceding ergative/nominative agreement marker ("Set A" in Mayanist terms)

Semantics: Manner or degree semantics – "verb-related" in the adverbial classification of [Maienborn & Schaefer \(2011\)](#)

Road map:

- §2 presents background on the language and its speakers, the data used here, as well as background on the syntax and semantics of adverbs generally;
- §3 lays out the syntactic properties of preverbs, including especially how to distinguish them from superficially similar constructions like V-V compounds and incorporation;
- §4 presents semantic arguments demonstrating that only certain kinds of adverbial meanings are attested with preverbs;
- §5 proposes a division between two subtypes of preverbs and proposes a preliminary syntactic analysis;
- §6 concludes with an eye towards similar elements in other Mayan languages.

2 Background

2.1 Language background and data

- Yucatec Maya is one of 30 languages in the Mayan family, spoken by $\approx 850,000$ speakers per [government statistics](#).
- Widely spoken, especially in rural areas in the states of Campeche, Quintana Roo, and especially Yucatán.

Data in this talk comes from a mix of corpus examples and elicitations with 4 native speakers, occasionally supplemented with introspection.

- We began by identifying apparent preverbs from a prior corpus study (?), especially to establish syntactic properties
- We additionally used introspection and looking through the dictionary to identify "potential preverbs"
- (Dis-)confirmed potential preverbs through elicitation and introspection
- Some individual lexical items showed a decent amount of individual variation in their acceptability in preverbal position, most did not.

2.2 The verbal complex in Yucatec Maya

- The verbal complex in Yucatec Maya consists of the following elements:

(5) ASP-SETA-root-suffix_{class}-suffix_{status}-SETB

- *Class* suffixes depend on the transitivity of the verb – in many cases, there is no class suffix (6a); the most relevant here is the morpheme *-t* (6b) often regarded as an *applicative* in prior literature
- *Status* suffixes depend on transitivity as well as aspect – the most relevant here are the transitive inceptive *-ik* (6a) and the transitive completive *-aj* (6b)

- (6) a. K-u páan-ik
HAB-A3 dig-TR.INC
‘He digs it.’
- b. T-u tséen-t-aj
PFV-A3 feed-APPL-TR.CMPL
‘He fed it.’

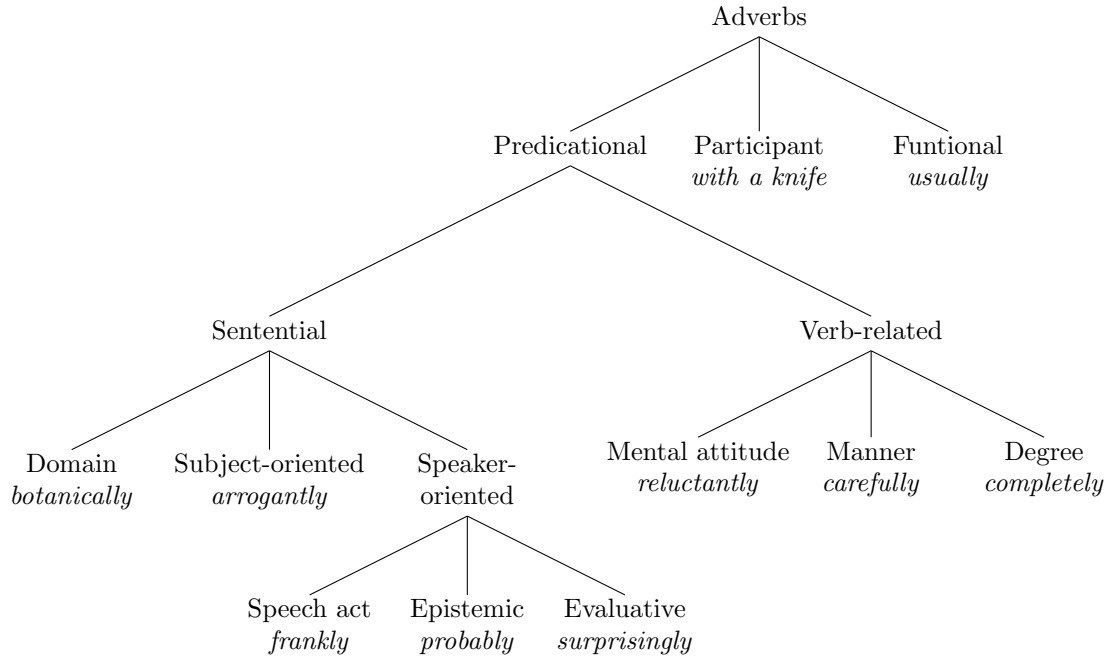
2.3 Semantic classification of adverbs

Adverbs in English, Spanish, and seemingly in many languages represent a wide range semantically:

