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## Focus and word order in Ch'ol: A production study

Lauren Clemens, Jessica Coon, Jamilläh Rodriguez & Morelia Vázquez\*

**Abstract.** Ch'ol is a Mayan language with verb-initial order and preverbal topic and focus positions (Vázquez Álvarez 2011; Clemens & Coon 2018). This paper presents the results of a systematic investigation of Ch'ol word order across various focus environments, including (i) broad focus, (ii) subject focus, (iii) object focus, (iv) contrastive subject focus, and (v) contrastive object focus. We analyze semi-spontaneous responses to questions designed to elicit these focus types from 31 Ch'ol speakers. Both verb-initial and subject-initial clauses are present across five focus conditions, revealing a more nuanced relationship between information structure and word order than previously reported. We also find that while contrastive focus is predominantly marked via fronting of the focused constituent, more variation is found with information focus, and fronting is found to be nonobligatory in every focus condition.

**Keywords.** verb-initial order; information structure; focus; Ch'ol; Mayan

**1. Introduction.** The topic of word order is notoriously complex in Mayan languages (England 1991; Aissen 1992; Clemens & Coon 2018). While Mayan languages are generally described as verb initial, many languages – including Ch'ol – allow all six possible orders of subject, verb, and object. The arrangement of postverbal constituents within the Mayan family exhibits variability attributed to factors belonging to the nominals themselves, such as definiteness and animacy. In contrast, the order of preverbal elements is commonly seen as related to information structure. Specifically, work going back to Norman (1977) recognizes preverbal positions dedicated to topic and focus, in that order, as shown in (1).

- (1) *Mayan word order*  
[ Topic [ Focus [ Verb NP NP ] ] ]

This basic structure is elaborated by Aissen (1992), who also identifies two different types of topics across Mayan languages: *internal* topics, which arrive at the left edge via movement, and *external* topics which are base-generated in a clause-external position and bind pronominals (usually null) in argument positions. Elements in the preverbal focus position, Aissen (1992) argues, are always the result of movement (in line with analyses of focus cross-linguistically).

1.1. NUANCES OF TOPIC AND FOCUS. Recent work probes more deeply into the way that different information structural configurations affect word order in Mayan languages, paying particular care to distinguish between contrastive and non-contrastive focus (see Aissen 2017b for an

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overview). For example, Velleman (2014) provides an extensive investigation into K'ichee' focus, demonstrating that the relationship between focus and movement to the left edge is not as straightforward as previously assumed. In particular, Velleman identifies the possibility of in situ focus for new information in K'ichee', but also finds that in situ focus is impossible for transitive (ergative) subjects. Verhoeven & Skopeteas (2015) report related findings for Yucatec, while Aissen (2017b) notes that the restriction against in situ focus for transitive subjects does *not* hold in Tzeltal. Our findings below suggest that while SVO is prevalent in Ch'ol subject focus environments, in situ focus is also well attested, in line with the Tzeltal findings.

Turning to topics, most work on topicalized constituents in Mayan languages has focused on the distinction between external and internal topics, noted above, and nearly all of the relevant literature pertains to the behavior of *preverbal* topics. As is also true for in situ (i.e., postverbal) focus, postverbal topics are easy to overlook because they result in verb-initial clauses, which are associated with discourse neutrality. Nonetheless, right-side topics have been attested in the literature for some time (see Clemens & Coon 2018 for an overview). For example, Curiel (2007) reports that external topics can appear either on the left- or right-edge of the clause in Tojol-ab'al; Can Pixabaj (2004) and Polian (2013) discuss left- and right-side topics in K'ichee' and Tzeltal, respectively; and most recently Royer (2021) discusses postverbal topics in Chuj.

An additional complicating factor in the study of information structure and word order in Mayan languages is that, whether due to language-internal pressures or contact with Spanish, SVO is a common word order for a number of Mayan languages even when the subject is not obviously associated with either topic or focus. For Yucatec, Gutierrez-Bravo & Monforte (2010) and Lehmann & Verhoeven (2022) demonstrate that preverbal constituents are not obligatorily associated with a particular discourse function. Similarly, Satterfield & Barrett (2004) and Clemens (2013) maintain that preverbal subjects in Sipakapense and Kaqchikel, respectively, occur due to factors independent of discourse. The prevalence of SVO across the various conditions in our Ch'ol study below aligns with this general pattern.

1.2. GOALS AND ORGANIZATION. This paper contributes to the larger goal of understanding the relationship between information structure and word order in Mayan via a *production study* of Ch'ol word order across five different types of focus environments. The five focus environments were elicited via five different types of questions, previewed together with an associated image in Figure 1; see Aissen (2023) and work cited there on the use of question-answer pairs in focus and additional background. The five types of focus elicited include: (i) broad focus, in which the focus extends over the entire utterance; (ii-iii) subject information focus and object information focus, in which the subject or object in the response will provide the new information solicited by the question; and (iv-v) subject contrastive focus and object contrastive focus, in which the subject or object in the response both supply new information and reject some alternative.

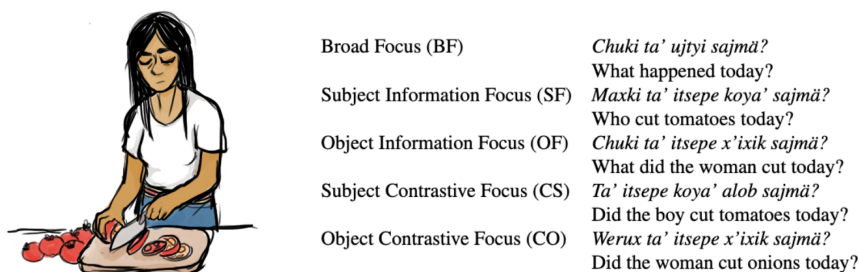


Figure 1. Example picture and five focus conditions

Methodology is a key issue in linguistic work related to information structure. Aissen (2023) notes that naturally-occurring speech provides a crucial baseline for the study and documentation of topic and focus, and can serve as a “reality check” for elicited material. But she notes further that targeted elicitation provides an important opportunity for systematic investigation into the effects of topic and focus. When it comes to Mayan languages, elicitation plays an especially important role. Information structure impacts word order, yet word order can be difficult to study in naturally-occurring texts due to the prevalence of pro-drop. Naturally-occurring sentences with two overt nominal arguments are exceedingly rare in corpus studies (e.g., DuBois 1987; Robinson 2002; England & Martin 2003). In one corpus study of nearly 2,500 naturally-occurring Ch’ol sentences, for example, Vázquez Álvarez & Zavala (2013) find fewer than 6% with two overt nominal arguments.

Production studies offer a middle ground between natural speech corpora and elicitation. The data discussed in this paper were produced “semi-spontaneously”. On the one hand, the design of the study influenced the data we collected, as participants were asked to react to auditory and visual prompts in Ch’ol, described below, and were instructed to give comprehensive full-sentence answers, even though it might be more natural in some contexts to answer in shorter fragments. Despite the obvious ways in which this approach introduces factors absent from natural discourse, speakers show interesting variation in their responses, and the results align with some of the larger expectations and points of variation previewed in the descriptions of Mayan word order above, which we elaborate below.

The remainder of the paper is organized as follows: section 2 provides relevant background information on word order and basic grammatical properties of Mayan languages in general, and Ch’ol in particular. Section 3 discusses the production study and methodology, including details about the different types of focus targeted. Sections 4 and 5 present the results and discussion of particular areas of interest. Section 6 concludes.

**2. Ch’ol basics.** Today there are approximately 30 Mayan languages spoken in southern Mexico, Guatemala, and Belize; see Aissen et al. (2017). Ch’ol belongs to the Cholan-Tzeltalan branch of the family, and is spoken by about 250,000 speakers, primarily in the state of Chiapas, Mexico (Vázquez Álvarez 2011). Ch’ol is comprised of two main dialects: Tila and Tumbalá.

