Optional agreement as successful/failed AGREE: evidence from Santiago Tz'utujil (Mayan)

Paulina Lyskawa & Rodrigo Ranero (University of Maryland, College Park)

1   Introduction

This paper investigates the structural sources that underlie the phenomenon of optional agreement. We explore this question via an in-depth analysis of the syntactic factors governing the appearance or omission of predicate agreement in the Santiago Atitlán dialect of Tz'utujil (Mayan). We observe that the availability of optional agreement with *inanimat*e nouns in Santiago Tz'utujil tracks the distinction between base-generated complements and base-generated specifiers. More precisely, inanimate noun phrases that enter into the structure as complements need not be co-indexed via agreement, whereas noun phrases that enter into the structure as specifiers must be co-indexed via agreement. We propose that this specifier vs. complement distinction correlates with *the size of the Goal* in the AGREE operation – base-generated specifiers are always a potential Goal for the AGREE probe, whereas Complements may be reduced in size, and thus not be a potential Goal. In turn, we observe that *animate* arguments obligatorily agree in most configurations, including some where the Goal is base-generated as a complement. We propose that in structures where an animate argument does not control agreement, such an argument is structurally inaccessible to the AGREE probe, since it is in a different phase. Overall, we argue that optional agreement on the surface does not arise because the syntactic operation AGREE is itself optional. Rather, variability in the size and accessibility of nominals that enter into the operation as Goals results in surface optionality. In other words, if AGREE succeeds because a relation is established between a Probe and a Goal, then an exponent surfaces; if AGREE fails because no relation is established between a Probe and a Goal, then default morphology surfaces.

Let us illustrate the phenomenon. In some Mayan languages, 3PL agreement is optional in a subset of the constructions where agreement obtains (see England 2011 for a summary of the literature; Smith-Stark 1974 for Poqomam, Zavala 1992 for Akateko, Aissen 1987 for Tzotzil, Henderson 2009 for Kaqchikel, Dayley 1985 for Tz'utujil). Consider, for example, the Kaqchikel data shown below, where the nominal 'three tomatoes' controls 3rd plural absolutive agreement *e*– on the verbal stem in a, but does not in b.

(1) *Optional 3PL absolutive agreement in Kaqchikel (Henderson 2009)[1]*

a. X–**e**–in–pitz   ri   oxi'   xkoya'.
    COM–**3PL.ABSOLUTIVE**–1SG.ERGATIVE–squeeze   DET   three   tomatoes
    'I squeezed three tomatoes.'

b. X–**Ø**–in–pitz   ri   oxi'   xkoya'.
    COM–**Ø**–1SG.ERGATIVE–squeeze   DET   three   tomatoes
    'I squeezed three tomatoes.'

What factors, if any, govern this kind of optionality? Looking at a handful of constructions, Henderson concludes that animacy plays a role in Kaqchikel, as well as a surface subject/object asymmetry: animate objects and inanimates in general control agreement optionally, whereas animate subjects control agreement obligatorily. England (2011)'s corpus study exemplifies another approach to the problem. She considers three factors in K'iche' and Mam that might govern the data distribution in the corpus: (i) whether the agreement controller is a surface subject or object, (ii) whether the agreement controller is animate or inanimate, and (iii) predicate type. England concludes that animate arguments always agree in K'iche', while inanimates rarely do. In contrast, animate arguments in Mam control agreement more frequently than inanimates, but inanimates can also control agreement.

---

[1] List of abbreviations used in the paper: 1 = first person, 2 = second person, 3 = third person, A = Set A (ergative/genitive) agreement, ADV = ADVERB, AUX = auxiliary, AF = Agent Focus voice, AP = antipassive voice, B = Set B (absolutive) agreement, C = consonant, CAUS = causative, CLF = classifier, COM = completive aspect, DEM = demonstrative, D = determiner, DIR = directional marker, DP = determiner phrase, EXS = existential, EPP = extended projection principle, F = feature, FOC = focus particle, IN = intransitive, InflP = inflectional phrase, *n* = functional nominal head, NMLZ = nominalization, *n*P = functional nominal phrase, NP = noun phrase, PASS = passive voice, PL = plural, PLD = primary linguistic data, POS.ST = positional stative, POSS = possessive, PREP = preposition, RN = relational noun, SG = singular, SS = status suffix, ST = Santiago Tz'utujil, SVO = subject-verb-object T = tense, TAM = tense/aspect/mood, TR = transitive, TRANS = transitivizer , V = vowel, *v* = functional verbal head, VOS = verb-object-subject, VP = verb phrase.

This paper is an in-depth expansion of the work laid out by England (2011) and others (see citations above). Our goal is to systematically explore the environments where optional agreement obtains in a single dialect of Tz'utujil, investigating in a controlled manner which factors determine the optionality. In doing so, we shed light on how deep structural factors govern a pattern that would be otherwise obscured if we limited our analysis to surface considerations.

An important aspect of this paper has to do with the methodology of linguistic inquiry. We will show how a controlled investigation on an individual-speaker-basis is required in order to model the phenomenon under discussion. We will describe elicitation data obtained in the span of two years of fieldwork (2018-2019), focusing on one speaker's data which was fully consistent across multiple elicitation sessions where she was the sole participant. In section 6, we will show that the data that was elicited from two other speakers who participated in *joint* elicitation sessions is, for the most part, much less systematic. We suggest that, given the poverty of the surface data during language acquisition, there are several logically possible grammars that would generate different subsets of the data available to a child acquiring ST (see Han et al. 2016; Authors 2020a). Because of this fact, we expect microvariation to exist in the domain of optional agreement, even across speakers of the same dialect. However, there is also systematicity within individual speakers. Put differently, our investigation shows that there is order within all systems, but this order would be obscured if data were simply pooled across multiple speakers. In a nutshell, we will observe how presenting data points from all speakers simultaneously would have resulted in the wrong characterization of the deeper systematicities underlying a complex, individually-oriented set of facts. Given the widespread use of traditional elicitation methodology in documenting understudied languages, we feel that our results should serve as a cautionary tale.

The paper is structured as follows. In section 2 we provide relevant background for interpreting the ST data: previous work on agreement optionality in ST and other Mayan languages, and brief notes on ST phonology, orthography and morphosyntax. In section 3 we present novel data from ST organized into two subsections: first, data involving agreement controllers base-generated as specifiers; second, data involving agreement controllers base-generated as complements. This organization is guided by the generalizations that we lay out in section 4: agreement optionality with inanimate noun phrases makes reference to the agreement

controller's base-generated position, while the pattern of agreement optionality with animate noun phrases is construction-specific. In section 5 we provide a more detailed analysis of these generalizations and propose two factors that govern the pattern: (i) the structural size of the agreement controller (variable in inanimate base-generated complements) and (ii) the agreement controller's position in a clause (variable in some constructions, regardless of animacy). In section 6 we note some microvariation in ST and provide a commentary regarding the appropriate methodology of data collection for phenomena like the one we discuss here. Section 7 concludes and lists some potential avenues for future work.

2   Santiago Tz'utujil

2.1   Previous work on optional agreement in Tz'utujil

Tz'utujil is a K'ichean Mayan language spoken in several municipalities in the vicinity of Lake Atitlán, Guatemala.[2] The present investigation will focus on an under-described dialect of Tz'utujil spoken in the town of Santiago Atitlán[3] by around 63,200 of speakers (Eberhard et al. 2019).[4] While there exist two published grammars of Tz'utujil, neither focuses on ST. Dayley

---

[2] We use the official spelling for the language used by the Academia de Lenguas Mayas de Guatemala (ALMG). Other scholars might use other spellings. For instance, the language is spelled Tz'utujiil in García Ixmatá 1997.

[3] O-Brien Rothe (2015), a study of traditional Santiago Atitlán ritual songs and music, refers to the language as Atiteco. Atiteco is the Spanish demonym used among Santiago inhabitants for themselves. We refer to the language simply as ST.

[4] Ethnologue reports that Eastern Tz'utujil (which includes ST) is in vigorous use. In carrying out fieldwork in Santiago, we have noticed that the language appears to be in broad use by adults, and it is not uncommon to hear children using it as well. However, in our consultants' family, the language has not been passed on to the children, who have shifted to Spanish completely. This situation highlights that even though the language is reported to be in vigorous use, there is an ongoing break in transmission. On a related note, O-Brien Rothe (2015) discusses how ritual song in Tz'utujil used to be a vibrant tradition in Santiago but is now practically non-existent.

(1985) describes the dialect of San Juan la Laguna, only briefly comparing the phonology of that dialect with the phonology of ST. García Ixmatá (1997) discusses the San Pedro la Laguna dialect only. Neither source, however, delves at length into optional agreement. Dayley (1985: 68) alludes to the phenomenon when he writes that "inanimate arguments (…) often do not trigger number agreement with the absolutive and ergative person markers; (…) overt marking of plurality with the absolutive and ergative person markers is not obligatory if a subject, patient, agent, or possessor is inanimate." Note from this citation, however, that it is unclear whether *subjects* in Dayley's description refer to any sole argument of a one-place predicate (i.e. intransitives, positionals, passives, antipassives, etc.) or whether the description refers only to instransitives (or some other predicate type). Furthermore, Dayley does not mention whether agreement can be dropped when co-indexing animate arguments, which is attested more broadly in the family (for instance in Kaqchikel (Henderson 2009) and Mam (England 2011)). García Ixmatá (1997) does not mention optionality in any domain of agreement. However, naturally occurring data in his grammar suggest that agreement with plural arguments need not be realized in San Pedro Tz'utujil either. In example (2) shown below, the plural object is not co-indexed on the verbal stem, even though we would expect the appearance of the absolutive agreement marker *ee–*:

(2)   *Absence of expected overt agreement (adapted from García Ixmatá 1997: 478)*
      X–**Ø**–qaa–tz'et   poon juule' b'oxoon   pkaay qas   b'uena.
      COM–**3SG.ABSOLUTIVE**–1PL.ERGATIVE–see DIR   some *palmitas*   *pacaya* ADV   good
      'We saw some good *palmitas* and *pacaya.*'

As we can see, then, the available descriptions of Tz'utujil dialects allude to the phenomenon of optional agreement, but do not discuss it systematically. Therefore, our work in what follows expands on the remarks made in Dayley and the suggestive data from García Ixmatá.

2.2   Phonology and orthography of ST

Given the paucity of descriptive work on ST, we briefly sketch some basic phonological properties of the language that we have observed in our fieldwork and that are relevant for the data in this paper. We also explain our choice of transcription convention in order to faithfully report the empirical data.

The table below shows the vowel inventory in ST:

(3)　*Full vocalic inventory of Santiago Tz'utujil from Dayley (1985)*

	SHORT		LONG		DIPHTHONG	
	FRONT	BACK	FRONT	BACK	FRONT	BACK
HIGH	i	u	ii	uu		
MID	e	o	ee	oo	ie	uo
LOW	a		aa			

There is no detailed phonetic work on the exact realization of these vowel categories. For example, we do not know the exact quality of the front high vowel, or the low one. In other words, the symbols above do not exactly correspond to the IPA symbols but rather represent some general distinct phonological categories.

Tz'utujil is characterized by both vowel epenthesis (usually [e] or [i]) and robust vowel syncope, particularly noticeable for ST. ST also displays regressive vowel height harmony, where mid-vowels raise if followed by a high vowel or diphthong (Authors 2021a). The exact conditions on the application and interaction of all these three processes (vowel epenthesis, syncope and harmony) are not well-understood.