- | | | |
|------|--|------------------|
| (7) | Estaba corriendo <u>lentamente</u>
He was running <u>slowly</u> | Manner |
| (8) | El edificio fue destruido totalmente .
The building was <u>completely</u> destroyed. | Degree |
| (9) | John <u>arrogantemente</u> había dejado la puerta abierta.
John <u>arrogantly</u> had left the door unlocked. | Subject-oriented |
| (10) | <u>Francamente</u> , la canción no me gusta.
<u>Frankly</u> , I don't like the song. | Speech act |
| (11) | <u>Matemáticamente</u> , la solución es sólida.
<u>Mathematically</u> , the solution is sound. | Domain |
| (12) | <u>Sorprendentemente</u> , María se fue temprano.
<u>Surprisingly</u> , María left early. | Evaluative |
| (13) | Alfredo <u>probablemente</u> no sepa la respuesta
Alfredo <u>probably</u> doesn't know the answer. | Epistemic |

- Maienborn & Schaefer (2011) propose the following classification of these meaning:

- (14) Semantic classes of adverbs from Maienborn & Schaefer (2011):



- On apparent dimension of this variation: **what does the adverb modify?**

Verbal action/event: manner, degree ...

Proposition: epistemic, evaluative ...

Utterance: speech act

2.4 Morphosyntactic reflexes of adverb semantics

Related to this diverse semantics, we see clear but complex connections between these semantic classes and their morphosyntax (cf. Cinque (1999), Ernst (2004, 2007))

- In English, the linear position of the adverb reflects/influences its interpretation (cf. McConnell-Ginet (1982), Morzycki (2016)):

- (15) a. **Subject-oriented**
Stupidly, Fatima left.
≈ ‘The fact Fatima left was stupid (compared with other things she might have done).’
- b. **Manera**
Fatima left stupidly.
≈ ‘The way that Fatima left was stupid (compared with other ways she might have left)’
- (16) a. **Speaker-oriented**
Frankly, she spoke to him already.
≈ ‘I am telling you in a frank manner that she spoke to him already.’
- b. **Manera**
She already spoke frankly to him.
≈ ‘The manner in which she already spoke to him was frank.’

- In Japanese, Kubota (2015) argues that the distinction between subject-oriented and manner adverbs is encoded with a suffix *-mo*:

- (17) a. **Subject-oriented**
Orokani-**mo** John-wa odotta.
stupidly-MO John-TOP dance

‘It was stupid of John to dance (compared to other things he might have done).’ Kubota (2015)

b. **Manner**

Orokani John-wa odotta.
stupidly John-TOP dance

‘John danced in a stupid manner (compared to other ways he might have danced)’ Kubota (2015)

- One important aspect to help understand the two interpretation of *stupidly* in (15a) and (15b) is frequent **polyfunctionality**:
 - The existence of both readings within a single lexical item is not an isolated exception.
- Given this, it can often be quite subtle to distinguish between different readings.
- For example, upon hearing (15b), it is tempting to conclude that Fatima is stupid or has done something stupid.
- However, this conclusion is not an entailment.
 - For example, her manner may have been stupid in order to deceive someone and therefore her action may ultimately be intelligent.
- The general pattern we find is that syntactically higher positions correspond to sentence and speech act modifiers, while event/verbal modifiers correspond to lower positions.

Summary: Adverbs are smeanantically diverse in ways that are partially due to morphosyntactic factors.

3 The syntactic profile of preverbs

3.1 Basic properties

- They occupy a fixed position between the Set A (ergative/nominative) marker and the verb root:

- (18) a. Táan k **múul** páan-ik le lu’um=o’
 PROG A1PL in a group dig-TR.INC DEF earth=DIST
 ‘We are digging the earth in a group.’
 b. *Táan k páan-ik **múul** le lu’um=o’
 PROG A1PL dig-TR.INC in a group DEF earth=DIST
 Intended: ‘We are digging the earth in a group.’

- More than one preverb is possible at once:

- (19) T-u **ka’a láaj** jaan-t-aj
 PFV-A3 again all eat-APPL-TR.CMPL
 ‘S/he ate it all again.’
 (20) T-in **utsil ki’ki’** meet-aj le chachaak waaaj=o’
 PFV-A1 well just.so make-TR.CMPL DEF tamale.type=DIST
 ‘S/he made the chachaak waaajs (a kind of tamale) well.’

- In contrast to preverbs, we can note that discourse particles which are generally even more flexible than adverbs (21) cannot occur in this position, (22)

- (21) Ma’ (bin) t-u máan-s-aj (bin) u examen (bin) Carmen (bin)-i’.
 NEG (REP) PFV-A3 pass-CAUS-TR.CMPL (REP) A3 exam (REP) Carmen (REP)-NEG.CL
 ‘Carmen didn’t pass the exam (they say).’