This section provides background information relevant to understanding the context and results of the production study in the following sections. We begin in section 2.1 with basic information about clause structure and verb stems, turning next to the factors governing the alternation between VOS and VSO orders in section 2.2. Section 2.3 presents existing information about topic and focus in Ch’ol, situated within the Mayan context.

**2.1. BASIC VERB STRUCTURE.** Predicates in Mayan languages can be divided into two basic types: so-called “verbal predicates”, which are typically eventive and require one of a set of aspectual morphemes, and “non-verbal predicates”, which are typically stative and may not appear with aspectual marking. The study described below is designed to elicit *transitive verbal* predicates, a basic template for which is shown in (2).

(2) *Ch’ol verb stem*  
ASPECT SET.A-root(-DERIV)-STATUS.SUFFIX-SET.B

As illustrated by the examples in (3) taken from the results discussed below, eventive verb stems are preceded by an aspectual particle, here the perfective *tyi*. The stem consists of a root,

optionally suffixed with derivational morphology, and then followed by a “status suffix”, which varies based on transitivity and aspect, here the root transitive suffix, realized as a harmonic vowel.<sup>1</sup>

- (3) a. **Tyi i-jul-u** bajlum jiñi wiñik sajmä.  
 PFV A3-shoot-TV jaguar DET man earlier.today  
 ‘The man shot a jaguar today.’ (sfc-21-9-1, BF)
- b. A’bi **tyi i-mäk’-ä** i-ja’as lakña’.  
 Yesterday PFV A3-eat-TV A3-banana old.woman  
 ‘The old woman ate her banana yesterday.’ (sfc-24-6-1, BF)

Grammatical relations in Ch’ol are marked via two sets of person markers, labelled “Set A” and “Set B” following Mayanist tradition. Set A prefixes mark subjects of transitive verbs as well as possessors, as seen with the possessed object in (3b). Set B suffixes mark transitive objects; there is no overt reflex for 3rd person Set B, which we leave unrepresented here.

4.2. VOS AND VSO ORDERS IN CH’OL. England (1991) groups Mayan languages into two basic types based on the order of postverbal elements: (i) VSO languages, like Q’anjob’al, which show a relatively fixed order of postverbal subject and object; and (ii) alternating VOS~VSO languages, like Ch’ol, in which the order of postverbal elements varies. A range of factors has been claimed to govern the alternation between VOS and VSO in alternating languages, including animacy, definiteness, and phonological weight of the arguments.

Clemens & Coon (2018) survey previous Mayan literature, and propose that all Mayan languages show an underlying VSO syntax, and that there exist three paths to VOS order in languages that show this alternation: (i) a prosodic requirement that *bare NP* objects surface adjacent to the verb (following Clemens 2014, 2019 for Niuean), (ii) right-side subject topicalization, and (iii) heavy NP shift. The alternation between NP and DP objects is shown in (4). If both arguments are realized postverbally and the object is an NP, VOS order results, as in (4a). Coon (2010) and Little (2020a) report that D<sup>0</sup>-level material like the anaphoric definite determiner *jiñi* and demonstratives like *ili* are ungrammatical in VOS object position. If both arguments are realized postverbally and the object is a DP, on the other hand, VSO order arises, as in (4b). As noted in Coon (2010), possessed nominals without preceding determiners and with pro-dropped possessors pattern with bare NPs in their ability to appear in VOS object position, as in (4a).<sup>2</sup>

- (4) a. Tyi i-ch’il-i [o i-tyumuty] [s jiñi x’ixik] tyi a’bälel.  
 PFV A3-fry-TV A3-egg DET woman PREP night  
 ‘The woman fried her eggs last night.’ (sfc-21-7-1, BF)
- b. Tyi i-ch’il-i [s jiñi x’ixik] [o jiñi tyumuty] tyi a’bälel.  
 PFV A3-fry-TV DET woman DET egg PREP night  
 ‘The woman fried the eggs<sub>F</sub> last night.’ (sfc-11-7-3, OF)

<sup>1</sup> Abbreviations used in glosses follow Leipzig conventions with the following Mayan-specific additions: A – “Set A” (ergative, possessive); AFF – affirmative; B – “Set B” (absolutive); DIR – directional; DTV – derived transitive status suffix; ENC – phrase-final enclitic; EP – epenthesis; F – focus; HON – honorific; NC – noun class marker; REAL – realis; TV – root transitive status suffix.

<sup>2</sup> Little (2020a) notes that possessive phrases with overt possessors pattern with DPs in triggering VSO order. Little attributes this to a difference in NP vs. DP status of the possessive phrase, in line with Coon & Henderson (2011).

Examples in the previous literature illustrating the alternation between VOS and VSO come primarily from elicited material (see e.g., Coon 2010; Vázquez Álvarez 2011; Clemens & Coon 2018). As noted above, it is extremely rare to find transitives with two overt nominals in corpora (due to pro-drop and other discourse structure factors), and it is even rarer to find *both* overt nominals postverbally (due to the effects of information structure, discussed below). The production study described here provides an important means to test the factors governing postverbal argument order. Our findings below align with two of the factors proposed in Clemens & Coon to trigger VOS order: bare NP objects and clause-final topics.

2.3. TOPIC AND FOCUS IN CH'OL. As foreshadowed in (1), work in Mayan linguistics has identified dedicated preverbal *topic* and *focus* positions (Norman 1977; England 1991; Aissen 1992); topic precedes focus. A Ch'ol example with a topicalized subject and a focused object is shown in (5). We discuss Ch'ol topic and focus in turn below.

- (5) [TOP A li aj-Oskar=i,] [FOC ixim=äch] tyi i-kuch-u tyälel.  
 TOP DET NC-Oscar=ENC corn=AFF PFV A3-carry-TV DIR-toward  
 'As for Oscar, he brought corn<sub>F</sub>.' (Vázquez Álvarez 2011: 338)

Drawing on Aissen's (1992) work, Vázquez Álvarez (2011) demonstrates that Ch'ol initial topics are *external topics*; that is, they are generated in a high, clause-external position, coindexed with a null pronoun in argument position. First, Ch'ol topics are obligatorily set off from the clause by an intonational pause, as indicated by the comma in (5). Second, Ch'ol possesses a set of *second-position clitics*, such as the affirmative =äch in (5). While these clitics may attach to a preverbal (clause-internal) focused element, as in (5), clause-level second-position clitics may not attach to a topicalized constituent. Finally, as in Tsotsil (Aissen 1992), topics in Ch'ol may not be embedded; see Vázquez Álvarez (2011: 333).

Topics may be preceded by the dedicated topic particle *a*, and followed by a phrase-final enclitic =*i*, as in (5), but the particle is not obligatory, as shown in (6).

- (6) [TOP Jiñi muty=i,] mi i-mel y-otyoty.  
 DET bird=ENC IPFV A3-make A3-house  
 'As for the bird, it makes its house.' (Little 2020b: 38)

Though not discussed in detail, examples of clause-final topics are provided in Vázquez Álvarez (2011), and some instances of final topics are found in our results as well, as previewed in (7).<sup>3</sup>

- (7) Tyi i-tsep-e jiñi koya' sajmäl [TOP a x'ixik=i].  
 PFV A3-cut-TV DET tomato earlier.today TOP woman=ENC  
 'The woman cut the tomatoes<sub>F</sub> today.' (sfc-11-4-3, OF)

Turning now to focus, as in described for other Mayan languages (Norman 1977; Aissen 1992; Velleman 2014), Ch'ol has a single preverbal focus position to which focused elements as well as *wh*-words, relativized elements, and certain scope-bearing elements move. *Wh*-words obligatorily front to this position, and multiple *wh*-questions are ungrammatical (Vázquez Álvarez & Coon 2020). The examples in (8) illustrate a question-answer pair.