ST has the following consonant inventory:

(4)　*Tz'utujil consonantal qualities*

	BILABIAL	ALVEOLAR	POST-ALVEOLAR	PALATO-ALVEOLAR	VELAR	UVULAR	GLOTTAL
SIMPLE STOPS	/p/ \<p\>	/t/ \<t\>	/ts/ \<tz\>	/tʃ/ \<ch\>	/k/ \<k\>	/q/ \<q\>	/ʔ/ \<'\>
GLOTTALIZED STOPS	/ɓ/ \<b'\>	/t'/ \<t'\>	/ts'/ \<tz'\>	/tʃ'/ \<ch'\>	/k'/ \<k'\>	/ɢ/ \<q'\>	
FRICATIVES		/s/ \<s\>		/ʃ/ \<x\>		/χ/ \<j\>	
NASALS	/m/ \<m\>	/n/ \<n\>					
LATERAL		/l/ \<l\>					
TRILL		/r/ \<r\>					
SEMIVOWEL	/w/ \<w\>			/j/ \<y\>			

The glottal stop, besides being a phoneme in Tz'utujil, also serves as an epenthetic consonant repairing illicit vowel hiatus.

The table above represent approximate consonant qualities in slanted brackets /C/, although similarly to vowels, the exact phonetic work on their properties is yet to be carried out.

For our purposes, the above description is sufficient. Note also the orthography we will use for each corresponding sound, represented in triangle brackets <C>.

As far as our transcription is concerned, we have chosen to represent our transcriptions faithfully here rather than to use standard orthography for Tz'utujil. ST phonology would be irremediably obscured via the official orthography.[5] In doing this, we remain agnostic to the correspondence between the underlying forms and the application of phonological processes whose details are yet to be understood. In sum, we report only surface forms as we perceive them using standardized symbols for each segment. We refer the reader to Aissen et al. 2017 for a discussion of standardized orthography across Mayan and Authors 2021a,b for some discussion of ST phonology.

2.3   Morphosyntax of ST

In this section, we discuss some basic aspects of the grammar of ST which will be crucial for understanding the data.

ST exhibits ergative-absolutive alignment, like all other Mayan languages. Nominals themselves are not morphologically marked for case, but head-marking on the verbal stem shows the alignment configuration. The verbal template in ST is shown below.

(5)   *Verbal template in ST*
      TAM–ABSOLUTIVE–ERGATIVE–V–VOICE–STATUS SUFFIX=(OTHER)

The right edge of the verbal complex in ST hosts derivational morphology and what is known as a Status Suffix (Craig 1977, Aissen 2011, Henderson 2012, Coon 2012, 2013). The Status Suffix generally encodes some information about voice and argument structure properties and is mandatory only at the right edge of the prosodic phrase. We will not be concerned about

---

[5] For instance, our consultants have remarked on several occasions that they find reading Tz'utujil difficult, given the appearance of vowels that they do not pronounce. Take the nominal 'my shoe', which would be spelled *nuxajaab'* in standard Tz'utujil. In ST, the pronunciation is *nxjaab', w*ith a CCC cluster at the beginning.

its behavior here, but it will appear in some of our data.[6] The final slot is reserved for clitics and particles that have a variety of uses, such as indicating direction (see Dayley 1985: 265-266).

In the Mayanist literature, the set of ergative and genitive markers is traditionally called Set A and the set of absolutive markers is called Set B. We will follow this convention moving forward. Below, we lay out the ST agreement paradigms, including (mostly phonologically conditioned) allomorphic variants where relevant:

(6)   *Set A (ergative/genitive) agreement paradigm in ST*

	SINGULAR	PLURAL
1	inu-, inw-, w-[7]	q(a)-
2	a(w)-	i(w)-
3	ru-, r-, u-	k(i)- / k(e)-

(7)   *Set B (absolutive) agreement paradigm in ST*[8]

	SINGULAR	PLURAL
1	(i)n(i)-	oq-
2	at-	ix-
3	∅	e- / i-

Note that Set B 3SG is morphophonologically ∅. For discussion on whether there is a difference between these two analyses for K'ichean agreement, see Preminger (2014). In examples where a 3PL marker would be expected, but none arises, we gloss an empty agreement slot as ∅.

The examples below show that Set A morphology co-indexes the subject of a transitive clause, whereas Set B co-indexes the object of a transitive, and the subject of an unaccusative:

---

[6] In closely related K'iche', status suffixes must appear at the edge of a prosodic phrase and cannot appear otherwise (Henderson 2012, Can Pixabaj 2017). In ST, status suffixes must appear at the edge of a prosodic phrase as well, but may also appear when they are not at the edge.

[7] It is possible that these forms are actually derived phonologically rather than via suppletion (see Kenstowicz 2013 for Kaqchikel). We stay agnostic as to the proper analysis of how these forms surface.

[8] The exact phonological quality of the single vowel morpheme in the Set B 3PL cell is subject to interspeaker variation and vowel (dis)harmony processes whose investigation we leave for future research (Authors 2021a). We will provide our transcriptions of this agreement morpheme faithfully.

(8) *Agreement in active transitive*
X–**e**–**q**–raq=pij i–k'e' etzb'al.
COM–**3PL.B**–**1PL.A**–break=DIR PL–two toy
'We broke two toys.'

(9) *Agreement in active unaccusative*
I–k'e' ch'uuch'–a x–**i**–tzaq=pa.
PL–two baby–PL COM–**3PL.B**-fall=DIR
'Two babies fell.'

Set A is also marked on nominals to signal possession (10). Furthermore, Set A co-indexes

the complement of nominalized verbs (11).[9]

(10) *Possessor agreement*
ki–plaj ch'uuch'–a
3PL.A–face baby–PL
'the babies' faces'

(11) *Object agreement on nominalization*
Ni–mjuon **ki**–kan–x–ik i–k'e' nu–tz'i.
1SG.A–AUX **3PL.A**–search–PASS–NMLZ PL–two 1SG.A–dog
'I am in search of my two dogs.'

Similarly, Set B appears in a broad range of configurations. It co-indexes the single

argument of passives (12), antipassives (13), nominal predicates (14), existential predicates (15),

and stative positional predicates (16). We will provide more details on these constructions later

on.

(12) *Agreement with passive subject*
Ak'al-a x-i-kay-taj k-maak utiw-a.
child-PL COM–**3PL.B**–bit–PASS 3PL.A–RN wolf–PL
'The children were bitten by the wolves.'

(13) *Agreement with antipassive subject*
J'ela utiw x–**i**–kum-s–an–a r–xiin elq'om
DEM.PL wolf COM–**3PL.B**–die–CAUS–AP–SS 3SG.A–RN thief
'THOSE WOLVES killed a thief.'

(14) *Agreement with subject of a nominal predicate*
A Xwaan i a Tru **i**–ajptayu.
CLF Juan and CLF Pedro **3PL.B**-farmer
'Juan and Pedro are farmers.'

---

[9] The vowel in the Set A prefix *ni-* in (11) is not what we would expect given the allomorphs

listed in (6). We are unsure whether the prefix here is *n-* and the vowel is epenthetic.

(15) *Agreement with an associate of an existential predicate*
I–k'ola   ki'e' ktz'eej chu   jaay.
3PL.B–EXS   two   flower PREP.3SG.A.RN   garden
'There are two flowers in the garden.'

(16) *Agreement with subject of a positional*
I–k'e' ak'al–a   **e**–q'e'–el   chwech   tz'aq.
PL–two child–PL   **3PL.B**–lean–POS.ST PREP.3SG.A.RN   wall
'Two children are leaning against the wall.'

Observe that in passive and antipassive frames, a *relational noun* introduces the oblique argument. A relational noun is a Mayan specific lexical class which carries out many of the functions that adpositions do in other languages, including the introduction of these oblique arguments.

In the construction known as Agent Focus, Set B agreement arises as well, but the agreement controller can be either the subject or the object (García Ixmatá 1997; see Preminger 2014 for K'ichean in general and Aissen 2017a for a discussion of AF across Mayan). We will discuss Agent Focus in more depth later in the paper.

Another property of ST is the lack of double object constructions. For example, the indirect argument in a ditransitive does not control agreement on the verb and is introduced by a relational noun:

(17) *No double object constructions*
Inin x–Ø–in–ya'   jun kotoon **chee**   **Aa**   **Xwaan** r–xin
1SG COM–3SG.B–**3SG.A**–give a   güipil **PREP.3SG.A.RN youth Juan**   3SG.A–RN
r–aanaa'.
3SG.A–sister
'I gave a *güipil* **to Juan** for his sister.'   (adapted from Dayley 1985: 311)

We have not carried out an in-depth investigation of word order in ST, but Dayley (1985) and García Ixmatá (1997) report the basic word order in the language as VOS, which is also assumed for the rest of the languages in the K'ichean branch (England 1991, Clemens & Coon 2018). We find that consultants accept, but rarely produce, verb initial utterances, offering preverbal subjects instead. Regardless of the conditions governing the order of predicate and arguments in ST, we have not found any effect of word order for the data reported in this paper. In other words, the agreement pattern of transitive subjects is the same whether the subject appears pre- or post-verbally. We therefore set aside the issue of word order for the rest of our work here, leaving a more thorough investigation of the topic for the future.

Before moving on to the empirical description, we preview below all the agreement controllers we will manipulate, alongside the agreement morpheme (Set A or Set B) that arises on the verb:

(18) *Agreement controllers under investigation*

transitive subject	Set A
possessor	Set A
subject of auxiliary in a progressive construction	Set A
argument of a nominalization in a progressive construction	Set A
transitive object	Set B
unaccusative subject	Set B
passive subject	Set B
antipassive subject	Set B
Agent Focus subject	Set B
Agent Focus object	Set B
existential associate	Set B
positional subject	Set B
subject of a nominal predicate	Set B

3 Optional agreement in ST

In this section, we present the data we will analyze. In each subsection, we first sketch the morphosyntax of a specific construction and then discuss the agreement facts for both animate and inanimate agreement controllers. We focus on plural noun phrases only, leaving the behavior of pronouns (including 1st and 2nd persons) for section 5.2.3. Before presenting the data, however, we must delve briefly into plural nominal morphology and nominal concord in ST.

Let us start with nominal morphology. Only a subset of noun phrases in ST are marked with plural morphology. However, the availability of plural morphology for a specific nominal is orthogonal to the nominal's behavior with respect to predicate agreement (see Henderson 2009 and England 2011). In other words, even though the animate nominals *utiw* 'wolf' and *ak'* 'chicken' differ in that 'wolf' can bear plural morphology (*utiw-a*) (19)-(20) but 'chicken' cannot (**ak'-a/i*) (21), they both behave the same with respect to verbal agreement:

(19) *Optional predicate agreement with plural 'wolf' bearing nominal plural agreement*
a. Ya   Mriiy x–**i**–ru–tzu'   i–uxi   utiw–a.
    CLF   Maria COM–**3PL.B**–3SG.A–see   PL–three   wolf-PL
    'Maria saw three wolves.'
b. Ya   Mriiy x–∅–u–tzu'   i–uxi   utiw–a.
    CLF   Maria COM–∅–3SG.A–see   PL–three   wolf-PL
    'Maria saw three wolves.

(20) *Optional predicate agreement with plural 'wolf' not bearing nominal plural agreement*
a. Ya   Mriiy x–**i**–ru–tzu'   i–uxi   utiw.
    CLF   Maria COM–**3PL.B**–3SG.A–see   PL–three   wolf
    'Maria saw three wolves.'
b. Ya   Mriiy x–∅–u–tzu'   i–uxi   utiw.
    CLF   Maria COM–∅–3SG.A–see   PL–three   wolf
    'Maria saw three wolves.'

(21) *Optional predicate agreement with plural 'chicken' not bearing nominal plural agreement*
a. A   Xwaan   x–**i**–ru–loq'   i–k'e'   ak'.
    CLF   Juan   COM–**3PL.B**–3SG.A–buy   PL–two   chicken
    'Juan bought two chickens.'
b. A   Xwaan   x–∅–u–loq'   i–k'e'   ak'.
    CLF   Juan   COM–∅–3SG.A–buy   PL–two   chicken
    'Juan bought two chickens.'