- (22) *Juan=e' t-u bin/bakáan p'at-aj je'ek'-a'an le puerta'=o'
 Juan=TOP PFV-A3 REP/MIR leave-TR.CMPL open-ADJ DEF door=DIST
 Intended: 'Juan reportedly/surprisingly left the door open.'

3.2 Distinguishing preverbs from incorporation and compounding

- Preverbs appear similar to V-N incorporation and X-V compounding.
- However, we show here that they can be distinguished from these on morphological grounds.
- These latter processes trigger the applicative *-t* suffix in transitive uses (regardless of the root's ordinary behavior (see Sullivan (1984), Gutiérrez-Bravo (2002), Petatillo-Chan (2020)))

(23) **Noun incorporation (V-N)**

- a. K-in lom-k'ab-t-ik-ech
 HAB-A1SG stab-hand-appl-TR.INC-B2SG
 'I hand-stabbed you.'
- b. Ko'ox joy-ja'-t-ik le pak'al=o'
 HORT spread-water-APPL-TR.INC DEF garden=DIST
 'Let's go water the garden!'

(24) **Compounding (X-V)**

- a. T-a ch'eb-k'os-t-aj
 PFV-A2SG askew-cut-APPL-TR.CMPL
 'You cut it askew.'
- b. T-u ts'úum-lom-t-aj le bejiiga=o'
 PFV-A3 deflate-puncture-APPL-TR.CMPL DEF balloon=DIST
 'He punctured and deflated the balloon.'

- Preverbs don't trigger the *-t* suffix when they modify transitive verbs:

- (25) a. T-u k'as tsaj-(*t)-aj le paanucho=o'
 PFV-A3 medio fry-(*APPL)-TR.CMPL DEF panucho=DIST
 'He fried the panuchos (taco type) halfway'
- b. Táan in chan xok-(*t)-ik le ju'un=a'
 PROG A1SG a.bit read-(*APPL)-TR.INC DEF leaf=DIST
 'I'm just reading this page.'

- Preverbs and compounds¹ are always strictly ordered:

- (26) a. Táan u chan mamak'-laj-t-ik
 PROG A3 a.bit angry-slap-APPL-TR.INC
 'He's just angry slapping him.'
- b. *Táan u mamak' chan laj-t-ik
 PROG A3 angry a.bit slap-APPL-TR.INC
 'He's just angry slapping him.'

- In contrast, two preverbs can often be interchanged freely, though sometimes with a change in meaning:

¹We apologize for the overabundance of violent verbs in this section. Among root transitives that don't ordinarily require the *-t* outside of compounds/incorporation, V-V compounding is most productive with verbs of ballistic motion and collision and so such examples were difficult to avoid here.

- (27) a. T-u ts'íik tuutuus lox-aj
 PFV-A3 aggressively fake hit-TR.CMPL
 'He aggressively fake hit him.'
- b. T-u tuutuus ts'íik lox-aj
 PFV-A3 fake aggressively hit-TR.CMPL
 'He pretended to aggressively hit him.'
- This ability is also subject to certain restrictions to be discussed in §5.1:
- (28) a. Táan u chan papa' lox-ik
 PROG A3 a.bit repeatedly hit-TR.INC
 'He's just repeatedly hitting him.'
- b. *Táan u papa' chan lox-ik
 PROG A3 repeatedly a.bit hit-TR.INC
 Intended 'He's just repeatedly hitting him.'

3.3 Preverbs compared to other categories

- Preverbs have semantically related homophonous counterparts of a diverse range of syntactic categories.

- (29) Preverb is numeral classifier: *múul*
- a. Táan k **múul** páan-ik le lu'um=o'
 PROG A1PL group dig-TR.INC DEF earth=DIST
 'We are digging the dirt in a group.'
- b. jun-**múul** tuunich
 one-CL rock
 'a pile of rocks'
- (30) Preverbo is a numeral: *ka'a*
- a. Yaan in **ka'a** pak'-ik le xixi'im=o'
 OBL A1SG again plant-TR.INC DEF corn=DIST
 'I am going to replant the corn.'
- b. **ka'a**-túul miis
 two-CL cat
 'two cats'
- (31) Preverb is an adjective: *k'as*
- a. T-u **k'as** tsaj-aj le paanucho=o'
 CMPL-A3 half fry-TR.CMPL DEF panucho=DIST
 'He half-fried the panucho.'
- b. **k'as**-ech
 ugly-B2SG
 'You are ugly.'
- (32) Preverbo is an adverb: *séeb*
- a. Táan u **séeb** póol-ik le che'=o'
 PROG A3 fast cut-TR.INC DEF tree=DIST
 'He is quickly cutting the tree.'
- b. **Séeb** u bin
 fast A3 go
 'It's fast that he is going.'