<sup>3</sup> Note that (7) is not a counterexample to the generalization that VOS objects are bare NPs while VSO objects are DPs because it involves a *topicalized* subject (see section 2.2 and Clemens & Coon 2018).

- (8) a. [<sub>FOC</sub> Majchki] tyi i-chok-o-y-ety ma che'jiñ?  
 who PFV A3-send-TV-EP-B2 DIR-go then  
 'Who sent you then?'  
 b. [<sub>FOC</sub> K-mamaj] tyi i-poj-chok-o-y-oñ.  
 A1-mama PFV A3-HON-send-TV-EP-B1  
 'My mother<sub>F</sub> sent me.' (Vázquez Álvarez & Coon 2020)

While many Mayan languages restrict the A'-extraction of transitive subjects – known as the Ergative Extraction Constraint (see Aissen 2017a and references there) – Ch'ol does not. All core arguments freely extract to preverbal focus position, and there is no Agent Focus construction.

As the examples in (5) and (8b) above – and the additional forms in (9) below – show, Ch'ol does not have a dedicated focus marker as some other Mayan languages do. The determiner *jiñ(i)* often appears with focused elements, and Vázquez Álvarez (2011) glosses it as FOC in these contexts. However, it is neither restricted to focus environments (cf. (3)) nor required. We follow Little (2020b) in analyzing it as an anaphoric determiner and gloss it as 'DET'.<sup>4</sup>

- (9) a. [<sub>FOC</sub> Aj-kaxlañ] tyi i-kãñty-is-ä-y-oñ.  
 NC-foreigner PFV A3-teach-CAUS-DTV-EP-B1  
 'A foreigner<sub>F</sub> taught me to work.' (Vázquez Álvarez 2011: 335)  
 b. [<sub>FOC</sub> Jiñ aj-Juan] tyi i-koty-ä x'ixik.  
 DET NC-Juan PFV A3-help-DTV woman  
 'Juan<sub>F</sub> helped the woman.' (Vázquez Álvarez 2011: 325)

Finally, Vázquez Álvarez (2011) discusses examples he analyzes as involving discontinuous focused elements. These involve the determiner *jiñ* in preverbal focus position, associated with a postverbal focused nominal, like *li ch'eñ* 'the cave' in (10a). He proposes that the naturally occurring example in (10a) is equivalent to the constructed minimal pair in (10b), in which *li ch'eñ* is fronted. Examples like this will be relevant for our discussion of in situ focus below.

- (10) a. [<sub>FOC</sub> Jiñ=tsa'] choñkol k-äl-la li ch'eñ.  
 DET=REAL PROG A1-talk-PL.INCL DET cave  
 'We are talking about the cave<sub>F</sub>.'  
 b. [<sub>FOC</sub> Jiñ=tsa' li ch'eñ] choñkol k-äl-la.  
 DET=REAL DET cave PROG A1-talk-PL.INCL  
 'We are talking about the cave<sub>F</sub>.' (Vázquez Álvarez 2011: 337)

Having provided an overview of the factors involved in word order, topic, and focus in Ch'ol, we turn to the details of our production study and the different types of focus targeted.

**3. Production study: motivation and methodology.** Most data on word order is gathered via traditional elicitation methods and natural speech corpora. Although these methods are indispensable, they have inherent limitations. Elicitation frequently depends on a lingua franca, often impacting the responses obtained. Furthermore, speakers may develop specific strategies when responding to questions, especially when there is more than one felicitous response. It can also be challenging to gather data from a large number of speakers through traditional elicitation. With respect to fully spontaneous spoken corpora, the constructions of interest might be infrequently observed in naturally occurring speech. The purpose of the present study is to collect a

<sup>4</sup> As discussed further in Little (2020b), definite readings are also available for certain bare NPs in Ch'ol.

large number of semi-spontaneous responses to a range of questions meant to elicit different types of focus from a sizable number of speakers.

3.1. PROCEDURE. The training phase of the study, which was conducted in Ch’ol by the fourth author, served to familiarize participants with the characters and events they would encounter during the testing stage. During training, participants were introduced to five different characters as drawings on a computer screen. Figure 2 presents our five characters, introduced as *xch’ok* or *xk’aläl* ‘girl’, *ch’ityoñ* or *alob*, ‘boy’, *x’ixik* ‘woman’, *wiñik* ‘man’, and *lakña* ‘grandma’.<sup>5</sup>

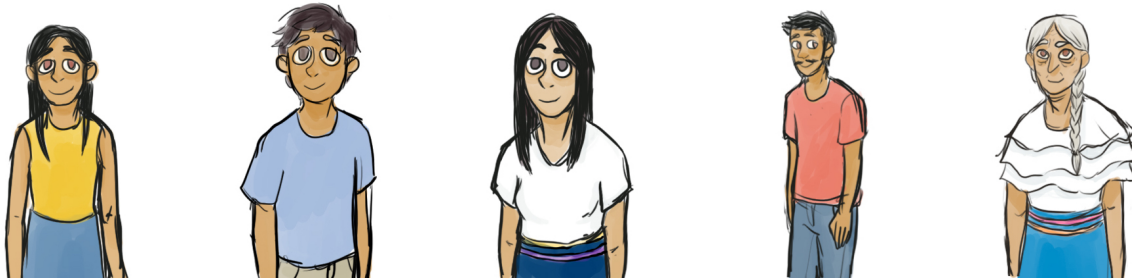


Figure 2. Event Participants

Once participants could identify all of the characters of the study they were presented with an illustration of an event involving one of the characters they had just met. They were then instructed to respond as naturally as possible to a prompt, while incorporating the known event participant into their response. In Figure 3, for example, the girl is buying beans in the picture on the left, and the man is painting the house in the picture on the right. For each prompt, participants might hear *Chuki ta’ ujt’yi sajmä?* ‘What happened today?’ and respond accordingly. Training lasted for as long as participants needed in order to feel comfortable beginning the testing phase.



Figure 3. The girl buys beans; the man paints the house

During the testing phase, each trial began by presenting participants with an illustration of an event and an audio question prompt. Participants, who were wearing USB headset microphones, initiated recording by pressing “enter”. They were given the option to record their response as many times as they liked. Accommodations were made for participants who preferred assistance with computer-related functions in order to create an inclusive testing environment.

3.1.1. PARTICIPANTS. Our participant pool comprised 31 native Ch’ol speakers, recruited via word of mouth, and they were compensated for their time. At the time of the study, participants

<sup>5</sup> The words for ‘girl’ and ‘boy’ show variation in different varieties of Ch’ol; see section 3.1.2 below.



were living in the municipalities of Tila ( $n=13$ ) and Tumbalá ( $n=18$ ); included women ( $n=21$ ) and men ( $n=10$ ); and ranged in age from 18 to 57 years old with a mean age of 29. With respect to language profile, 21 speakers self-identified as Chol-Spanish bilingual, while 10 participants described themselves as monolingual Ch'ol speakers.

3.1.2. MATERIALS. The study contained a total of 50 trials, comprising five conditions and 10 items. The five conditions corresponded to the following five focus types in Figure 1: broad focus (BF), subject information focus (SF), object information focus (OF), subject contrastive focus (CS), and object contrastive focus (CO). Each trial had its own question prompt meant to elicit one of the five focus types with vocabulary matching the given item. These 50 questions were recorded twice: once by a speaker of the Tumbalá dialect for participants living in Tumbalá and once by a speaker of the Tila dialect for speakers living in Tila. Although Ch'ol varieties are mutually intelligible, we recorded two versions of each question prompt to maximize the naturalness of our stimuli from the perspective of each participant.

The primary difference reported between the two varieties is lexical. A few examples of lexical variation directly relevant to the present study are given in Table 1. For more examples of lexical differences between the two Ch'ol varieties and a more in-depth discussion of Ch'ol-internal variation see López López (2005), Vázquez Álvarez (2011), and Vázquez & Little (2020).