 Since some nouns do not inflect for plural (animals like 'chicken' and all inanimates), then, we ensure that an argument is interpreted as plural via the use of numerals and/or plural demonstrative modifiers. Put differently, it would be impossible to carry out a controlled investigation into the agreement behavior of many nominals *unless* we used numerals or plural demonstratives to ensure that an intended plural interpretation indeed obtains. It is only through this method that we can guarantee the reliability of our conclusions, so we apply it throughout. For reference, the tables below show the forms for numerals and demonstratives used throughout the paper:

(22) *Forms of numerals in ST*

	NUMBER CONCORD FORM	NON-CONCORD FORM
ONE	jun	
TWO	i–k'e'	ki'e'
THREE	i–uxi	uxi

(23) *Forms of demonstratives in ST*

	SINGULAR	PLURAL
PROXIMAL	jaw(ra')	j'ew(ra')
DISTAL	jal(a')	j'el(a')

Before moving on to the core empirical data related to predicate agreement, it is also necessary to provide a brief note regarding the above forms. Both numerals and demonstratives behave like adjectives in that they show number concord with the nominal they modify. However, *modifier concord* is orthogonal to the *predicate agreement* that we are concerned with here (England 2011 makes the same distinction in the context of Mam and K'iche'). Consider the two sentences below:

(24) *Independence of modifier concord and predicate agreement*
a. A   Xwaan   x–**i**–ru–loq'   k'ie'   ak'.
    CLF   Juan   COM–**3PL.B**–3SG.A–buy   two   chicken
    'Juan bought two chickens.'
b. A   Xwaan   x–∅–u–loq'   **i**–k'e'   ak'.
    CLF   Juan   COM–∅–3SG.A–buy   **PL**–two   chicken
    'Juan bought two chickens.'

In a above the predicate shows agreement with the object even though the numeral does not show number concord. In turn in b we see the opposite configuration: the numeral shows number concord but there is no agreement on the predicate.

We also observe examples where predicate agreement is obligatory and number concord on a modifier in optional:[10]

(25) *Inanimate argument of a positional 3PL/*3SG=*∅*
a. **I**–k'iy   ab'aj   **e**–q'e'–el–a   chwech   tz'aq.
    PL–many   stone   **3PL.B**–lean–POS.ST–SS PREP.3SG.A.RN   wall
    'Many stones are leaning against the wall.'
b. K'iy   ab'aj   **e**–q'e'–el–a   chwech   tz'aq.
    many   stone   **3PL.B**–lean–POS.ST–SS PREP.3SG.A.RN   wall
    'Many stones are leaning against the wall.'
c. ***I**–k'iy   ab'aj   ∅–q'e'–el–a   chwech   tz'aq.
    PL–many   stone   ∅–lean–POS.ST–SS   PREP.3SG.A.RN   wall
    Intended: 'Many stones are leaning against the wall.'
d. *K'iy   ab'aj   ∅–q'e'–el–a   chwech   tz'aq.
    many   stone   ∅–lean–POS.ST–SS   PREP.3SG.A.RN   wall
    Intended: 'Many stones are leaning against the wall.'

To summarize, we use numerals or number-concord forms of demonstratives to ensure the plural interpretation of nominals that might otherwise not exhibit plural morphology of their own.

3.1 Agreement controlled by base-generated specifiers

We start by laying out the pattern where 3PL predicate agreement is controlled by nominals that are base-generated in a specifier position. Agreement in obligatory in all these cases. We

---

[10] We have observed that modifier concord is not optional across the board. For example, our consultant rejected non-concord forms of modifiers of some animate arguments. This occasional obligatoriness of concord did not seem to correlate at all with the pattern of predicate agreement. We leave the investigation of the modifier concord system for future work.

will discuss the following: root transitive subjects, Agent Focus subjects, Antipassive subjects, subjects of auxiliaries, subjects of nominal predicates, and possessors. We also discuss stative positional predicates; positional roots are a Mayan-specific lexical class. We will observe that agreement in positional predicates patterns just like in the other constructions presented in this section. We therefore conclude that the subject of a positional predicate is base-generated in a specifier position.

3.1.1 Root transitive subjects

Transitive verbs are divided into two categories in the Mayanist literature: (i) root and (ii) derived. [11] In the active voice, root verbs are those that usually surface as Consonant-Vowel-Consonant, alongside prefixal inflection (Dayley 1985: 73):

(26) *Root transitive verbs - inflection + CVC verb root*
a.　X–Ø–ki–**raq**.
　　COM–3SG.B–3PL.A–**tear**
　　'They tore it.*'*
b.　X–Ø–qa–**tz'et.**
　　COM–3SG.B–3PL.A–**see**
　　'They saw it.**'**

Derived transitive verbs are not CVC. In other words, derived transitive verbs are composed of a CVC root (of any lexical category) and additional suffixal morphology (Dayley 1985: 73):

(27) *Derived transitive verb - inflection + root + derivational morphology*
a.　X–Ø–ki–**k'aay**–**iij**.
　　COM–3SG.B–3PL.A–**sale-TRANS**
　　'They sold it.*'*

b.　X–Ø–ki–**k'ol**–**ob'a'**.
　　COM–3SG.B–3PL.A–**round-TRANS**
　　'They left it (a round object).*'*

---

[11] Both categories can undergo further syntactic derivations (e.g. decreasing their valency). Some derivations (i.e. antipassive and Agent Focus) reference the distinction between root and derived verbs, since different forms of the antipassive and Agent Focus markers surface depending on this distinction.

A transitive verbal stem exhibits agreement with the object via Set B markers and with the subject via Set A. Let us discuss first the availability of agreement with 3rd person plural subjects, cross-referenced by the Set A marker *ki-*. First, observe below that Set A is obligatory with animate controllers:[12]

(28) *Transitive animate subject 3PL/*3SG/*Ø*

a. I–k'e'   tz'e   x–Ø–**ki**–raq   jal   siaw.
    PL–two dog   COM–3SG.B–**3PL.A**–tear   DEM.SG   cat
    'Two dogs ripped apart that cat.'

b. *I–k'e' tz'e   x–Ø–**u**–raq   jal   siaw.
    PL–two   dog   COM–3SG.B–**3SG.A**–tear   DEM.SG   cat
    Intended: 'Two dogs ripped apart that cat.'

c. *I–k'e' tz'e   x–Ø–**Ø**–raq   jal   siaw.
    PL–two   dog   COM–3SG.B–**Ø**–tear   DEM.SG   cat
    Intended: 'Two dogs ripped apart that cat.'

In example (28) we see that 3PL *ki-* is the only acceptable morpheme to cross-reference an animate plural subject of a transitive. Neither the 3SG marker *–(r)u* b, nor a null morpheme c (which could also be analyzed as the outright absence of a Set A morpheme), is acceptable.

Similarly, an inanimate subject must be cross-referenced with the Set A 3PL morpheme in this construction:

(29) *Transitive inanimate subject 3PL/*3SG/*Ø*

a. Jal   i–k'e'   chi'a' x–Ø–**ki**–waq'   jun   ch'eech'.
    DEM   PL–two   tree   COM–3SG.B–**3PL.A**–destroy   one   car
    'Those two trees destroyed a car.'

b. *Jal   i–k'e'   chi'a' x–Ø–**u**–waq'   jun   ch'eech'.
    DEM   PL–two   tree   COM–3SG.B–**3SG.A**–destroy   one   car
    Intended: 'Those two trees destroyed a car.'

c. *Jal   i–k'e'   chi'a' x–Ø–**Ø**–waq'   jun   ch'eech'.
    DEM   PL–two   tree   COM–3SG.B–**Ø**–destroy   one   car
    Intended: 'Those two trees destroyed a car.'

In parallel fashion to animate arguments, then, inanimate subjects of transitive clauses must be cross-referenced by a 3PL morpheme a, rather than a 3SG B or Ø c. Put differently, plural

---

[12] Unfortunately, the scenario depicted by the example below did indeed occur the day before the elicitation took place.

transitive subjects must be co-referenced with 3PL agreement on the verb, regardless of their animacy status.

3.1.2 Subjects of antipassives

In ST, the use of the oblique antipassive voice is reflected by the suffix *-ow* (for underived CVC roots) or the suffix *-Vn* (for all derived stems). In the antipassive voice, the logical object is demoted to an oblique.[13] The oblique phrase is optional and is headed by the relational noun – *xiin*, which displays Set A agreement controlled by the logical object. First, observe that animate arguments in the antipassive obligatorily control Set B agreement on the verb:

(30) *Antipassive animate subject with 3PL/*3SG=∅*
a. J'ela   i–k'e'   ak'al–a   x–**i**–por–on–a   r–xiin   a–k'ayib'al.
    DEM.PL PL–two boy–PL   COM–**3PL.B**–burn–AP–SS   3SG.A–RN   2SG.A–portrait
    'Those two boys burnt your portrait.'

b. *J'ela   i–k'e'   ak'al–a   x–**∅**–por–on–a   r–xiin   a–k'ayib'al.
    DEM.PL PL–two boy–PL   COM–**∅**–burn–AP–SS   3SG.A–RN   2SG.A–portrait
    Intended: 'Those two boys burnt your portrait.'

Similarly, inanimate plural subject DPs control Set B agreement obligatorily:

---

[13] A caveat is necessary here. We only present data for the oblique antipassive. There is at least one other antipassive construction in other K'ichean languages which is often referred to as the incorporation antipassive (see e.g. Heaton 2017 for Kaqchikel). In such a construction, the logical object must be a bare noun (at least in Kaqchikel; see Aissen 2011 for complications in K'iche'). We have been unable to find an incorporation antipassive construction in ST akin to that reported for other Mayan languages—Dayley (1978), (1985) does not report any such construction either. García Ixmatá (1997) does report an "incorporation antipassive", but its morphology appears to be identical to Agent Focus (AF; discussed here in 3.1.3). Its distribution seems similar to AF as well, since García Ixmatá reports that its use is limited to relativization. Since we do not yet understand the morphosyntax of this construction, nor have we been able to find it in ST, we do not discuss it.

(31) *Antipassive inanimate subject 3PL/*3SG=∅*
   Context: You walk into your room and find that your portrait is a pile of ash. You ask your sister: "Who burned my portrait?" Your sister knows the culprit but wishes to protect them. She therefore blames two candles. She responds:

a. | J'ela | i–k'e' | kandeel | x–**i**–por–on–a | r–xiin. |
    |---|---|---|---|---|
    | DEM.PL | PL–two | candle | COM–**3PL.B**–burn–AP–SS | 3SG.A–RN |

    'Those two boys burnt your portrait.'

b. | *J'ela | i–k'e' | kandeel | x–∅–por–on–a | r–xiin. |
    |---|---|---|---|---|
    | DEM.PL | PL–two | candle | COM–∅–burn–AP–SS | 3SG.A–RN |

    Intended: 'Those two boys burnt your portrait.'

The behavior of subjects of antipassives regarding agreement parallels the behavior of transitive subjects, since in both configurations, agreement is obligatory. Note, however, that transitive subjects control Set A agreement, whereas antipassive subjects control Set B agreement. This shows that Set B can also be obligatory.