- Despite these connections, we see that preverbs are grammaticalized as such:
 - They represent a more or less closed class—not just any adjective/adverb/etc. can be used as a preverb.
 - Their form is lexicalized: e.g. the preverb *utsil* only occurs with the adverbial suffix *-il*, while *chaambel* ‘slowly’ does not (though it does as an adverb)

4 Semantics of preverbs in YM

4.1 Describing the semantics of preverbs

- In this section, we present a list of preverbs we have identified along with rough glosses and semantic categories.
- Primarily, we find preverbs in the categories of manner and degree:

Manner

Compulsive: The action is described with sudden starts and/or without apparent control
jan ‘suddenly’, *séeb* ‘quickly’, *téek* ‘abruptly’, *chich* ‘strongly/quickly’, *k’anaaj* ‘in a hurry’

Distributive/Quantificational: the action is described distributively over the object(s) (cf. [Ernst \(2004\)](#))
lúaj ‘completely’, *túul* ‘entirely’

Integrative: the action is described in an integrative manner, including various individuals.
múul ‘together’, *múuch* ‘in a group’, *túul* ‘completely’, *much* ‘reciprocally’, *jóol* ‘totally’, *paklam* ‘in a group’

Modal: the action is described as having a particular manner (cf. [Ernst \(2007\)](#))
ki ‘rich/tasty’, *k’as* ‘half’, *tuutus* ‘pretend, fake’, *k’anaaj* ‘in a hurry’, *noj* ‘big/important’, *baj* ‘just so’, *pach* ‘hesitantly’, *ma’alob* ‘well’, *nonoj* ‘jokingly’, *chen* ‘simply, just’, *yáax* ‘pre-’

Degree

Intensity: describes the extent or intensity with which the action is realized (cf. [Maienborn & Schaefer \(2011\)](#))
k’a’am ‘strongly’, *k’anaaj* ‘hurriedly’, *sen* ‘much’, *senkech* ‘much’, *jach* ‘suddenly’

Iterative: describes the degree/kind of repetition of the action
papa ‘empapada’, *babaj* ‘varias veces como sea’, *xanxan* ‘tardado’, *ka’a* ‘segundo’

Durative: describes the duration or amount of the event
chaambel ‘slowly’, *chan* ‘a little bit’, *xaan* ‘slowly, delayedly’, *chen* ‘just’, *jets* ‘careful’, *páat* ‘until soaked’,

- The morphemes listed above all fit the (morpho)syntactic criteria listed above in §3.
- We note that while many of these are uniform across speakers, there is some variation across speakers for certain preverbs.

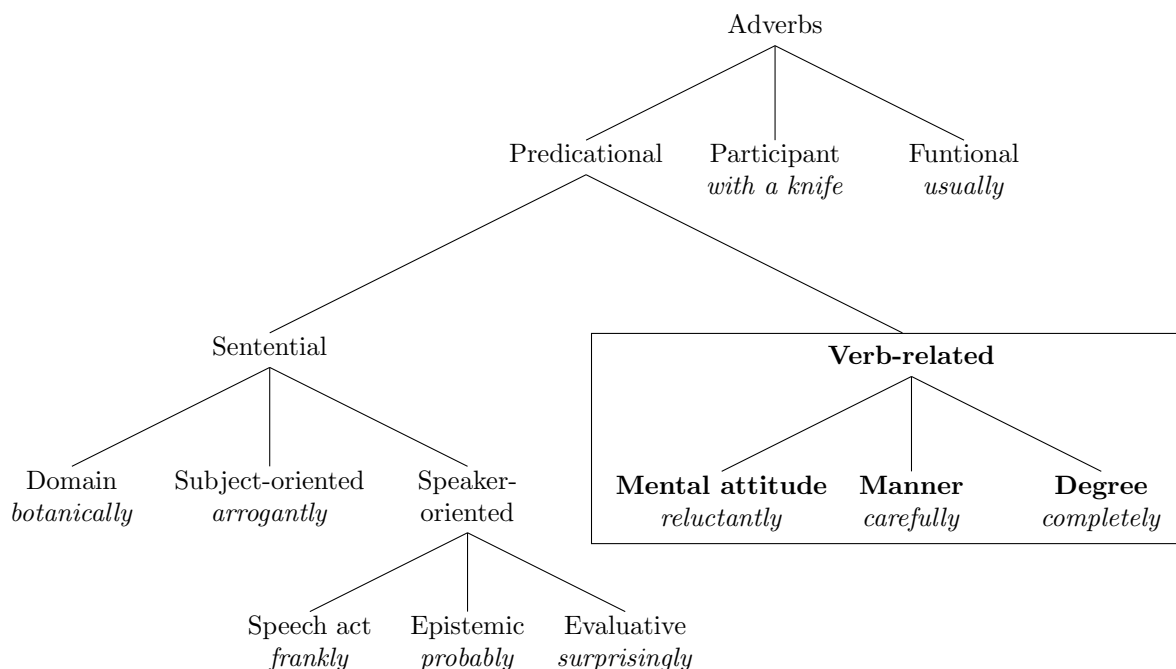
4.2 Preverbs within the semantic typology of adverbs