	Tumbalá	Tila	English		Tumbalá	Tila	English
a.	<i>xch'ok</i>	<i>xk'aläl</i>	'girl'	b.	<i>ch'ityoñ</i>	<i>alob</i>	'boy'
c.	<i>ñi'uk'</i>	<i>ch'um</i>	'chayote'	d.	<i>ak'lel</i>	<i>a'bälel</i>	'night'
e.	<i>wo(li)</i>	<i>choñ(kol)</i>	PROG	f.	<i>ta', tsa'</i>	<i>tyi, ta', tsa'</i>	PFV

Table 1. Lexical differences between Tumbalá and Tila Ch'ol.

Auditory question prompts corresponding to each condition in the Ch'ol of Tila for one item (i.e., the bean-buying in the image on the left in Figure 3) are illustrated in (11).

- (11) a. Chuki tyi ujty-i sajmä?  
 what PFV happen-ITV earlier.today  
 'What happened today?' Broad focus
- b. Maxki tyi i-mäñ-ä bu'ul sajmä?  
 who PFV A3-buy-TV beans earlier.today  
 'Who bought beans today?' Subject focus
- c. Chuki tyi i-mäñ-ä xk'aläl sajmä?  
 what PFV A3-buy-TV girl earlier.today  
 'What did the girl buy today?' Object focus
- d. Jiñi alob tyi i-mäñ-ä bu'ul sajmä?  
 DET boy PFV A3-buy-TV beans earlier.today  
 'Did the boy buy beans today?' Contrastive subject
- e. Tyi i-mäñ-ä ch'um xk'aläl sajmä?  
 PFV A3-buy-TV chayote girl earlier.today  
 'Did the girl buy chayote today?' Contrastive object

Note that the CS prompt in the item shown in (11d) is SVO while the CO question (11e) is V1. Unlike *wh*-questions (in which the *wh*-word is obligatorily fronted), word order in polar questions is more variable: V1, SVO and OVS orders are all grammatical for the CO question in (11e). For this reason, we included V1 and SVO prompts in the CS condition, and V1 and OVS

prompts in the CO condition. The word order of the prompt appears to have had some influence on the word order of the response, which we address in section 5.1.

3.2. CODING. Vázquez, co-author of this paper and Ch’ol-speaking linguist, rated 1,550 responses for felicity (yes/no), speaker confidence/fluency for a given response (1–3), and intelligibility of the response, for example, whether part of the response was clipped from the recording or otherwise unrecoverable (yes/no). A total of 238 responses were excluded on the basis that they were deemed infelicitous. Of these infelicitous responses, 211 were also given the lowest rating for fluency (1) and only one infelicitous response was rated the highest rating for fluency. An additional 61 recordings were deemed felicitous but were disfluent (rating of 1). Finally, 53 responses were excluded because the recording was unintelligible, clipped, or otherwise damaged. A total of 351 responses were excluded from analysis, the majority of which originated from six participants. The remaining 1,198 responses were coded for word order, syntactic status of the core arguments (NP or DP), and information structure-sensitive discourse particles.

**4. Results.** Examining the relationship between focus type and word order in the dataset reveals several expected findings. In response to questions eliciting subject focus (SF) or contrastive subject focus (CS), participants exhibit a strong tendency to produce SVO sentences. Participant responses with OVS word order are strongly associated with questions designed to prompt object focus (OF) or contrastive object focus (CO). Finally, speakers frequently give felicitous verb-initial (V1) and SVO responses to broad focus (BF) prompts. While the Mayan literature tends to emphasize the discourse neutrality of verb-initial orders, the prevalence of SVO responses in BF contexts is unsurprising from the vantage point of the studies discussed in section 1.1 above.

Table 2 presents the composite results for word order by focus type. Note that all of the BF responses are either V1 or SVO; in other words, object initial word order is infelicitous in broad focus. We find the most word order variability in OF, but note that preverbal objects are more than twice as likely to occur in CO (64%) than in OF (31%).

	<i>n</i> =	V1	SVO	OVS
Broad Focus	246	89	157	0
Subject Focus	273	27	246	0
Object Focus	239	73	92	73
Contrastive Subject	224	8	216	0
Contrastive Object	215	27	50	138

Table 2. Word order by condition

It is also worth highlighting from the start that V1 responses are found across all focus conditions, defying any expectation that focused arguments uniformly undergo movement to preverbal focus position in Ch’ol (and in line with the existence of in-situ focus in other Mayan languages, noted in section 1.1 above). Moreover, SVO is not only prevalent in BF and SF contexts, but it is also found in all focus conditions, emerging as the preferred word order in every condition except CO. In the subsequent section, we look more closely at the relationship between word order and focus and the specific structures that speakers use to encode focus.

4.1. BROAD FOCUS. In response to BF questions, such as *Chuki ta’ ujyti sajmā?* ‘What happened today?’, speakers use subject- and verb-initial word orders, as shown in Figure 4.

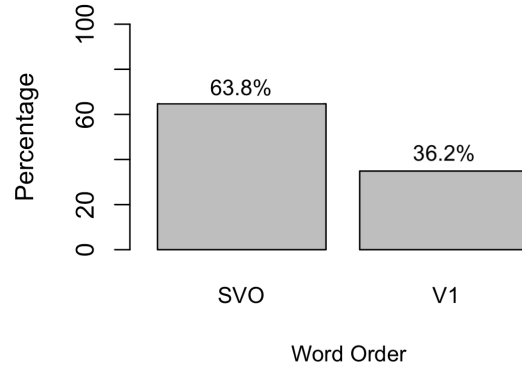


Figure 4. Word order in Broad Focus

The SVO<sub>BF</sub> clauses that speakers produce vary primarily according to the syntactic status of the subject and object (NP or DP). Beginning with subject variation, in 60.5% of all SVO<sub>BF</sub> clauses, the subject is an NP; in all other cases the subject is a DP. This distribution of NP and DP subjects (approximately 3:2) is consistent across focus types, as we will see. Turning to objects, 87.2% of SVO<sub>BF</sub> clauses have an NP object and 12.8% have a DP object. Here we take NP objects to include all objects without overt D<sup>0</sup>-level material (see §2.2). This includes bare NPs (12b), possessed objects (12c), as well as objects with the numeral ‘one’ followed by a classifier (12d).<sup>6</sup>

- (12) a. [s Jiñi xch’ok] tyi i-chuk-u [o jiñi pejpem].  
 DET girl PFV A3-catch-TV DET butterfly  
 ‘The girl caught the butterfly.’ (sfc-16-3-1, BF; S=DP, O=DP)
- b. [s Xk’aläl] tyi i-mañ-ä [o bu’ul] sajmäl.  
 girl PFV A3-buy-TV bean earlier.today  
 ‘The girl bought beans today.’ (sfc-19-1-1, BF; S=NP, O=NP)
- c. [s X’ixik] tyi i-ch’il-i [o i-tyumuty] tyi a’bälel.  
 woman PFV A3-fry-TV A3-egg PREP night  
 ‘The woman fried her eggs last night.’ (sfc-29-7-1, BF; S=NP, O=NP)
- d. [s Wiñik] tyi i-jul-u [o juñ-kojty bajlum] sajmäl.  
 man PFV A3-shoot-TV one-CLF.animal jaguar earlier.today  
 ‘The man shot the jaguar today.’ (sfc-11-9-1, BF; S=NP, O=NP)

VOS order is the preferred word order for V1<sub>BF</sub> clauses.<sup>7</sup> The variation in VOS<sub>BF</sub> responses is also centered on the syntactic status of subjects and objects. With respect to subjects, there is again a roughly even split between NP subjects (54.5%) and DP subjects (45.5%) with somewhat more DP subjects in V1<sub>BF</sub> than in SVO<sub>BF</sub>. Turning to object variation, more V1<sub>BF</sub> clauses have an NP object (94.3%) than SVO<sub>BF</sub> clauses (87.2%). Thus, SVO<sub>BF</sub> word order has somewhat more NP subjects than VOS<sub>BF</sub>, and VOS<sub>BF</sub> word order has somewhat more NP objects than SVO<sub>BF</sub>. Also note that in VOS clauses, when the object is a DP, the subject is also a DP, and quite possibly also a topic (see section 2.3 for more discussion about identifying topics in these data). An example of each is given in (13).