3.1.3 Subjects of Agent Focus

The Agent Focus (AF) construction (also known as the focus antipassive) has received much attention in the Mayanist literature (Aissen 2017a). This construction is used in a subset of Mayan languages when the ergative subject is A'-extracted: AF is used for *wh*-questions, focus, and relativization of the ergative subject (Ordoñez 1995, Hale 2002, Aissen 2011, Stiebels 2006, Coon et al. 2014, Assmann et al. 2015, Erlewine 2016, Polinsky 2016, Douglas et al. 2017, Ranero 2020). The syntactic details of the analysis of AF do not concern us here. Instead, what is relevant to our investigation is the particular agreement pattern that surfaces when AF is used in Tz'utujil. Much like in other K'ichean languages such as Kaqchikel, AF is unique in that only one agreement slot surfaces on the verbal stem, displaying Set B morphology. AF verbs carry either a *-ow(a)* or *-Vn(a)* suffix. Note that the same suffix appears in the oblique antipassive construction. In contrast to antipassive and passive clauses, however, AF has two arguments— neither argument is demoted to an oblique introduced by a relational noun. The controller of agreement in AF is determined via an agreement hierarchy also found in other related languages such as K'iche' and Kaqchikel:

(32) *K'ichean agreement hierarchy*
   1, 2 > 3PL > 3sg

Descriptively, the two arguments of an AF construction are compared with respect to their phi-features. The argument whose phi-features are higher on the above hierarchy ends up

controlling agreement and its phi-features are exponed. The phi-features of the argument lower in the hierarchy are not exponed. Take the Kaqchikel example below, where the subject is 2nd person and the object is 3rd person. 2nd person trumps 3rd person, so the former controls Set B agreement:

(33) *Agent Focus 2SG subject and 3SG object* (Kaqchikel, Preminger 2014: 18)
a. Ja   rat   x–at–ax–an   ri   achin.
    FOC   2SG   COM–2SG.B–hear–AF   DET   man
    'YOU saw the man.'

b. *Ja   rat   x–∅–ax–an   ri   achin.
    FOC   2SG   COM–3SG.B–hear–AF   DET   man
    Intended: 'YOU saw the man.'

Contrastively, the roles are reversed in the example below, such that the subject is 3rd person, while the object is 2nd person. Nevertheless, 2nd person again trumps 3rd person and the same form of the verb as in (34)a surfaces:

(34) *Agent Focus 3SG subject and 2SG object* (Kaqchikel, Preminger 2014: 18)
a. Ja   ri   achin   x–at–ax–an   rat.
    FOC   DET   man   COM–2SG.B–hear–AF   2SG
    'THE MAN saw you'

b. *Ja   ri   achin   x–∅–ax–an   rat.
    FOC   DET   man   COM–∅–hear–AF   2SG
    Intended: 'THE MAN saw you'

What is interesting for our purposes is the presence or absence of agreement when one of the arguments is 3PL and the other is 3SG. In these cases, 3PL trumps 3SG in the agreement hierarchy. What we find in AF can be summarized as follows:

(35) *Summary of AF agreement optionality*
a. 3PL agreement is obligatory when agreement co-indexes a 3PL subject (regardless of animacy)
b. 3PL agreement is optional when agreement co-indexes a 3PL object (regardless of animacy)

In order to properly control for number and person, all our examples consist of focused subjects. All examples below were elicited in a specific context, e.g. a dialogue where one speaker corrects another speaker as to the agent of the reported action, or where the subject is a felicitous reply to a *wh*-question.

In an AF configuration where the subject is animate and controls agreement, Set B is obligatory:

(36) *Agent Focus subject animate 3PL/*3SG=*Ø*

a. J'ela   i–k'e' ixq–i   x–**i**–k'ay–in–a   jun   ch'eech'.
   DEM.PL PL–two woman–PL   COM–**3PL.B**–buy–AF–SS   one   car
   'THOSE TWO WOMEN bought a car.'

b. *J'ela   i–k'e' ixq–i   x–**Ø**–k'ay–in–a   jun   ch'eech'.
   DEM.PL PL–two woman–PL   COM–**Ø**–buy–AF–SS   one   car
   Intended: 'THOSE TWO WOMEN bought a car.'

Similarly, when the subject is inanimate, Set B agreement is obligatory:

(37) *Agent Focus subject inanimate 3PL/*3SG=*Ø*
Context: You walk into your room and find that your portrait is a pile of ash. You ask your sister: "Who burned my portrait?" Your sister knows the culprit but wishes to protect them. She therefore blames two candles. She responds:

a. J'ela   i–k'e'   kandeel   x–**i**–por–on–a   jun   a–k'ayib'al.
   DEM.PL PL–two   candle   COM–**3PL.B**–burn–AF–SS one   2SG.A–portrait
   'THOSE TWO CANDLES burnt your one portrait.'

b. *J'ela   i–k'e'   kandeel   x–**Ø**–por–on–a   jun   a–k'ayib'al.
   DEM.PL PL–two   candle   COM–**Ø**–burn–AF–SS   one   2SG.A–portrait
   Intended: 'THOSE TWO CANDLES burnt your one portrait.'

In sum, Agent Focus subjects pattern identically to the subjects of transitives and antipassives. Regardless of the animacy status of the argument controlling agreement, agreement is obligatory.

3.1.4 Subject of an auxiliary in a progressive construction

The progressive construction is formed by a combination of an auxiliary *mjuon* and a nominalized verb whose valence has been reduced to one (see Aissen 2017b on these nominalizations in Tz'utujil). The logical subject is indexed with Set A agreement on the auxiliary.[14] First, consider an animate controller of agreement on the auxiliary. Agreement here is obligatory:

---

[14] The ST progressive we report here is different from Chuj and Ch'ol's (Coon & Carolan 2017). In those languages, the nominalization bears Set A and Set B agreement, where Set A is controlled by a matrix subject. In ST, the matrix subject controls Set A but on the auxiliary, not the nominalization. In turn, the nominalization in ST bears Set A – however, it is controlled by

(38) *Animate subject of a progressive with 3PL/*3SG/*Ø*

a. J'ela'   i–k'e'   ixq–i'   **ki–mjuon**   r–mich–x–ik
    DEM.PL PL–two   woman–PL   **3PL.A–AUX**   3SG.A–pluck–PASS–NMLZ
    jun   ak'.
    one   chicken
    'Those two women are plucking a chicken.'

b. *J'ela' i–k'e'   ixq–i'   **ru–mjuon**   r–mich–x–ik
    DEM.PL PL–two   woman–PL   **3SG.A–AUX**   3SG.A–pluck–PASS–NMLZ
    jun   ak'.
    one   chicken
    Intended: 'Those two women are plucking a chicken.'

c. *J'ela' i–k'e'   ixq–i'   **Ø–mjuon**   r–mich–x–ik
    DEM.PL PL–two   woman–PL   **Ø–AUX**   3SG.A–pluck–PASS–NMLZ
    jun   ak'.
    one   chicken
    Intended: 'Those two women are plucking a chicken.'

The same pattern is observed with inanimate subjects as well:

(39) *Inanimate subject of a progressive with 3PL/*3SG/*Ø*

a. Puk'iy chi'a' **ki–mjuon**   r–waq'–x–ik   jun   ch'eech'.
    many   tree   **3PL.A–AUX** 3SG.A–destroy–PASS–NMLZ one   car
    'Many trees are destroying a car.'

b. *Puk'iy chi'a' **ru–mjuon**   r–waq'–x–ik   jun   ch'eech'.
    many   tree   **3SG.A–AUX** 3SG.A–destroy–PASS–NMLZ one   car
    Intended: 'Many trees are destroying a car.'

c. *Puk'iy chi'a' **Ø–mjuon**   r–waq'–x–ik   jun   ch'eech'.
    many   tree   **Ø–AUX**   3SG.A–destroy–PASS–NMLZ one   car
    Intended: 'Many trees are destroying a car.'

The pattern of agreement on an auxiliary in a progressive construction is the same as in all other Set A-agreeing constructions described so far.[15]

---

the logical object of the nominalization, not the matrix subject. We will propose in section 4 that this logical object is base-generated as a complement, permitting variability in its structure and resulting in optional agreement with inanimate controllers (see the description in 3.2.6).

[15] The ST progressive we report here is different from Chuj and Ch'ol's (Coon & Carolan 2017). In those languages, the nominalization bears Set A and Set B agreement, where Set A is controlled by a matrix subject. In ST, the matrix subject controls Set A but on the auxiliary, not

3.1.5 Subjects of nominal predicates

Nouns can also serve as predicates in ST. The subjects of these predicates are cross-referenced with Set B morphology on the predicative noun and there is no copula. Regarding agreement, animate subjects must be indexed obligatorily on the predicate with Set B morphology:

(40) *Animate subjects of a noun predicate 3PL/*3SG=*Ø*
a.   Ya   Mriiy i   ya   Sar   **i**–kmoykyem.
     CLF   Maria and   CLF   Sara   **3PL.B**–seamstress
     'Maria and Sara are seamstresses.'

b.   *Ya   Mriiy i   ya   Sar   **Ø**–kmoykyem.
     CLF   Maria and   CLF   Sara   **Ø**–seamstress
     Intended: 'Maria and Sara are seamstresses.'

     Inanimate subjects are also necessarily indexed by Set B morphology:

(41) *Inanimate subject of a noun predicate 3PL/*3SG=*Ø*
a.   J'ew   munil **i**–sq'ul.
     DEM.PL   fruit **3PL.B**–banana
     'These fruits are bananas.'

b.   *J'ew   munil **Ø**–sq'ul.
     DEM.PL   fruit **Ø**–banana
     Intended: 'These fruits are bananas.'

     In sum, the sole argument of a nominal predicate is obligatorily indexed by Set B morphology, regardless of its animacy status.

3.1.6 Possessors

Possessors are indexed on a possessed nominal via a Set A prefix. First, observe the pattern for animate possessors. As shown below, agreement here is obligatory:

---

the nominalization. In turn, the nominalization in ST bears Set A – however, it is controlled by the logical object of the nominalization, not the matrix subject. We will propose in section 4 that this logical object is base-generated as a complement, permitting variability in its structure and resulting variability of agreement (see the description in 3.2.6).

(42) *Animate possessors of a noun 3PL/*3SG/*Ø*
a. **ki**–plaj   ch'uuch'–a   rex
   3PL.A–face   baby–PL   green
   'babies' faces that are green'

b. *__**ru**–plaj   ch'uuch'–a   rex
   3SG.A–face   baby–PL   green
   Intended: 'babies' faces that are green'

c. *__**Ø**–plaj   ch'uuch'–a   rex
   Ø–face   baby–PL   green
   Intended: 'babies' faces that are green'

Inanimate possessors also must be indexed by Set A plural morphology:

(43) *Inanimate possessors of a noun with 3PL/*3SG/*Ø*
a. **Ki**–skil   uxi   k'um   x–Ø–q'oy–a.
   3PL.A–seed   three   squash COM–Ø–rot–SS
   'The seeds of three squashes rotted.'

b. *__**Ru**–skil   uxi   k'um   x–Ø–q'oy–a.
   3SG.A–seed   three   squash COM–Ø–rot–SS
   Intended: 'The seeds of three squashes rotted.'

c. *__**Ø**–Skil   uxi   k'um   x–Ø–q'oy–a.
   Ø–seed   three   squash COM–Ø–rot–SS
   Intended: 'The seeds of three squashes rotted.'

In sum, possessor agreement exhibits the same pattern as transitive subjects, antipassive subjects, AF subjects, and subjects of nominal predicates.

3.1.7 Subjects of stative positional predicates

Positionals are a class of CVC roots in Mayan languages characterized by their semantic properties and unique derivational and inflectional morphology (Tummons 2010, Henderson 2019). Positionals encode complex meanings of physical configuration and/or state (e.g., 'lying face down', 'standing on one's toes'). Their distribution and morphosyntactic properties make them similar to adjectives (e.g. some of them are gradable, some of them can modify nouns) as well as verbs (they share some derivational morphology, e.g., status suffixes). On the other hand, unlike most adjectives or verbs, they cannot ever surface as bare CVC roots. Furthermore, some stems derived from positional roots require unique morphology that is not shared with either adjectives or verbs. For this reason, the Mayan literature has classified positionals as a distinct lexical category.

In order to use a positional as a stative predicate, the CVC root takes a *-Vn* suffix (if the second C of the root is a liquid or a glottal stop) or a *-Vl* suffix (elsewhere), followed by an intransitive status suffix *-a*. Stative positional predicates do not show TAM marking. With respect to agreement, animate subjects of stative positional predicates are obligatorily cross-referenced by Set B agreement:

(44) *Animate argument of a positional 3PL/*3SG=*Ø*

a.
I–k'e'	ak'al–a	e–q'e'–el	chwech	tz'aq.
PL–two	child–PL	**3PL.B**–lean–POS.ST	PREP.3SG.A.RN	wall

'Two children are leaning against the wall.'

b.
*I–k'e'	ak'al–a	Ø–q'e'–el	chwech	tz'aq.
PL–two	child–PL	Ø–lean–POS.ST	PREP.3SG.A.RN	wall

Intended: 'Two children are leaning against the wall.'