- We’ve seen that preverbs generally appear at a glance to fit into two major categories: manner and degree
- In contrast, note that there are many adverb classes that do not appear to be represented among preverbs:

- Domain adverbs (e.g. *botanically*)
- Speech act (e.g. *frankly*)
- Epistemic (e.g. *probably*)
- Evaluative (e.g. *surprisingly*)

- **Proposal:** Preverbs are restricted to [Maienborn & Schaefer \(2011\)](#)’s ‘verb-related’ class of adverbs:

(33) Proposed semantic restriction on preverbs:



- In section §4.3, we consider a few case studies of apparent potential counterexample, showing that they fit this generalization.

4.3 Case studies supporting the generalization

4.3.1 *chéen* ‘just, simply’

- Among the most frequent preverbs, we find *chéen*.
- Apart from its use as a preverb, the morpheme *chéen* is used as a focus-sensitive operator with a meaning similar to English ‘just’ or ‘only’:

(34) **Use of *chéen* as a focus-sensitive operator:**

Beto=e’ *chéen* soopa k-u jan-t-ik.
 Beto=TOP only soup HAB-A3 eat-APL-TR.INC

‘Beto only eats soup.’

- In (34), we see that *chéen* is a functional/quantificational adverb, not from the verb-related class.
- However, looking at *chéen* in preverb position, we find a meaning more like ‘casually’ or ‘simply’²:

²N.B. the adverb *just* in English shows a similar sort of polyfunctionality. Another complication we set aside here is that *chéen*—like *just*, but unlike *only*—is only optionally focus-sensitive. As case studies, we leave it to future work to provide a more detailed investigation of each individual morpheme.

(35) **Use of *chéen* as a preverb:**

Beto=e' soopa k-u **chéen** jan-t-ik.
 Beto=TOP sopa HAB-A3 simply eat-APPL-TR.INC

‘Beto simply/just ate soup.’

- That is to say, in its preverb use, *chéen* indicates the manner of eating rather than a meaning quantifying over events of eating.
- One illustration of this is the following contrast in exhaustivity entailments:

- (36) a. #Beto=e' chéen soopa k-u jan-t-ik. Bey-xan taako.
 Beto=TOP soup HAB-A3 only eat-APPL-TR.INC like.that-ALSO taco
 Int: #‘Beto just eats soup. And tacos too.’
- b. Beto=e' soopa k-u **chéen** jan-t-ik. Bey-xan taako.
 Beto=TOP soup HAB-A3 simply eat-APPL-TR.INC like.that-ALSO taco
 ‘Beto simply eats soup. And also tacos.’

- Although it has other uses in other positions, *chéen* in preverb position is a manner adverb.

4.3.2 *múul*, *múuch* ‘in a group, together’

- Apart from their use as a preverb, the roots *múul* and *múuch* have uses across a diverse range of syntactic categories with related meanings: ‘hill’, ‘group’, ‘pile up’, ‘agglomerate’, ‘join’ etc.
- In their use as a preverb, both morphemes indicate an action realized in a group:

- (37) J **múul** kuuch-n-aj-en (t-a wéet-el)
 PFV gather carry-VOI.ANTIP-ITV.CMPL-B1SG (PREP-A2SG compañero-REL)
 ‘I carried in a group.’ AnderBois & Armstrong (2016)

- At first blush, these uses appear to be participant modifiers.
- Maïenborn & Schaefer (2011) describe participant adverbs as follows:

“They introduce a new participant that takes part in the eventuality described by the verb... linked to the verb’s eventuality argument through a thematic role just like standard agent or patient arguments”

- However, AnderBois & Armstrong (2016) show that the inclusion of *múul* does not affect argument structure
 - It doesn’t change the subject for the purposes of control (control in YM is complete, not partial).
 - It doesn’t saturate a comitative argument, as evidenced by the felicity with an optional comitative PP.

- (38) In k’aat **múul** kuuch-∅ (t-a wéet-el).
 A1sg want gather carry-ITV.INCMPL (PREP-A2sg companion-REL)
 ‘I wanted to carry in a group (with you).’ AnderBois & Armstrong (2016)

- Summary: *múul* and *múuch* express that the event happened in a group manner, but without affecting thematic structure.