<sup>6</sup> As noted in footnote 4, bare NPs may receive definite interpretations in Ch’ol, and Little (2020b) shows that this is always the case for bare NP transitive subjects, as reflected in the translations in (12b-d). The definite translations of these bare NP subjects is also consistent with the fact that the subjects were introduced in the training stage.

<sup>7</sup> The one exception is a VS clause in which the participant did not overtly realize the object.

- (13) a. Tyi i-k'el-e [o tele] [s ch'ityoñ].  
 PFV A3-watch-TV TV boy  
 'The boy watched TV.' (sfc-13-10-1, BF; S=NP, O=NP)
- b. A'bi tyi i-boñ-o [o otyoty] [s jiñi wiñik].  
 yesterday PFV A3-paint-TV house DET man  
 'The man painted a house yesterday.' (sfc-30-8-1, BF; S=DP, O=NP)
- c. Tyi i-jul-u [o jiñi bajlum] [s jiñi wiñik] sajmäl.  
 PFV A3-shoot-TV DET jaguar DET man earlier.today  
 'The man shot the jaguar today.' (sfc-7-9-1, BF; S=DP, O=DP)

Across all broad focus clauses (SVO<sub>BF</sub> and V1<sub>BF</sub>), NP objects are preferred to DP objects; however, in alignment with previous descriptions of Ch'ol word order (see §2.2), DP objects are especially uncommon in VOS clauses. We return to this finding in section 5.3, when we discuss the interaction between word order and argument type.

4.2. INFORMATION FOCUS. This section addresses participant responses to questions meant to elicit subject and object information focus, such as *Maxki ta' imãñã bu'ul sajmã?* 'Who bought beans today?' and *Chuki ta' imãñã xch'ok sajmã?* 'What did the girls buy today?' (see (11b-c)). As in the BF condition, we pay particular attention to the syntactic status of the arguments.

4.2.1. SUBJECT FOCUS. In response to subject *wh*-questions, SVO responses are far more common than V1 responses and occur at a ratio of 10:1, as shown in Figure 5. One of the 27 V1 responses is VSO and another one is VS with an unrealized object.

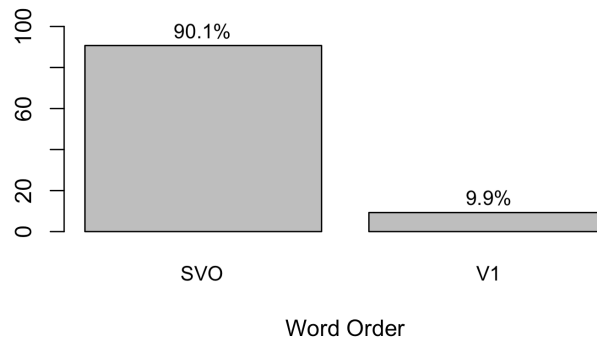


Figure 5. Word order in Subject Focus

The distribution of DP versus NP subjects looks very similar when comparing SVO<sub>BF</sub> and SVO<sub>SF</sub> clauses, but a bit different when comparing V1<sub>BF</sub> and V1<sub>SF</sub> clauses. For subjects in V1<sub>SF</sub> clauses, 66.7% are realized as NPs, compared to 54.5% in V1<sub>BF</sub> clauses. In other words, post-verbal subjects are more likely to be bare NPs when they are focused than when they are not.

Many of the SF responses in SVO word order ( $n=42$  or 17.1%), as well as some of the SF responses in V1 order ( $n=3$  or 11%), appear with *jiñäch*: the determiner *jiñ(i)* with the affirmative enclitic =*äch* (Vázquez Álvarez 2011). Recall from section 2.3 that Vázquez Álvarez (2011) analyzes this element as a focus marker. Little (2020b: 45) also notes that *jiñäch* often appears in certain copular constructions, specifically in specificational and identificational contexts (see also Coon & Martinović 2023), which are frequently taken to involve focus. In the responses in this study, *jiñäch* occurs in clause-initial position both when it is immediately followed by a

focused constituent, as in (14a) and (14b), or when the focused constituent stays in situ, as in (14c). In (14a) *jiñäch* precedes a focused DP,<sup>8</sup> while in (14b) it appears with a bare NP.<sup>9</sup>

- (14) a. [<sub>S</sub> **Jiñ=äch** jiñi ch'ityoñ] woli i-k'el [o tele] tyi ak'lel.  
 DET=AFFR DET boy PROG A3-watch TV PREP night  
 'The boy<sub>F</sub> is watching TV at night.' (sfc-14-10-2, SF; *jiñäch*, SVO)
- b. [<sub>S</sub> **Jiñ=äch** ch'ityoñ] tyi i-kuch-u [o wajtyañ] ak'bi.  
 DET=AFFR boy PFV A3-carry-TV corn yesterday  
 'The boy<sub>F</sub> carried corn yesterday.' (sfc-30-8-1, BF; S=DP, O=NP)
- c. **Jiñ=äch** sajmäl tyi i-jap-ä [o i-kajpe'] [<sub>S</sub> lakchuchu'].  
 DET=AFFR earlier.today PFV A3-drink-TV A3-coffee grandma  
 'The grandma<sub>F</sub> drank her coffee today.' (sfc-7-9-1, BF; S=DP, O=DP)

Although *jiñ(i)* appears alone as an anaphoric determiner in non-focus environments and is not required for a focus interpretation, the data here support Vázquez Álvarez's (2011) analysis of *jiñ*, at least in coordination with =*äch*, as contributing to encoding focus. Our data include a total of 45 instances of clause-initial *jiñäch* in subject focus environments, but only two in broad focus. We will see below that *jiñäch* plays a role in the other focus environments as well.

4.2.2. OBJECT FOCUS. Participant responses to object *wh*-questions are considerably more varied with respect to word order. As shown in Figure 6, word order permutations are fairly evenly distributed among OV, SVO, and V1 across this condition, with SVO being the most common. The majority of the V1 responses are VOS, but 10% of the V1 OF are VSO. All but one of the OV orders were OVS, as in (15a); there was one SOV token in object focus, shown in (15b).

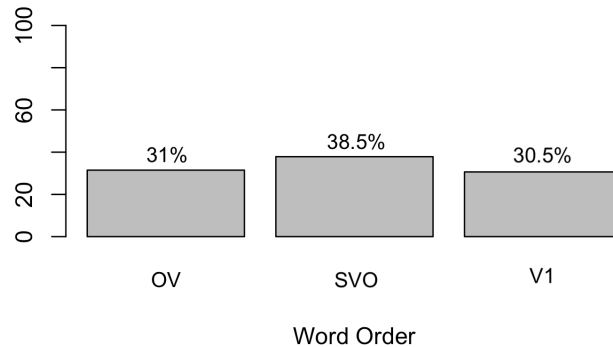


Figure 6. Word order in Object Focus

- (15) a. [o Kajpe'] tyi i-jap-ä [s jiñi lakña'] tyi a'bälel.  
 coffee PFV A3-drink-TV DET grandma PREP night  
 'The grandma drank coffee<sub>F</sub> at night.' (sfc-17-1-3, OF; OVS)
- b. [<sub>S</sub> Lakña'] [o kajpe'] tyi i-jap-ä tyi a'bälel.  
 grandma coffee PFV A3-drink-TV PREP night  
 'The grandma drank coffee<sub>F</sub> at night.' (sfc-853-4-3, OF; SOV)

<sup>8</sup> While in (14c) it is clear that there is an initial *jiñäch* and an in-situ focus, it could also be the case that *jiñäch* is associated with the adjacent adverbial element *sajmä*.