Similarly, inanimate subjects must be indexed by Set B agreement here as well:

(45) *Inanimate argument of a positional 3PL/*3SG=*Ø*

a.
I–k'iy	ab'aj	e–q'e'–el–a	chwech	tz'aq.
PL–many	stone	**3PL.B**–lean–POS.ST–SS	PREP.3SG.A.RN	wall

'Many stones are leaning against the wall.'

b.
*I–k'iy	ab'aj	Ø–q'e'–el–a	chwech	tz'aq.
PL–many	stone	Ø–lean–POS.ST–SS	PREP.3SG.A.RN	wall

Intended: 'Many stones are leaning against the wall.'

In sum, the sole argument of a stative positional predicate, regardless of its animacy status, must be co-referenced by Set B agreement on the verb. In this way, this argument patterns like the subject of an antipassive or AF.

3.2 Agreement with controller base-generated in a complement position

We now lay out the pattern where 3PL predicate agreement is controlled by nominals that are base-generated in a complement position. Agreement in optional in these cases if the agreement controller is inanimate; conversely, agreement is optional only in a subset of these cases if the agreement controller is animate.

We discuss the following here: root transitive objects, unaccusative subjects, passive subjects, Agent Focus objects, and associates of existential predicates. We also discuss the sole argument of nominalizations that bear agreement. In this construction, we show that agreement is optional if the agreement controller is inanimate. We therefore conclude that such an argument is base-generated in a complement position.

3.2.1 Root transitive objects

3PL objects of transitive clauses are co-referenced by aSet B morpheme-. This marker is optional if the cross-referenced argument is animate:

(46) *Transitive animate object 3PL/3SG=∅*
a.   X–**i**–qa–tz'et   i–k'e'   ch'uuch'–a.
      COM–**3PL.B**–1PL.A–see PL–two   baby–PL
      'We saw two babies.'

b.   X–**∅**–qa–tz'et   i–k'e'   ch'uuch'–a.
      COM–**∅**–1PL.A–see   PL–two   baby–PL
      'We saw two babies.'

In example (46) above, the plural animate object of a transitive verb can be cross-referenced either as Set B 3PL or ∅ on the verb. Similarly, if the object of a transitive is inanimate, the realization of 3PL agreement is optional (47):

(47) *Transitive inanimate object 3PL/3SG=∅*
a.   X–**e**–q–raq=pij   i–k'e'   etzb'al.
      COM–**3PL.B**–1PL.A–break=DIR   PL–two   toy
      'We broke two toys.'

b.   X–**∅**–q–raq=pij   i–k'e'   etzb'al.
      COM–**∅**–1PL.A–break–DIR   PL–two   toy
      'We broke two toys.'

We observe, then, that 3PL objects in transitive frames control agreement optionally, regardless of animacy.

3.2.2 Root unaccusative subjects

Similar to root transitive verbs, root intransitive verbs surface mostly as bare roots with a CVC phonological shape (Dayley 1985: 85). We have found only a handful of such verbs and all of them have meanings consistent with an unaccusative analysis. Other typically unaccusative verbs bear passive morphology, so we will put them aside for now.

The subject of underived, unaccusative verbs, is cross-referenced by a Set B 3PL marker. If the agreement controller is animate, the agreement morpheme is obligatory:

(48) *Unaccusative animate subject 3PL/*3SG=*Ø*
a. I–k'e'   ch'uuch'–a   x–**i**–tzaq=pa.
    PL–two   baby–PL   COM–**3PL.B**–fall=DIR
    'Two babies fell.'

b. *I–k'e' ch'uuch'–a   x–**Ø**–tzaq=pa.
    PL–two   baby–PL   COM–**Ø**–fall=DIR
    Intended: 'Two babies fell.'

In contrast, inanimate subjects of unaccusative verbs do not require Set B 3PL agreement

on the verb:

(49) *Unaccusative inanimate subject 3PL/3SG=Ø*
a. I–k'e'   ru–xaq   chi'a   x–**i**–tzaq=pa.
    PL–two   3SG.A–leaf   tree   COM–**3PL.B**–fall=DIR
    'Two tree leaves fell.'

b. I–k'e'   ru–xaq   chi'a   x–**Ø**–tzaq=pa.
    PL–two   3SG.A–leaf   tree   COM–**Ø**–fall=DIR
    'Two tree leaves fell.'

As for verbs whose meaning is consistent with an unergative analysis, we have found no

underived intransitive verbs fitting such a profile. All of them are complex idiomatic phrases

formed via a light verb + noun (similarly to Chol as reported in Coon and Preminger 2009) or are

constructed via e.g. an antipassive derivation, so we are setting them aside as well:

(50) *Complex predicate with a canonical unergative meaning*
    Jun   wunaq x-Ø-u-tej   krera.
    one   person COM-3SG.B-3SG.A-eat race
    'One person ran.'
    Literally: 'One person ate a race.'

Coon (2016) cautions that traditional unergative vs. unaccusative diagnostics do not apply

in some Mayan languages. Foreshadowing the results of our investigation, we will show that

optional agreement is a first diagnostic for uncovering this structural distinction among one-place

predicates in ST.

In unaccusatives, then, animacy plays a role in determining the behavior of agreement. We

will return to this later but note that the contrasting behavior of Set B when cross-referencing

objects and Set B when cross-referencing subjects shows that the observed optionality cannot be

attributed to a simple distinction between Set A and Set B.

3.2.3 Subjects of passives

The use of passive voice is reflected by several possible affixes on the verbal stem (see García Ixmatá 1997 for San Pedro Tz'utujil). There are three passive affixes in ST: (i) -*Vx*, (ii) -*V'*-, and (iii) -*taj*. The passive affixes (i) and (ii) are in complementary distribution: (i) is limited to non-CVC transitives, while (ii) is limited to CVC transitives (see Dayley 1985: 341). Affix (iii) is semantically distinct from (i) and (ii) and is referred to by Dayley as a "completive" passive (Dayley 1985: 332). We will focus on this latter affix to illustrate the behavior of agreement with the sole argument of a passive.[16]

Descriptively, a passive clause has the following property: the logical object is promoted to surface subject and the logical subject is demoted to an oblique. The oblique phrase is optional and is headed by the relational noun *maak,* which bears Set A morphology controlled by the logical subject. The surface subject in a passive is indexed by Set B morphology on the verb. The agreement pattern is identical to the pattern we observed previously with unaccusative subjects: animate arguments control agreement obligatorily, whereas inanimate arguments do not:

(51) *Passive animate subject 3PL/*3SG=Ø*
a. J'ewra' i–k'e'   siaw   x–**e**–raq–taj–a.
    DEM.PL   PL–two   cat   COM–**3PL.B**–tear–PASS–SS
    'These two cats were torn apart.'

b. *J'ewra' i–k'e'   siaw   x–**Ø**–raq–taj–a.
    DEM.PL   PL–two   cat   COM–**Ø**–tear–PASS–SS
    Intended: 'These two cats were torn apart.'

While the example above shows that animate subjects of a passive must be indexed by Set B agreement, inanimate subjects optionally control agreement in this configuration:

---

[16] It is not inconceivable that different passives might show different behavior regarding optional agreement, but we must leave a thorough investigation of this possibility for future investigation. As far as we can tell from testing the different passives, this is not the case.

(52) *Passive inanimate subject 3PL/3SG=∅*

a. Ki'e' nu–po't   x–**e**–b'ik–taj–a   r–wech   k–maak   al'–i'.
    two 1SG.A–güipil COM–**3PL.B**–rip–PASS–SS 3SG.A–face 3PL.A–RN boy–PL
    '(The front of) my two *güipiles* were torn up by the boys.'[17]

b. Ki'e' nu–po't   x–**∅**–b'ik–taj–a   r–wech   k–maak   al'–i'.
    two 1SG.A–güipil COM–**∅**–rip–PASS–SS   3SG.A–face 3PL.A–RN boy–PL
    '(The front of) my two *güipiles* were torn by the boys.'

To sum up, passives pattern like underived unaccusatives in that animate arguments are necessarily indexed by Set B morphology on the verb, while inanimate arguments need not be. That this behavior is identical to the behavior of the unaccusatives discussed in Section 3.2.2 lends credence to the analysis of those intransitives as unaccusative verbs.

3.2.4 Objects of Agent Focus

In AF configurations where the object controls agreement, Set B agreement is optional when the nominal is animate:

(53) *Agent Focus object animate 3PL/3SG=∅*

a. Majoon, ya   Mriy   x–**e**–q'et–en–a   j'el   tz'e.
    no   CLF   Maria COM–**3PL.B**–hug–AF–SS   DEM.PL   dog
    'No, Maria hugged those dogs.'

b. Majoon, ya   Mriy   x–**∅**–q'et–en–a   j'el   tz'e.
    no   CLF   Maria COM–**∅**–hug–AF–SS   DEM.PL   dog
    'No, MARIA hugged those dogs.'

Similarly, agreement is also optional when the object is inanimate:

(54) *Agent Focus object inanimate 3PL/3SG=∅*

a. Jal   ixoq   x–**i**–k'ay–in–a   i–k'e'   ch'eech'.
    DEM.SG   woman   COM–**3PL.B**–buy–AF–SS   PL–two   car
    'That woman bought two cars.'

b. Jal   ixoq   x–**∅**–k'ay–in–a   i–k'e'   ch'eech'.
    DEM.SG   woman   COM–**∅**–buy–AF–SS   PL–two   car
    'That woman bought two cars.'

In sum, Agent Focus objects show a different agreement pattern than subjects. AF objects are optionally co-referenced on the verb, while AF subjects are obligatorily co-referenced.

---

[17] A *güipil* is a traditional garment worn by Mayan women in Guatemala. The Santiago *güipil* is adorned by birds.

Animacy plays no role in regulating agreement in this construction. This makes Agent Focus subjects and objects parallel to the arguments of a transitive in the active voice.

3.2.5 Associates of existential predicates

ST does not have a copula verb for existential predicates, but uses instead a predicate *k'o(la)* meaning 'there is', 'there exists', or 'to be located'. Dayley (1985: 314) analyzes this predicate as a type of positional. However, the distinct morphosyntactic patterning of existentials in ST warrants treating them as a separate class from positionals. We currently have no analysis for the *–la* suffix that optionally surfaces on the existential. It resembles the positional stative morpheme *–l* followed by a status suffix *–a.* However, we argue that it is not decomposed synchronically into these two affixes. As already mentioned, *–la* is optional on the existential predicate while positional morphology is always mandatory (see Section 3.1.7). Dayley (1985) merely notes that there is a short form of the existential (no *–la*) and a long form (with *–la*). We have observed no distributional differences between the short and long forms, nor does the appearance of agreement correlate with the presence of *–la*.

Morphosyntactically, *k'o(la)* is not marked with TAM morphology, takes a single argument (associate), and references that single argument with a Set B prefix. We observe that agreement with an animate argument here is optional:

(55) *Animate associate of an existential predicate 3PL/3SG=∅*
a. Chwech   chtal   **i**–k'ola   i–k'e'   ch'uuch'–a.
    PREP.3SG.A.RN   table   **3PL.B**–EXS   PL–two   baby–PL
    'There are two babies on the table.'

b. Chwech   chtal   **∅**–k'ola   i–k'e'   ch'uuch'–a.
    PREP.3SG.A.RN   table   **∅**–EXS   PL–two   baby–PL
    'There are two babies on the table.'

The same pattern of optional agreement is found when the argument is inanimate:

(56) *Inanimate associate of an existential predicate 3PL/3SG=∅*
a. **I**–k'ola   ki'e'   ktz'eej   chu   jaay.
    3PL.B–EXS   two   flower   PREP.3SG.A.RN   garden
    'There are two flowers in the garden.'

b. **∅**–K'ola   ki'e'   ktz'eej   chu   jaay.
    ∅–EXS   two   flower   PREP.3SG.A.RN   garden
    'There are two flowers in the garden.'