4.3.3 *ts'íik* ‘bravely, aggressively’

- Another preverb whose gloss suggests it to not be ‘verb-related’ is *ts'íik* ‘bravely, aggressively’
 - In particular, from these translations, it appears to potentially be subject-oriented

- However, we see that in preverb position

Sin embargo, vemos que en posición

(39) a. ***Ts'íik* as non-verbal predicate**

Ts'íik úuch u náats'-al
bravely REM.PAST A3 approach-ITV.INCMPL

‘It was brave that he approached. (the fact that he approached was brave)’

b. ***Ts'íik* as preverb**

Úuch u **ts'íik** náats'-al.
REM.PAST A3 bravely approach-ITV.INCMPL

‘He approached bravely/aggressively (the manner was brave/aggressive).’

- Although the gloss appears subject-oriented, we have argued that as a preverb, *ts'íik* has a semantics relating of manner/mental attitude.
- A further note of interest: there does not seem to be a way to express something like the subject-oriented meaning with an adverb:
 - (39a) instead uses a non-verbal predicate with a clausal argument to approximate it.

Summary: although there are preverbs that may appear tempting to categorize otherwise, all preverbs plausibly belong to the ‘verb-related’ class

Tentative generalization: Yucatec Maya does not have preverbs or other adverbs which are subject-oriented (nor speaker-oriented)

- N.B. we would love suggestions on how to show the manner nature of *ts'íik* and other adverbs more rigorously. Prior literature for English and other lgs relies primarily on co-occurrence with subject-oriented adverbs to show this.

5 Two subtypes of preverbs

- In previous sections, we have seen that preverbs have a common character, distinct in form and meaning from other categories in the language
- In this section, we look more closely within this class, identifying two subtypes of preverbs.
- Both fit the criteria in §3, but they appear to differ syntactically and semantically in subtle ways

5.1 VP or V modifiers

- En prior literature on adverbs (primarily in English), various authors have proposed a division between two subtypes of manner adverbs (see Maienborn & Schaefer (2011), (Morzycki, 2016, ch.5) for recent summaries):

McConnell-Ginet (1982): Distinguishes between “ad-verbs” that modify the verb itself and “ad-sentences” that modify a larger clausal constituent.

Schäfer (2008): Distinguishes between manner adverbs which are predicates of events and those which are claimed to modify a manner argument internal to the verb itself

- Here, we make a similar proposal for YM preverbs:

Argument 1: restrictions on linear order

- We saw above in (27-28) that preverbs often exhibit flexible ordering relative to one another.
- However, this is not always so. Some combinations require a particular order to be grammatical:

- (40) a. Táan u chan papa' lox-ik.
 PROG A3 a.bit over.and.over hit-TR.INC
 's/he is hitting it lightly over and over (all at once)'
 'una y otra vez lo está golpeando levemente'
 b. *Táan u papa' chan loxik.

Argument 2: relative scope

- In other cases, both orders are grammatical, but appear to have different meanings:

- (41) a. T-u ts'íik tuutuus jan-t-aj.
 PFV-A3 aggressive fake eat-APPL-TR.CMPL
 'He aggressively pretended to eat it.' (ts'íik > twutús)
 b. T-u tuutuus ts'íik jan-t-aj.
 PFV-A3 fake aggressive eat-APPL-TR.CMPL
 'He pretended to eat it in an aggressive manner.' (ts'íik > twutús)

- Based on similar sorts of scopal relations, Schäfer (2008) develops an analysis in which some adverbs modify a manner parameter of the verb itself, while others are predicates of events (and many are compatible with either option)

Argument 3: interaction with the direct object

- Some preverbs appear to exhibit interactions with the direct object.
- Simplifying³ slightly, *láj* 'all, completely' requires a plural internal argument:

- (42) a. **Context:** There is a door that was closed completely.
 #T-u **láj** k'al-aj le puerta=o'
 PFV-A3 all close-TR.CMPL DEF door=DIST
 Intended: 'S/he closed the door completely' #Singular object
 b. **Context:** There are various doors that were closed.
 T-u **láj** k'al-aj le puerta=o'
 PFV-A3 all close-TR.CMPL DEF door=DIST
 'S/he closed all the doors.' Objeto plural

³In addition to a plural object, *láj* also accepts a singular direct object with a plurality of parts:

- (1) T-u **láj** sel-aankil a wíinkil-il bey=a'.
 PROG-A3 all peel-AFF A2 body-REL like.that=PROX
 'His whole body is peeling like that (from sunburn).' Object with parts
<https://yucatecmaya.github.io/LingView/#/story/21047806-1864-420f-9d68-538acfd2055c?82324>

We leave it to future work to conduct a detailed analysis of such cases. The important thing here is the interaction with the direct object.