<sup>9</sup> Here we choose to bracket *jiñäch* with the following focused element for consistency, though further work is needed to confirm its syntactic status, especially in examples that contain an additional determiner. Note that it does not always appear in clause-initial position, as in (16b) below.

In the object focus condition, all responses that included the focus marker *jiñäch* involved *jiñäch* being linearly adjacent to the focused object, either with a preverbal object, as in (16a), or with a postverbal focused object, as shown in (16b).

- (16) a. [o **Jiñ=äch** jiñi kajpe'] tyi i-jap-ä [s jiñi lakchuchu'] tyi ak'lel.  
 DET=AFFR DET coffee PFV A3-drink-TV DET grandma PREP night  
 'The grandma drank the coffee<sub>F</sub> at night.' (sfc-7-5-3, OF; *jiñäch*, OVS)
- b. Tyi i-tsep-e [s x'ixik] [o **Jiñ=äch** koya'].  
 PFV A3-cut-TV woman DET=AFFR tomato  
 'The woman cut tomatoes<sub>F</sub>.' (sfc-4-4-3, OF; *jiñäch*, VSO)

We found no instances of a clause-initial *jiñäch* with a postverbal object in OF – i.e., no examples of apparent discontinuous OF – in contrast with what was observed in the subject focus condition (see e.g., (14c) above). One possible explanation could be that speakers prefer to associate a preverbal *jiñäch* with the structurally higher subject. We leave this topic for future work.

Turning to the syntactic status of the arguments, in OVS<sub>OF</sub> clauses, subjects tend to surface as NPs (60.3%), as is also true in SVO<sub>OF</sub> clauses (63.0%). In V1<sub>OF</sub> clauses, subjects are as likely to surface as NPs as they are DPs, but interestingly, this is the first condition where – despite the instructions to name all of the known participants – 5% of subjects were dropped in OF. This occurred mostly from V1-clauses, where they were dropped 15.1% of the time.

Here too, objects are more likely to be NPs than DPs in SVO<sub>OF</sub> (85.9% = NPs), OVS<sub>OF</sub> (87.7%), and VOS<sub>OF</sub> (80.8% = NPs). In fact, the only word order in which DP objects are common is VSO<sub>OF</sub>. All but two VSO objects are DPs. (17a) illustrates a typical VOS example with a bare NP object and (17b) illustrates a VSO clause with a DP object.

- (17) a. Tyi i-jap-ä [o i-kajpe'] [s jiñi lakña'] tyi a'bälel.  
 PFV A3-drink-TV A3-coffee DET grandma PREP night  
 'The grandma drank the coffee<sub>F</sub> at night.' (sfc-21-5-3, OF; VOS, O-NP)
- b. Tyi i-ch'il-i [s jiñi x'ixik] [o jiñi tyumuty] tyi ak'lel.  
 PFV A3-fry-TV DET woman DET egg PREP night  
 'The woman fried the eggs<sub>F</sub> at night.' (sfc-11-7-3, OF; VSO, O-DP)

Not only did the OF context introduce the first OVS clauses, but also the first true VSO clauses. It is probably not the case that VSO order alone encodes OF, but rather that *jiñäch* is a D<sup>0</sup> that is used with focus, and postverbal DP objects independently require VSO order. As we show in the next section, the strategies that speakers use to encode information focus are also found in contrastive focus contexts, often at higher rates.

4.3. CONTRASTIVE FOCUS. In this section, we turn to participant responses to questions meant to elicit contrastive subject (CS) and object focus (CO), such as *Jiñi alob ta' imäñä bu'ul sajmä?* 'Did the boy buy beans today?' and *Ta' imäñä ch'um xch'ok sajmä?* 'Did the girl buy chayote today?' (see (11d-e) above). CS prompts were balanced for SVO and V1 word order. CO prompts contained a ratio of 7 OVS to 3 V1 questions, an issue we address below.

4.3.1. CONTRASTIVE SUBJECT FOCUS. Almost all CS constructions are SVO, shown in Figure 7. Of the few V1 responses in these data, only one is VSO. CS prompts were balanced for SVO and V1 word order. While participants use V1 order in response to both SVO and V1 CS prompts, they are more likely to use V1 order in response to V1 prompts: 75% of all of the V1 responses were in response to V1 questions.

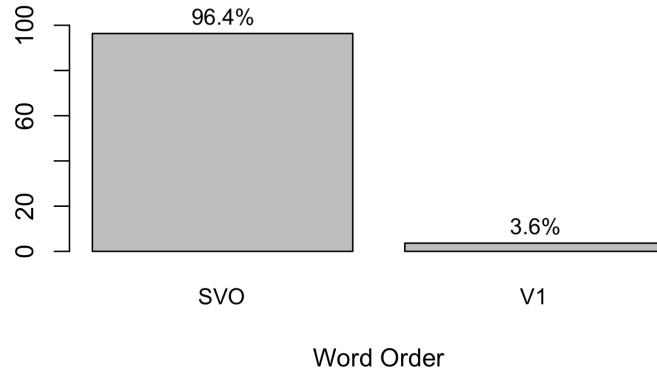


Figure 7. Word order in Contrastive Subject Focus

The distribution of NP and DP subjects in contrastive subject focus is on par with other conditions inasmuch as the NP:DP ratio for subjects is approximately 3:2. In  $SVO_{CS}$ , 97.7% of objects are NPs, which is quite high even in light of the general tendency for objects to be NPs. In  $V1_{CS}$ , all VOS objects are NPs, and the only DP object occurs in VSO order.

Responses to questions meant to elicit contrastive subject focus, unsurprisingly, contain a high percentage of negative response markers that negate the proposition of the preceding question. These come in two basic types: (i) sentential negation and (ii) constituent negation. Sentential negation is marked with the negative *ma'añ*, which frequently occurs together with the irrealis clitic =*ik* in the Tumbalá dialect of Ch'ol.<sup>10</sup> Examples with sentential negation *ma'añ* and *ma'añik* are shown in (18); the negative marker is followed by a pause.

- (18) a. *Ma'añ*, [s lakña'] tyi i-mäk'-ä [o ja'as] a'bi.  
 NEG.EXT grandma PFV A3-eat-TV banana yesterday  
 'No, grandm<sub>F</sub> ate bananas yesterday.' (sfc-853-6-4, CS)
- b. *Ma'añ=ik*, [s jiñ=äch jiñi lakchuchu'] tyi i-jap-ä [o kajpe'].  
 NEG.EXT=IRR DET=AFF DET grandma PFV A3-drink-TV coffee  
 'No, grandm<sub>F</sub> drank coffee.' (sfc-7-5-4, CS)

Other examples involve the constituent negation marker *mach*, where *mach* negates either the NP introduced in the question prompt, as in (19a) and (19b), or it negates *jiñ(i)* – a pronoun that refers to the NP introduced in the question prompt – as in (19c) and (19d). Again, dialect variation is found in whether the irrealis =*ik* appears at the end of the negated constituent or not.

- (19) a. *Mach alob*, [s lakña'] tyi i-jap-ä [o kajpe'] tyi a'bälel.  
 NEG boy grandma PFV A3-drink-TV coffee PREP night  
 'Not the boy; grandm<sub>F</sub> drank coffee at night.' (sfc-22-5-4, CS)
- b. *Mach wiñik=ik*, [s xch'ok] tyi i-chuk-u [o jiñi pejpem] ak'bi.  
 NEG man=IRR girl PFV A3-catch-TV DET butterfly yesterday  
 'Not the man; girl<sub>F</sub> caught the butterfly yesterday.' (sfc-5-3-4, CS)
- c. *Mach jiñi*, [s jiñi wiñik] tyi i-boñ-o [o y-otyoty] a'bi.  
 NEG DET DET man PFV A3-paint-TV A3-house yesterday  
 'Not that one; the man<sub>F</sub> painted his house yesterday.' (sfc-30-8-4, CS)

<sup>10</sup> The negative marker *ma'añ* is glossed NEG.EXT, following Vázquez Álvarez (2011), as it contains the existential morpheme *añ*.