To summarize, agreement with an argument of an existential patterns like agreement with objects of a transitive or Agent Focus clause.

3.2.6 Argument of a nominalization in a progressive construction

The nominalization in a progressive construction is formed by the addition of the *-ik* suffix to a passive verb. The logical object in the clause is indexed with Set A agreement on the nominalization. Consider below the pattern of agreement with an animate argument. Agreement is obligatory in this case:

(57) *Animate arguments of nominalizations*
a.
Anen	ni–mjuon	**ki**–kon–x–ik	i–k'e'	nu–tz'i'.
1SG	1SG.A–AUX	**3PL.A**–search–PASS–NMLZ	PL–two	1SG.A–dog

'I am looking for my two dogs.'

b.
*Anen	ni–mjuon	**r**–kon–x–ik	i–k'e'	nu–tz'i'.
1SG	1SG.A–AUX	**3SG.A**–search–PASS–NMLZ	PL–two	1SG.A–dog

Intended: 'I am looking for my two dogs.'

c.
*Anen	ni–mjuon	Ø–kon–x–ik	i–k'e'	nu–tz'i'.
1SG	1SG.A–AUX	Ø–search–PASS–NMLZ	PL–two	1SG.A–dog

Intended: 'I am looking for my two dogs.'

In contrast, Set A plural agreement co-indexed with an inanimate argument is optional here:

(58) *Inanimate arguments of nominalizations*
a.
Anen	ni–mjuon	**ki**–kon–x–ik	i–k'e'	nu–mees.
1SG	1SG.A–AUX	**3PL.A**–search–PASS–NMLZ	PL–two	1SG.A–table

'I am looking for my two tables.'

b.
Anen	ni–mjuon	**r**–kon–x–ik	i–k'e'	nu–mees.
1SG	1SG.A–AUX	**3SG.A**–search–PASS–NMLZ	PL–two	1SG.A–table

'I am looking for my two tables.'

c.
*Anen	ni–mjuon	Ø–kon–x–ik	i–k'e'	nu–mees.
1SG	1SG.A–AUX	Ø–search–PASS–NMLZ	PL–two	1SG.A–table

Intended: 'I am looking for my two tables.'

The data from agreement on nominalizations shows that the optionality of agreement is not unique to Set B morphology. Therefore, we conclude that whether agreement is obligatory or optional is not determined by the type of morphology that would be exponed. In other words, the optionality does not track the Set A vs. Set B distinction at all.

4   Towards an analysis: carving out the right generalizations

In section 3, we presented a detailed survey of (non-)optional 3PL agreement across different syntactic constructions controlled by both animate and inanimate noun phrases. The table below summarizes these data.

(59)   *Summary of data*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	ANIMATE	INANIMATE
transitive subject	Set A	obligatory	obligatory
antipassive subject	Set B	obligatory	obligatory
AF subject	Set B	obligatory	obligatory
subject of auxiliary in progressive construction	Set A	obligatory	obligatory
subject of a nominal predicate	Set B	obligatory	obligatory
possessor	Set A	obligatory	obligatory
positional subject	Set B	obligatory	obligatory
transitive object	Set B	optional	optional
unaccusative subject	Set B	obligatory	optional
passive subject	Set B	obligatory	optional
AF object	Set B	optional	optional
existential associate	Set B	optional	optional
argument of a nominalization in a progressive	Set A	obligatory	optional

Two observations arise from the summary above: (i) optionality appears both in Set A (ergative/genitive) and Set B (absolutive) agreement and (ii) there is no surface subject/object asymmetry (see Authors 2020b). Instead, the base-generated position of the agreement controller and its animacy status determine the pattern. Let us now unpack these parameters in closer detail.

4.1   Inanimate controllers: base syntactic position determines the pattern

The first generalization is that when agreement is controlled by an inanimate noun phrase, (non)optionality tracks the distinction between different types of verbal arguments. Note, however, that the surface subject vs. object distinction cannot account for the Tz'utujil pattern, since we observe that not all inanimate *subjects* pattern together: whereas inanimate subjects of transitive verbs show obligatory agreement, inanimate subjects of unaccusative verbs show optional agreement. In other words, an account that attempted to make the right distinction through the surface subject vs. object distinction would be inadequate (cf. Henderson 2008 for Kaqchikel).

We argue instead that the base-generated specifier vs. complement distinction captures the pattern. We define a complement as an argument that is first-merged as sister to a head (ZP in (60) below). In contrast, arguments that are not merged as a sister to a head are specifiers (YP in (60) below):

(60) *Specifier and complement distinction*

```
                    XP
           _____/  _____
          YP                 X⁰      ZP
         /  \                       /  \
  ─────────────            ─────────────
   SPECIFIER                 COMPLEMENT
```
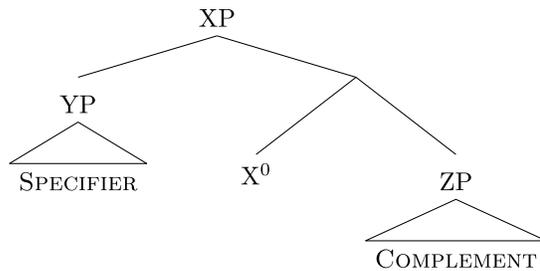
Let us now return to the empirical picture. Agreement is obligatory for transitive subjects, antipassive subjects, AF subjects, subjects of nominal predicates, possessors, matrix subjects in a progressive construction, as well as subjects of stative positional predicates.

(61) *Obligatory agreement with inanimate controllers base-generated as specifier arguments*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	3PL AGREEMENT
transitive subject	Set A	obligatory
antipassive subject	Set B	obligatory
AF subject	Set B	obligatory
subject of auxiliary in progressive construction	Set A	obligatory
subject of a nominal predicate	Set B	obligatory
possessor	Set A	obligatory
positional subject	Set B	obligatory

A transitive subject is a canonical base-generated specifier (Chomsky 1970). For most of the other constructions, it has been argued in the literature that they are merged as specifier arguments: the sole argument of an antipassive (Polinsky 2017), an Agent Focus subject (Stiebels 2006, Aissen 2017a, Ranero 2020), the subject of a nominal predicate (Baker 2008), and certain possessors (Abney 1987). For other arguments in constructions that follow the same

pattern, i.e. matrix subjects of a progressive and positional subjects, we extrapolate from their behavior regarding optional agreement and conclude that they are merged as specifiers.[18]

In contrast, agreement is optional when controlled by transitive objects, subjects of unaccusatives, subjects of passives, AF objects, and the sole argument of a nominalization in a progressive construction.

(62) *Optional agreement with inanimate controllers base-generated as complement arguments*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	3PL AGREEMENT
transitive object	Set B	optional
unaccusative subject	Set B	obligatory
passive subject	Set B	obligatory
AF object	Set B	optional
existential associate	Set B	optional
argument of a nominalization in a progressive	Set A	obligatory

We argue that all these agreement controllers are base-generated as complements. For instance, a transitive object is a canonical complement argument (Chomsky 1970). Similarly, the sole argument of the existential predicate has been argued to be merged as a complement argument in Tz'utujil (Aissen 1999) and in other languages (Deal 2009). The sole argument of a passive has been argued to be merged as a complement in a long-tradition goin back to Chomsky (1965). The object in AF has also been argued to be a complement (Stiebels 2006, Aissen 2017a, Ranero 2020). Finally, intransitive subjects have been argued to be exclusively unaccusative in some Mayan languages (Coon 2019); furthermore, Coon 2016 notes that traditional unergative/unaccusative diagnostics seem to be inapplicable in closely-related Kaqchikel.

This leaves the object of a nominalization in a progressive construction: given that this argument controls agreement optionally, we extrapolate that it is also merged as a complement. Note, however, that proposing that the logical object of a nominalization (which controls Set A agreement) is generated as a complement does not necessitate that it remain in that position. If it

---

[18] Henderson (2019: 5) provides semantic arguments that positional roots in Kaqchikel cannot compose with an argument directly. It is unclear to us, however, whether his analysis necessitates that the argument of a positional be merged as a specifier. If so, we would have independent reasons to justify our analysis of the argument of a positional being a specifier.

remains in the complement position, we would have a possession construction analogous to the English 'the destruction of the city'. However, it may also be the case that once generated in a complement position, the logical object could undergo movement, analogous to possession constructions in English of the 'the city's destruction' variety. If this movement occurs, we can simultaneously capture the attested optionality of agreement in line with the generalization highlighted here, while also maintaining a generalization where Set A is always controlled by an argument whose *final* position is a specifier.

It is important to note at this point that we looked for independent evidence to corroborate our assumptions about the base-position ofarguments. For example, subextraction from complement arguments in the base position is allowed in many languages, while subextraction from specifier arguments is banned.[19] However, Tz'utujil bans subextraction altogether, so we cannot use this diagnostic to test the base position of the arguments in question.[20] Currently, we do not have any corroborating evidence that the grammar of Tz'utujil exhibits a specifier vs. complement asymmetry in domains beyond optional agreement.

To summarize, inanimate complement arguments optionally index 3PL agreement, while inanimate specifier arguments obligatorily index agreement. We now turn to the pattern of agreement realization with animate controllers.

4.2   Animate controllers: construction-specific pattern

This clear distinction between specifier and complement base-positions does not carry over to animate arguments. The generalization here is as follows: all animate arguments generated as specifiers obligatorily index agreement, but some animate arguments generated as complements do so as well. Optional agreement appears only with transitive objects, AF objects, and the sole argument of nominalizations in a progressive construction.

---

[19] Little (2019) shows that in Ch'ol the asymmetry is the reverse: subextraction is allowed from specifier but not from complement positions. Whichever the direction, if a grammar makes distinction between these positions, it would constitute a relevant diagnostic for us.

[20] Imanishi (2014) shows that for Kaqchikel, subextraction is only allowed from doubly embedded phrases. We have not found this to be true in Tz'utujil.

We argue here that the optionality we observe in some constructions arises due to the specific syntactic make up of functional heads in these constructions. For our purposes, this distinction is a result of lexical specification. In the following section, we will encode this lexical specification as an [EPP] feature on some heads which forces an argument to move. This will allow us to establish how the position of an argument in a clause determines the success of the AGREE operation.

5   Analysis

In the previous section, we provided two generalizations: (i) the pattern of optional agreement with inanimate arguments is governed by the base-position of the controller (specifier vs. complement), and (ii) agreement with animate arguments is generally obligatory, with some constructions being exceptional and allowing optional agreement. In this section we propose an analysis with two necessary conditions that need to be met in order for agreement to surface; failing to meet either or both of them results in failed AGREE, resulting in default agreement (null for Set B and /ru-/ for Set A):

(63) *Agreement outcome: visibility and accessibility*

		VISIBILITY (STRUCTURAL SIZE)	
		D^0	no D^0 (only inanimate base-complement)
ACCESSIBILITY (POSITION IN THE CLAUSE)	probe and goal within the same phase	successful AGREE	failed AGREE
	probe and goal in two different phases (only in constructions with no EPP movement)	failed AGREE	failed AGREE

We will now provide the details of these conditions.

5.1   Inanimate controllers: structural size

Based on well-understood structures (e.g., transitives), we argued earlier that when the agreement controller is inanimate, the optionality vs. obligatoriness of agreement depends on whether the agreement controller was initially merged as a complement. Given this systematic behavior, we assumed that the distinction extends to constructions with less understood argument structures (e.g., stative positional predicates). Here, we elaborate on our analysis, which capitalizes on the distinction between specifier and complement position. This analysis holds

only for inanimates, in line with a well-established typological observation that inanimates control agreement less robustly than animates (Corbett 2006).