- Moreover, this property appear to be related to the relative order of preverbs:

- (43) a. ??T-u **séeb láaj** meen-t-aj.
 PFV-A3 fast all do-APPL-TR.CMPL
 Intended: ‘S/he finished them all quickly.’
 b. T-u **láaj séeb** meen-t-aj.
 PFV-A3 all fast hacer-APPL-TR.CMPL
 ‘S/he finished them all quickly.’

- **Summary:** in this subsection, we have argued for a division between two subclasses⁴ of preverbs based on their formal and semantic properties:

Type 1: *láaj* ‘all’, *chan* ‘a bit’, *ts’úik* *aggressively*, *tuutus* ‘fake, pretend’ ...

- Predicates of events
- Take wide scope relative to Type 2
- Precedes Type 2 in linear order
- May interact with direct object (but need not)

Type 2: *papa* ‘many times all at once’, *ts’úik* *aggressively*, *tuutus* ‘fake, pretend’, *chaambel*, ...

- Modify verb’s manner argument
- Take narrow scope relative to Type 1
- Closer to the verb than Type 1
- Cannot interact with direct object
- N.B. many preverbs can be used in either way (e.g. *tuutus* ‘fake, pretend’ and *ts’úik* ‘aggressively’ above).

5.2 Towards an analysis

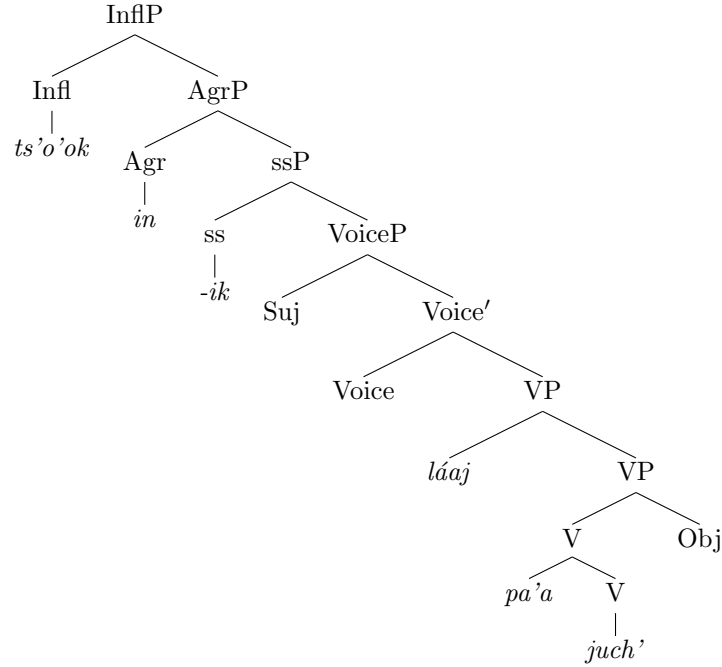
We base our background assumptions about the syntax of VPs in Mayan on the proposals of Coon (2017) and Clemens & Coon (2018)

- Within this framework, we propose that Type 1 preverbs are VP modifiers, while Type 2 modify V itself, as in (45)

- (44) Ts’o’ok in láaj pa’a juch’ik.
 TERM A1 all at.once grind-TR.INC
 ‘I just ground it all at once.’

⁴One apparent preverb of interest according to the morphosyntactic diagnostics in §3 is pluractional reduplication of the verb root. Semantically, Yu (2021) argues that this morpheme contributes event-internal pluractionality (in contrast to the suffix *-laaj*). It can only occur adjacent to the verb and so appears to be Type 2. However, event-internal pluractionality is often still modeled as an event modifier (e.g. by Henderson (2012)). At the same time, this may not be a necessary step (e.g. Henderson argues that event-internal pluractionals combine directly with verbal roots) and there may also simply be phonological reasons for its linear order given its reduplicative form.

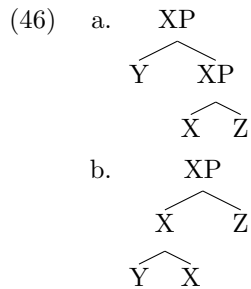
(45)



- We leave a detailed semantic analysis to future work, but note that this difference is a natural fit with Schäfer (2008)'s semantic proposal for two subtypes of adverb uses in English.