- d. Mach jiñ=i*k=i*, [s jiñi xch'ok] tyi i-chuk-u [o jiñi pejpem].  
 NEG DET=IRR=ENC DET girl PFV A3-catch-TV DET butterfly  
 'Not that one; the girl<sub>F</sub> caught the butterfly.'  
 (sfc-8-3-4, CS)

Finally, 30.1% of contrastive subject responses do not begin with a negative marker. All but one response without a negative marker occurs in SVO order; that is, the CF subject is in the position most associated with focused constituents. Six SVO<sub>CS</sub> responses used focus sensitive *jiñäch* alone, but an additional 10 of the responses that began with negation followed it with *jiñäch*, as in (18b). As a result, 223 out of 224 contrastive subjects in these data are marked by some combination of negation, *jiñäch*, and SVO word order.

4.3.2. CONTRASTIVE OBJECT FOCUS. For contrastive object constructions (CO), the majority of responses are OV(S), but both SVO and V1 orders are well represented in response to OVS and V1 CO question prompts alike. The rate of OV<sub>CO</sub> responses (64.4%) is the highest percentage of object-fronting that we find in the study and more than twice the rate of OV<sub>OF</sub> responses. On the one hand, the general trend is clear: object fronting is most common when the object is focused, especially under contrastive focus. On the other hand, the exact number of OV(S) responses in the CO condition was somewhat skewed by the question prompts, which were given in a ratio of 7 OVS order to 3 V1 order. Because participants responded to 68% of OVS questions in OVS order, but to only 54% of V1 questions in OVS order, if the prompts had been balanced for word order, we would expect the total percentage of OVS responses to be more like 61% (and SVO responses to be closer to 25% and V1 to 14%).

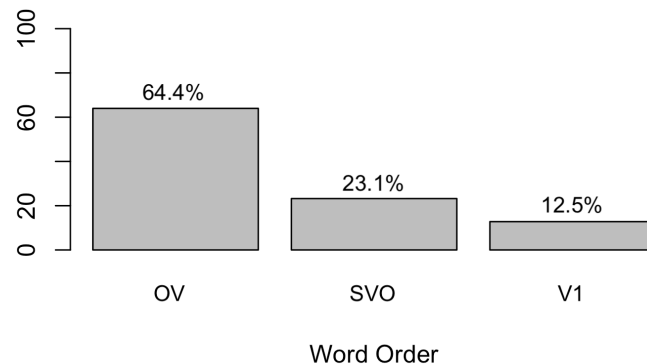


Figure 8. Word order in Contrastive Object Focus

CO responses contain a noteworthy number of breakthrough dropped subjects (12.6%), despite researcher instructions to name all known event participants in response to the question. Subjects are dropped from both OV<sub>CO</sub> and VO<sub>CO</sub> clauses. These data contain one example of an SOV clause with a topicalized subject, which is counted among the other fronted-object responses. Finally, the ratio of VOS to VSO within V1<sub>CO</sub> is 8:2. So while VSO is an extremely infrequent word order in these data, it is relatively more likely to occur when an object is focused, namely in OF and CO as compared to BF, SF and CS.

The differential between NP and DP subjects in contrastive object focus is on par with other conditions inasmuch as the NP:DP ratio for subjects is approximately 3:2 for the condition; however, subjects are much more likely to be NPs in V1 order (66.7%) as compared to other orders: in SVO clauses, 51% of subjects are NPs and in OVS clauses, 53.2% of subjects are NPs. The syntactic status of the object varies less and are NPs the vast majority of the time (90.2%) in all three possible word orders. A selection of examples of CO responses is shown in (20):



- (20) a. [o Koya'] tyi i-tsep-e sajmä [s jiñi x'ixik].  
 tomato PFV A3-cut-TV today DET woman  
 'The woman cut tomatoes<sub>F</sub> today.' (sfc-31-4-5, OVS CO)
- b. [o Jiñ=äch jiñ tele] tyi i-k'el-e [o jiñi ch'ityoñ] tyi ak'lel.  
 DET=AFF DET TV PFV A3-watch-TV DET boy PREP night  
 'The boy watched TV<sub>F</sub> at night.' (sfc-7-10-5, OVS CO)
- c. Ma'añ, [s xch'ok] tyi i-mäñ-ä [o bu'ul] sajmä.  
 NEG.EXT girl PFV A3-buy-TV beans today  
 'No, the girl bought beans<sub>F</sub> today.' (sfc-27-1-5, SVO CO)
- d. Mach jiñi, tyi i-tesp-e [o i-koya'] [s x-ixik] sajmä.  
 NEG DET PFV A3-cut-TV A3.tomato woman today  
 'Not that one; the woman cut her tomatoes<sub>F</sub> today.' (sfc-15-9-5, VOS CO)

As is true for CS, the majority of the CO responses include the negation of a part or all of the proposition asserted in the prompt question, exemplified in (20c)–(20d). A number of responses included *jiñäch* with or without negation, as in (20b). Of the few CO responses that included neither negation nor *jiñäch*, only four did not encode focus via object fronting. In other words, more than 98% of CO responses encoded focus either via fronting or specific morphology.

**5. Discussion.** SVO is the most common word order in all but the contrastive object condition and V1 is found in every condition. The only word order that is reliably associated with a specific information structure in these data in OVS: it is only used in the object information focus and contrastive object conditions. No single strategy that Ch'ol speakers use to encode focus is required in any given focus context, and none of the ways that Ch'ol speakers encode focus are unique to a given focus context. Thus the relationship between word order and focus is not one-to-one, nor is focus obligatorily encoded via the strategies discussed in this paper. Given this complicated landscape, it is important to view the patterns in the data from different vantage points. In this section, we address differences between constituent and contrastive focus, differences between focusing subjects and objects, SVO order across conditions, and the interaction between the syntactic status of the core arguments, word order, and focus condition.

5.1. INFORMATION VS. CONTRASTIVE FOCUS. The morphosyntactic strategies employed by Ch'ol speakers to encode information focus (IF) are also used to encode contrastive focus (CF): fronting of the focused element to clause-initial focus position and the use of a specific morpheme (e.g., the affirmative *jiñäch* and negative *mach jiñ(=ik=i)*). Each of these strategies is used more regularly in CF as compared to IF.

First, CF favors a preverbal placement of the focus constituent more than IF does. While 30.5% of responses to questions meant to elicit OF are OVS, this percentage increases to 64.2% in the case of CO. The increase in the percentage of SVO responses from IF to CF is less striking for subjects due to the prevalence of SVO order in all focus conditions. Nonetheless, 90.1% of participant responses to SF prompts use SVO, while that rate increases to 96% for CS.

Next, *jiñäch* is found in less than 1% of broad focus responses, but in 9.4% of responses to IF prompts. Thus, *jiñäch* can be considered a focus marker inasmuch as it exhibits a tendency to associate with constituents that are focus-marked: it is nearly absent from BF, and is exclusively associated with subjects in SF/CS contexts and objects in OF/CO contexts. We may want to go one step farther: not only does *jiñäch* associate with the focused constituent, it also appears to contribute to the encoding of focus, because in this study, it does not affirm a prior assertion in the discourse, but is instead associated with both new and contrastive information. Looking more

closely at CF, we find that *jiñäch* occurs at a similar rate to information focus (8.7%) in the affirmative responses to CF prompts (i.e., those without negation). In responses that do include the negation, one strategy is to begin the response with *mach jiñ(=ik=i)* ‘not that (one)’. This strategy is employed in 28.1% of contrastive focus responses. If *jiñäch* and *mach jiñ(=ik=i)*, are taken to be two sides of the same coin, then indeed, the use of focus-sensitive items increases from information to contrastive focus by the addition of the negative *mach jiñ(=ik=i)*.