Consider some results from the literature on noun-incorporation (Baker 1996, Massam 2001, Levin 2015; see also Mithun 1984), which has established an asymmetry between specifier and complements, such that only a complement may be noun-incorporated. This distinction has been argued to arise because arguments in complement position, but not in the specifier position, can be smaller in size, e.g. lack a D^0 head.[21] D^0 hosts determiners, whether they are phonologically null or overt (like English 'the' or 'a'). The DP layer is first accessed by syntactic operations like AGREE. We assume that AGREE is a syntactic operation that transmits phi-features, (e.g., person and number), from an argument to a predicate:

(64) *Assumed definition of* AGREE
- *Description*: A probe X^0 Agrees with a goal YP iff,
  - X^0 c-commands YP (YP is the sister of X^0 or YP is dominated by the sister of X^0).
  - The probe X^0 has an unvalued phi-feature [F: _]
- *Result*:
  - The relevant feature on YP is shared with X.
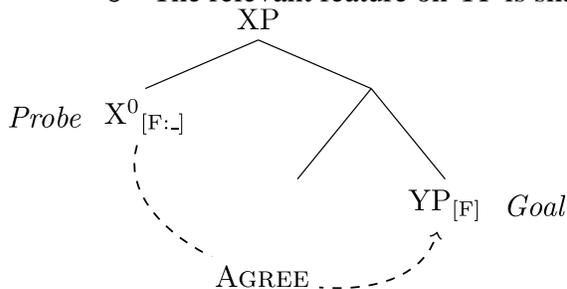
We assume Bare Phrase Structure (Chomsky 1995); a specifier-head relation therefore meets the description in (64). We also assume that AGREE feeds morphological agreement (Chomsky 2001). Furthermore, if D^0 is the target of the AGREE operation (Chomsky 2001), then an argument lacking D^0 will not be a possible Goal.

Additionally, let us assume that AGREE can fail. Such a failure results in default agreement (Preminger 2014).

---

[21] We set aside the question of *why* this should be so. What is crucial for our purposes is that this type of asymmetry has been observed to have consequences outside the domain of agreement specifically, e.g. in deriving constraints on other phenomena such as noun incorporation.

(65) *Agreement and argument size – proposal for ST*

a.   In order to be a target for AGREE, a noun phrase must be headed by D^0.

b. X^0 selects only for a noun phrase *specifier* headed by D^0.

c. Y^0 selects for a noun phrase *complement;* presence of D^0 is irrelevant.

> o   No $D^0 \rightarrow$ failure to AGREE $\rightarrow$ default agreement morphology

The gist of (65) is that inanimate complements can be born lacking D^0, but such a complement cannot serve as a goal in the AGREE operation.[22] In contrast, a specifier must be headed by D^0, controlling agreement.

Note that thus far, we have only discussed agreement optionality with noun phrases. We showed that agreement is optional in some configurations and obligatory in others. A basic component of our analysis is that the grammar of ST restricts the size of arguments generated in a specifier position, such that they can only be full arguments bearing D^0. We also proposed that inanimate arguments may lack D^0 when they are generated in the complement position: i.e. they lack the projection/feature necessary for the AGREE probe to target them. Our proposal predicts that if an argument must have this projection/feature for independent reasons, it will always be a target for AGREE.

Our analysis makes a prediction, then, regarding agreement optionality and pronominal arguments. Déchaine and Wiltschko (2002) propose that pronominal *arguments* (as opposed to predicates) are larger than NP, possibly DP (or D^0 and nothing else) (see Postal 1966, Elbourne 2001). We thus expect AGREE to succeed if a pronominal argument is a goal, regardless of its base-position, resulting in obligatory agreement.

This prediction is borne out. First, recall that agreement is optional below:

---

[22] One might expect designated morphology to appear on the verb if the complement is smaller than DP, as in the "incorporation" antipassive reported for other K'ichean languages; see 3.1.2. However, in related languages like K'iche', pseudo-incorporated NPs can appear with fully transitive morphology (Aissen 2011).

(66) *Optional agreement with transitive object*[23]

a. Iwir   x–i–nu–tzu'   i–k'e'   ch'uuch'–a.
    yesterday   COM–**3PL.B**–1SG.A–see   PL–two   baby–PL
    'Yesterday, I saw two babies.'

b. Iwir   x–∅–in–tzu'   i–k'e'   ch'uuch'–a.
    yesterday   COM–∅–1SG.A–see   PL–two   baby–PL
    'Yesterday, I saw two babies.'

However, we observe that in the same construction, agreement becomes obligatory when the object is a pronoun:

(67) *Obligatory agreement with overt pronouns*[24]

a. Iwir   x–**i**–nu–tz'et   j'iye'.
    yesterday   COM–**3PL.B**–1SG.A–see   3PL
    'Yesterday, I saw them.'

b. *Iwir   x–∅–in–tz'et   j'iye'.
    yesterday   COM–∅-1SG.A–see   3PL
    Intended: 'Yesterday, I saw them.'

We find an asymmetry here, then. While animate non-pronominal arguments control agreement optionally as objects of transitives, pronouns control agreement obligatorily.

While overt pronouns in ST can have animate referents only, null pronouns can refer to inanimates. In the example below, we see that a null pronoun has the inanimate referent 'flowers'. In a manner parallel to the example above, agreement is obligatory here with a pronoun controller (68)b-(68)c, in contrast to agreement with a non-pronominal controller (68)a:

---

[23] One might be tempted to decompose the form of the Set A marker *-in-* in (66)b into Set B *-i-* and Set A *-n-* resulting in the presence of plural agreement in both examples. However, the evidence for analyzing *-in-* in this example as a non-decomposable Set A morpheme is an example with singular agreement (Set B agreement) which has the same form: *Iwir **x-in-tzu'** jun ch'uuch'*. 'Yesterday I saw a baby.'

[24] The verbal roots in (66) *tzu'* and (67) *tz'et* are different lexical items despite our translation 'see'. While the examples here do not constitute a perfect minimal pair, what is relevant for our purposes is the fact that both verbs are transitive.

(68) *Obligatory agreement with null pronouns*

a. Iwir   Ø–k'ola   ki'e'   ktz'eej chu   jaay.
yesterday   Ø–EXS   two   flower PREP.A3S.RN   garden.
'Yesterday, there were two flowers in the garden.'

b. Ja   ya   Mriiy   x–**i**–ru–b'oq.
DET   CLF   Maria   COM–**3PL.B**–3SG.A–tear.out
'Maria tore (them) out.'

c. *Ja   ya   Mriiy   x–Ø–u–b'oq.
DET   CLF   Maria   COM–Ø–3SG.A–tear.out
Intended: 'Maria tore (them) out.'

We have thus established that 3PL pronouns control agreement obligatorily in all cases.

Our analysis of the behavior of 3PL pronouns should extend to local person pronouns as well. This is indeed the case: agreement with local persons (1st and 2nd plural) is always obligatory across all constructions. We use an existential construction to illustrate the facts, because we established that agreement is optional in these examples regardless of animacy; see section 3.2.5.:

(69) *Obligatory agreement with 1PL pronoun in an existential construction*

a. Ajoj   **oq**–k'ola   chu   jaay.
1PL   **1PL.B**–EXS   PREP.A3S.RN   garden
'We're in the garden.'

b. *Ajoj   **in**–k'ola   chu   jaay.
1PL   **1SG.B**–EXS   PREP.A3S.RN   garden
Intended: 'We're in the garden.'

c. *Ajoj   Ø–k'ola   chu   jaay.
1PL   Ø–EXS   PREP.A3S.RN   garden
Intended: 'We're in the garden.'

(70)   *Obligatory agreement with 2PL pronoun in an existential construction*

a. Ixix   **ix**–k'ola   chu   jaay.
2PL   **1PL.B**–EXS   PREP.A3S.RN   garden
'You all are in the garden.'

b. *Ixix   **at**–k'ola   chu   jaay.
2PL   **1SG.B**–EXS   PREP.A3S.RN   garden
Intended: 'You all are in the garden.'

c. *Ixix   Ø–k'ola   chu   jaay.
2PL   Ø–EXS   PREP.A3S.RN   garden
Intended: 'You all are in the garden.'

Our assumption that pronouns in argument position contain D^0, paired with the proposal that AGREE probes for D^0, straightforwardly explains why agreement with local persons is

always obligatory. Local persons are necessarily pronominal arguments. Thus, we do not need any stipulation to capture the seemingly special status of local persons in comparison to 3rd person: put simply, pronouns always control agreement.[25]

Returning to non-pronominal arguments, a strong version of the proposal in (65) predicts that all and only nominal phrases headed by D^0 will successfully AGREE. If we can manipulate the presence of D^0, we should see an effect on the behavior of agreement. The presence of D^0 is often associated with definiteness or specificity, so we would expect that the availability of agreement should track a manipulation targeting these variables. We have searched for a definiteness/specificity effect by adding a demonstrative or a relative clause to inanimate arguments. Although demonstratives are assumed to occupy a different structural position Dem(onstrative)^0, there is a link between using a definite/specific demonstrative and a definite/specific determiner. We have found no systematic effect of the presence of any demonstratives on agreement, since the pattern remains the same:[26]

---

[25] Déchaine and Wiltschko 2002's typology of pronouns includes a category of ϕP pronouns—larger than NP but smaller than DP. According to the authors, the only way to distinguish whether an argument pronoun is a ϕP or DP involves a binding diagnostic—whether a pronoun gives rise to Principle B (ϕP pronoun) or C violations (DP pronoun). At present, we have been unable to construct the relevant examples in ST for independent reasons. While we plan to investigate this in future work, we believe that identifying the *exact* structure of the relevant pronouns is not necessary: if it turns out that ST pronouns are not DPs but ϕPs, we can still maintain the generalization that NPs cannot control agreement and larger nominals have to control agreement. We would then need to revise the details of our generalization, but the main point of our analysis would be intact.

[26] It would be necessary to determine first whether demonstratives in ST are truly D^0 heads or adjuncts. If the latter, then manipulating the presence of demonstratives would not affect the agreement pattern.

(71) *Optionality of agreement with inanimate definite (subject of a passive)*
a. Jaw   k'ie'   etz'bal x–**i**–waq'–taj–a.
    DEM.SG two   toy   COM–**3PL.B**–break–PASS–SS
    'These two toys got broken.'

b. Jaw   k'ie'   etz'bal x–∅–waq'–taj–a.
    DEM.SG two   toy   COM–∅–break–PASS–SS
    'These two toys got broken.'

This lack of correlation between presence/absence of a demonstrative and presence/absence of agreement might suggest that we need to apply more sophisticated diagnostics of definiteness/specificity.

However, we note two cross-linguistic facts challenging the presumed correlation between DP status and definiteness. First, the correlation between an NP and indefiniteness does not hold in Mayan (e.g. Little 2020a, 2020b for Ch'ol) nor outside of Mayan. For example, Levin (2015) argues that in Balinese pseudo-incorporated pronouns are definite. Second, the correlation between a DP and definiteness seems too strong cross-linguistically (Ionin 2003, 2006) including in English. For example, 'a dog' is indefinite and nevertheless is analyzed as a DP. Therefore, the apparent lack of correlation between definiteness and the syntactic structure of nominals in ST, which has consequences for the availability of agreement, should not trouble us.

5.2 Animate arguments: construction-specific accessibility

Recall the pattern of agreement with animate arguments:

(72) *Optionality of agreement with animate arguments*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	ANIMATE
transitive subject	Set A	obligatory
antipassive subject	Set B	obligatory
AF subject	Set B	obligatory
subject of auxiliary in progressive construction	Set A	obligatory
subject of a nominal predicate	Set B	obligatory
possessor	Set A	obligatory
positional subject	Set B	obligatory
transitive object	Set B	optional
unaccusative subject	Set B	obligatory
passive subject	Set B	obligatory
AF object	Set B	optional
existential associate	Set B	optional
argument of a nominalization in a progressive construction	Set A	obligatory

First, notice that there are more constructions that require agreement when the controlling argument is animate, as opposed to inanimate. This means that the analysis in the previous section cannot be directly applied here. Observe as well that the set of constructions that allow optionality of agreement with animate arguments (transitive objects, AF object and existential associate), does not constitute a natural syntactic class to the exclusion of the other constructions.