(One possible idea to derive the surface word order)

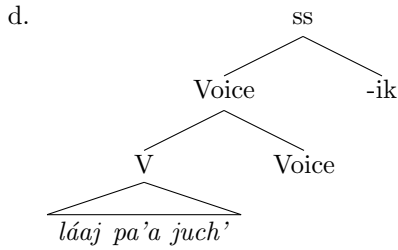
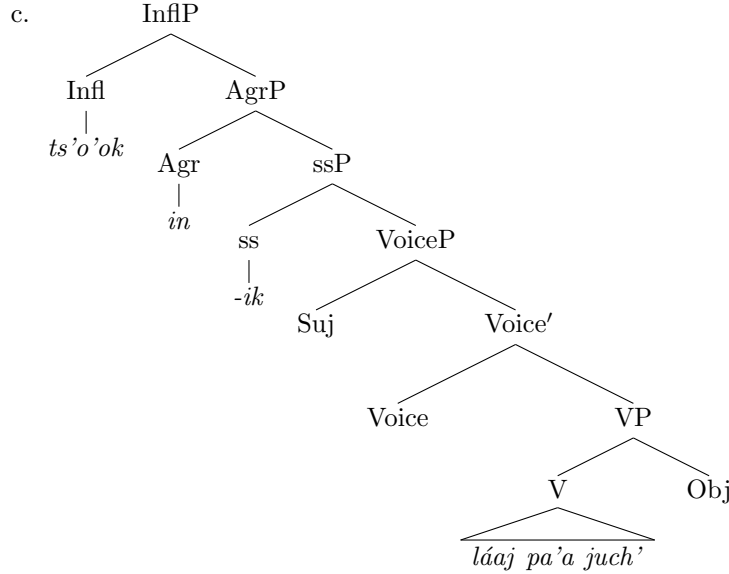
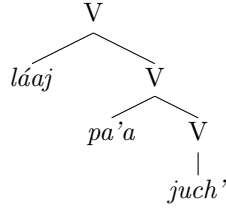
- Type 2 preverbs by hypothesis already form a complex head with the V root they modify.
- They therefore produce the correct word order already under Coon (2017) and Clemens & Coon (2018)'s analysis.
 - The complex V head raises and picks up verbal suffixes along the way.
- Type 1 preverbs, on the other hand, by hypothesis attach at the VP level and therefore present a puzzle.
- We propose that Type 1 combine with the verb root via “m-merger” (Matushansky (2006), Nevins (2011), Kramer (2014))
- m-merger converts a structure like (46a) into one like (46b), fusing an element in the specifier of *X* with the head:



- Following this, the complex head can then raise to VoiceP and ssP as seen in (47a) and (47d)

(47) a.

- b. Ts'o'ok in láaj pa'a juch'ik.
 TERM A1 all at.once grind-TR.INC
 'I just ground it all at once.'



6 Conclusions

- In this talk, we've proposed that Yucatec Maya has a category of verbal modifiers that we have dubbed *preverbs*.
- In contrast with adverbs in YM, preverbs are restricted to a unique position inside the verbal complex, between Set A and the verb root itself.
- We've shown that preverbs can be formally distinguished from incorporation and compounds and proposed a preliminary analysis of the two subtypes.

Looking beyond Yucatec Maya the question arises of whether there are preverbs in other Mayan languages

- Although we lack detailed investigations of the sorts of morphosyntactic and semantic properties discussed here, we see that several other Mayan languages have similar elements, and sometimes even cognates:

Language	Subfamily	Source
Ch'ol	Ch'olan	Vázquez Álvarez (2011, p.139, 373)
Itzaj	Yucatecan	Hofling (2000, pp.81-2)
Yokot'aan	Ch'olan	Osorio May (2005, p.185)
Tseltal	Tseltalan	Polian (2013, pp.733-735)
Chuj?	Q'anjob'alan	Royer & Alonso Ovalle (to appear)
Q'anjob'al?	Q'anjob'alan	Mateo Toledo (2012, p.14)

A few notes:

- These are primarily lowlands languages and ones with some contact with the lowlands (there is no available data either way for other lowlands lgs)
- From available information, it seems that these other languages likely have smaller preverb inventories than YM
- In Q'anjob'alan, these may or may not be preverbs in the same sense.
 - Mateo Toledo (2008, 2012) identifies a small class of adverbial elements in this position in Q'anjob'al, but claims they have the same morphosyntactic properties as compounds
 - Royer & Alonso Ovalle (to appear) present a detailed semantic analysis of a single element in this position, *komon* 'at random', and propose a seemingly subject-oriented semantics.

Looking beyond Mayan, a number of interesting questions arise about the syn/sem interface properties of adverbs:

1. Cross-linguistic support for proposals like Schäfer (2008) acknowledging 2 different types of manner adverb uses:

Type 1: modifies VP, semantically predicates of events, wide scope relative to Type 2, further away from V in linear order, may interact with direct object.

Type 2: modifies V, semantically fill V's manner argument, narrow scope relative to Type 1, closer to V in linear order, doesn't interact with direct object.
2. Illustrates the central role of syntax in the derivation of subject-oriented and speaker-oriented adverbs (i.e. since preverbs can't move to higher positions, they don't take on these other readings).
3. Highlights the need for more detailed semantic work on adverbs cross-linguistically. Many preverbs look superficially like members of other syntactic categories and even within preverb uses, often have glosses suggesting a broader range of meanings than we have found here (e.g. the case studies in §4.3)

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