We consider the rate at which focus is encoded in the responses via either fronting to initial focus position or the use of *jiñäch* or *mach jiñ(=ik=i)*. Because each individual strategy is more prevalent in CF than IF, it is unsurprising that focus is more reliably encoded via fronting in CF. In IF, 62.3% of responses encode focus in one or both of the ways mentioned (90.1% of all SF and 30.5% of all OF). In CF, that number climbs to 97%. The focus encoding strategies available to Ch’ol speakers are applied in both IF and CF contexts, but only in CF does it appear virtually obligatory to encode focus by morphosyntactic means.

Finally, an additional difference between IF and CF concerns the distribution of null arguments in the data. Objects are almost never omitted in this study; one token of object drop occurs in BF, one in SF, and one in CS. Subjects are more regularly dropped, but only in the OF and CO conditions. Subject drop occurs in 5.0% of all OF responses ( $n=12$ ) and in 12.6% ( $n=27$ ) of all CF responses. While these numbers likely do not represent the naturally-occurring rate of subject drop in Ch’ol (recall participants were instructed to answer in complete sentences), it suggests that subject drop may be sensitive to the nature of object focus (i.e., OF vs. CO).

5.2. A FOCUS ON SVO. In addition to discussing the quantitative ways in which the realization of IF and CF differ in these data, the previous section identified two ways in which subject and object focus differ across conditions: focused subjects are more likely than focused objects to surface in clause-initial position and relatedly, subject focus is more likely to be encoded in some (morpho)syntactic way than object focus. This apparent difference between how subject and object focus is encoded may well be an artifact of the prevalence of SVO order in Ch’ol.

Recall that participants use SVO order in every condition, and that for every condition (except CO), SVO is the most common word order. Because topics can also be associated with clause-initial position (see section 1.1), it is possible that some percentage of the preverbal subjects in broad focus, object focus, and contrastive object focus are topics. Furthermore, given that object information focus is not obligatorily encoded via fronting or overt morphology, it is conceivable that some portion of the clause-initial subjects in subject information focus do not represent focused subjects, but are instead unmarked topics.

While we know there are at least some topics in these data, it is difficult to tell how many from transcription alone, given that morphological marking of topics is optional in Ch’ol. As a whole, our data include 18 clauses with overt topic marking: five subjects are topicalized in VOS order (BF and OF); 11 subjects are topicalized in OVS order (OF and CO). Finally, two objects are topicalized in SVO order (CS). We also find two SOV clauses in which the subject is necessarily an unmarked topic in OF and CO.

A second possibility is that subjects may gravitate towards a preverbal position for reasons that do not have to do with information structure at all, but rather, contact with Spanish, for which SVO is the norm for transitive clauses in all focus conditions. Mexican Spanish typically does not allow object fronting in focus contexts (Gutiérrez-Bravo 2006). Given the high rate of Ch’ol-Spanish bilingualism in this community, and the fact that 21 of 31 participants self-identified as Ch’ol-Spanish bilinguals, we ought to consider the potential influence of Spanish.

Rodriguez (2019) (the third author on this study, looking at the same data as we do here) examines how word order varies according to demographic factors. She finds that speakers under 35 years of age were significantly more likely to report Ch’ol-Spanish bilingualism in Spanish and Ch’ol in comparison to speakers 35 years of age and older ( $p = .004$ ). Furthermore, age and language profile were the best predictors of the word order of a response in a given focus condition. No effects of municipality were found (i.e., Tila vs. Tumbalá). SVO order occurred most frequently in the speech of monolinguals in subject focus contexts, but the probability that a Ch’ol-Spanish bilingual used SVO order in broader focus and when the object is focused is greater than their monolingual counterparts. Rodriguez’s finding suggests that language contact between Spanish and Ch’ol may lower the rate at which Ch’ol speakers front focused elements.<sup>11</sup>

5.3. ARGUMENT TYPE. Table 3 summarizes the percentage of each type of argument for subjects and objects in each focus condition. While NPs are far more common in these data than DPs, subjects are also far more likely to be DPs than objects are.

	Subj		Obj	
	NP	DP	NP	DP
BF	55.3	44.7	79.5	10.6
SF	58.6	41.4	92.3	<b>7.7</b>
OF	58.8	41.2	85.3	14.8
CS	59.7	40.3	97.7	<b>2.3</b>
CO	62.2	37.8	90.2	9.8

Table 3. Argument distribution by focus context

The most common determiner in these data is *jiñi*, which is used in specifically anaphoric definite contexts (Little 2020b). The agents in the events pictured – but not the patients – are all characters introduced during the training phase (see Figure 2). As such it is possible that the relatively higher percentage of DPs in subject position as compared to object position is in part an artifact of the study’s design. Although topics are associated with definiteness cross-linguistically, NPs in Ch’ol may receive definite interpretations (see section 2.3), and so even if many of the SVO<sub>BF</sub> responses incorporate topicalized subjects, that cannot necessarily explain the relatively high occurrence of DP subjects. Table 3 also gives the impression that objects are especially unlikely to be DPs when subjects are focused.

The degree to which the selection of argument type is influenced by focus conditions vis-à-vis word order should also be considered. Toward that aim, Table 4 summarizes the percentage of subjects and objects according to argument type across the primary word order permutations.

	Subj		Obj	
	NP	DP	NP	DP
SVO	59.3	40.7	92.1	7.9
OVS	<b>63.4</b>	36.6	89.3	10.8
VOS	52.3	47.7	91.2	8.8
VSO	<b>78.6</b>	21.4	33.3	<b>66.7</b>

Table 4. Argument distribution by word order

<sup>11</sup> It would also be interesting to explore whether Ch’ol and neighboring Mayan languages have had a reciprocal effect on Chiapan Spanish constituent focus, as Gutiérrez-Bravo et al. (2019) have shown for Yucatecan Spanish, which has adopted Yucatec Maya’s focus-fronting.

As discussed in sections 2.2 and 4.1, VSO~VOS orders are associated with the syntactic status of the object in Ch'ol. Table 4 shows that DP objects are associated with VSO clauses, and VOS clauses also have a high rate of NP objects. As for the exceptions to the rule – i.e., DP objects in VOS and NP objects in VSO – we expect that the arguments on the clause edge are topicalized. Recall that 18 clause-final topics are marked with topic morphology in these data and we do not yet have a sense as to how many may be marked via prosodic cues alone.

Table 4 also shows a relatively high percentage of NP subjects in OVS and VSO order. Recall that both of these word orders are strongly associated with object focus, and that we have reason to believe that when one core argument of a transitive clause is focused, the other one is likely to have a syntactic status that is relatively lower on the referentiality scale.

**6. Conclusion.** This study aimed to deepen our understanding of the way in which different types of focus are encoded in Ch'ol. Several of our findings align closely with the existing literature. Specifically, BF demonstrates a robust association with both V1 and SVO orders, while OF and CO focus exhibit a strong preference for OVS order. Furthermore, VOS order is shown to arise predominantly with either bare NP objects or clause-final topics, in line with the proposal in Clemens & Coon (2018) and previous descriptions cited there. Similarly, SF and CS are notably linked to SVO order.

At the same time, due to the methodology we employ, our study uncovered nuances that previous elicitation and corpora-based work did not reveal. Contrary to expectations, V1 order is found in every condition and SVO order is prominent in every condition, challenging the established associations between focus and word order. The next phase of this project will be dedicated to expanding our investigation to encompass the semantics and phonological properties of focus in Ch'ol. We anticipate that forthcoming research will reveal prosodic distinctions between V1 and SVO structures in various focus contexts and will further contribute to our understanding of how focus may be encoded in situ through prosodic means, or may reveal that information focus is not obligatorily encoded in Ch'ol.

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