The fact that animates display agreement more frequently, however, is expected. As suggested earlier, we will assume that the structural/featural reduction of arguments is possible only for inanimate arguments, not animate ones. This encodes the typological observation that there is an asymmetry concerning agreement between animate and inanimate arguments: animate arguments tend to obligatorily control agreement more often than inanimate arguments (Corbett 2006).

As a result, then, we propose a second possible source for agreement optionality that is orthogonal to the size of the agreement controller: an agreement controller's position in the clause. More precisely, let us assume that in order to successfully AGREE, the AGREE probe needs to find a visible target within its domain of accessibility. The first condition, TARGET VISIBILITY, is whether the target nominal has D^0, as proposed earlier. We assume that animate arguments must bear D^0. The second condition is DOMAIN ACCESSIBILITY: whether an argument is accessible for AGREE given its position in the structure. We assume a phase-based account of accessibility (Chomsky 2001, Citko 2014).[27] If an argument originates above a phase boundary (i.e. in the same phase as the AGREE probe) it is automatically accessible for this probe. However, if an argument originates *below* a phase boundary, it needs to move to the specifier of the phase head (the phase edge) to be accessible to a higher AGREE probe. If the argument does not move into a position where it is accessible to AGREE, then AGREE fails. Again, the derivation does not crash, but default agreement arises instead (Preminger 2014).

---

[27] There are many different flavours of phase-theory, with variations regarding (i) which heads constitute phases, (ii) whether elements become inaccessible upon Spell-out for all syntactic operations, or just a subset of these, etc. Our point here is not to debate which version of phase theory is ultimately correct. Rather, a particular view of accessibility based on the core assumptions of phase theory can give us a handle on deriving the pattern we observe with animate arguments.

It has been argued that a verb phrase constitutes a phase (Chomsky 2001, Legate 2003, Sauerland 2003, a.o.; see Citko 2014 for discussion). As a result, a nominal must be at the edge of a verb phrase in order to be accessible for a higher probe, such as $Infl^0$. For agreement to succeed, then, a nominal that is merged as the complement of the verb needs to move closer to the probe, specifically into the edge of a verb phrase (the highest specifier). We will assume that the movement trigger is an [EPP] feature that appears on some types of v^0 but not others. We will now discuss two derivations of Set B agreement, one where AGREE succeeds and another where it fails. Then, we will discuss Set A agreement.

5.2.1 Accessibility and Set B agreement

First, consider Set B agreement. We follow Coon et al. (2014) in assuming that $Infl^0$ is one of the sources of Set B agreement in high-absolutive Mayan languages like Tz'utujil.[28] Therefore, if an argument originates low in the clause (below the v^0 phase boundary; e.g. as a complement of V^0), it needs to move to Spec,vP in order to successfully be a target for AGREE by the $Infl^0$ probe. Only if v^0 bears [EPP], then, will the argument move into the agreement domain of $Infl^0$ and be successfully targeted for AGREE. This is shown in (73) below.

(73) *Successful agreement with transitive object and transitive subject*
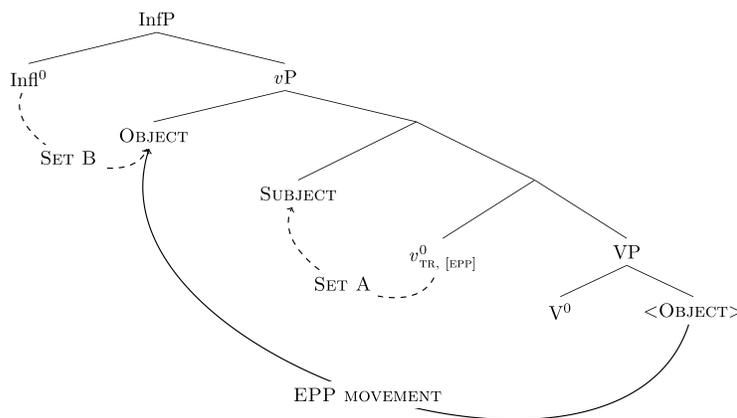
A similar movement and AGREE takes place in unaccusative clauses, where the sole argument originates as a complement of V^0:

---

[28] See Tada (1993), Coon et al. (2014) and Douglas et al. (2017) for discussion of the high vs. low-absolutive partitioning in Mayan. A high-absolutive language corresponds in essence to Legate (2014)'s absolutive=nominative languages.

(74) *Successful agreement with unaccusative subject*
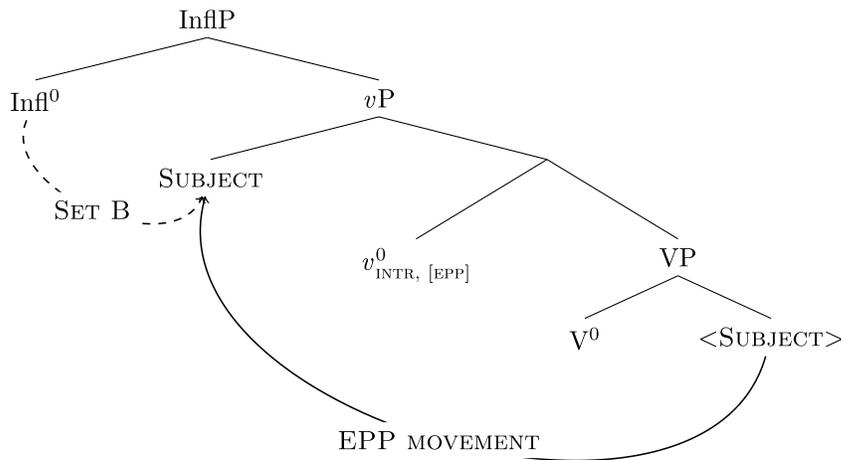
The same scenario, delivering a parallel result, occurs with the sole argument in a passive and in nominalizations. Conversely, we assume that the sole argument in antipassive, nominal, and positional predicates, as well as the subject of AF, are base-generated high enough to be targeted by the AGREE probe without a prior movement step.[29]

In turn, AGREE fails if the relevant argument stays low (i.e., if there is no [EPP] on v^0)—it is inaccessible. In a nutshell, then, for constructions where the argument is base-generated high, (i.e. antipassive arguments and AF subjects) the relevant arguments will always be accessible, since they are base-generated in a position that is accessible to AGREE. On the other hand, for all arguments that are base-generated below v^0, they will be inaccessible for AGREE if v^0 does not have an [EPP] feature.

Consider a transitive clause as a concrete illustration. We propose that transitive v^0 comes in two lexical flavorsin ST: (i) one with [EPP] and (ii) one without [EPP]. In the derivation where v^0 bears [EPP], the complement of the verb moves to the edge of the phase and is thus accessible for AGREE (75)a. Conversely, in the derivation where v^0 does not bear [EPP], the complement of the verb stays in its base-generated position and is thus inaccessible for AGREE. Consequently, AGREE fails, but the derivation converges (75)b-(76):

---

[29] Note that stative positional predicates and nominal predicates do not inflect for aspect. The source for Set B agreement for these predicates is therefore a different head from Infl^0, which we take to be Pred^0.

(75) *Optional agreement with transitive object*

a. Iwir   x–i–nu–tzu'   i–k'e'   ch'uuch'–a.
  yesterday COM–**3PL.B**–1SG.A–see PL–two baby–PL
  'Yesterday, I saw two babies.'

b. Iwir   x–∅–in–tzu'   i–k'e'   ch'uuch'–a.
  yesterday COM–∅–1SG.A–see PL–two baby–PL
  'Yesterday, I saw two babies.'

(76) *Failed agreement with transitive object*
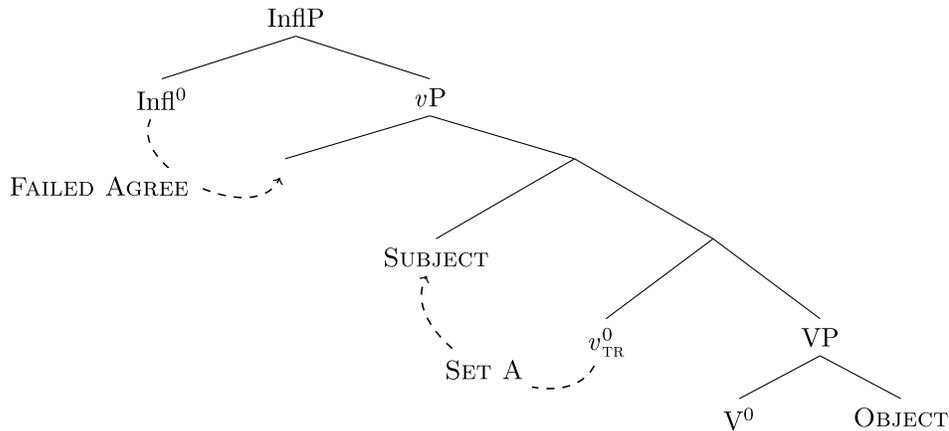
Put differently, 3PL objects AGREE optionally because they can stay low in transitive predicates. The same holds for AF objects and existential associates.

However, recall from the summary table in (72) that among the constructions we described, there are some that show agreement obligatorily when the agreement controller is animate and base-generated as a complement: unaccusatives, passives, and nominalizations. We propose that in these constructions, v^0 always come with [EPP] and movement is thus obligatory—in other words, these predicates are headed by a projection that comes in only one variety in the Lexicon, bearing [EPP].[30]

---

[30] An alternative analysis for the obligatory nature of agreement with animates in unaccusatives, passives, and nominalizations would posit that v^0 in these constructions is not a phase (see Chomsky 2001, cf. Legate 2003, Sauerland 2003). Hence, agreement controllers would always be accessible, even when base-generated as complements. This analysis would make a strong prediction about possible microvariation in optional agreement—we would not expect to find grammars where 3PL animates would control agreement optionally in these constructions. Future work across Mayan might reveal whether this alternative analysis is preferable.

Crucially, even though the relevant heads in passive, AF, and existential predicates come only in an [EPP] flavour, agreement with inanimates is optional because these nominals can be born invisible to the AGREE probe, i.e. lacking D^0. Thus, even though an inanimate goal might be in a position where it is accessible to a probe, it will not AGREE if it lacks D^0

### 5.2.2 Accessibility and Set A agreement

Now, consider Set A agreement. We assume that v^0 inherently assigns ergative (Set A) to its specifier (Aissen 1992; Woolford 1997; Aldridge 2004; Legate 2008, Coon et al. 2014). Hence, in a transitive construction, a subject is base-generated in the right position to AGREE and trigger Set A agreement:

(77) *Successful agreement with a transitive subject*
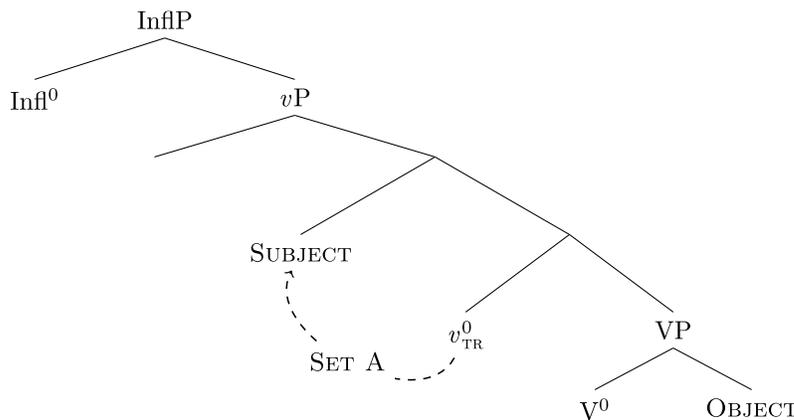
We assume that a parallel scenario is found with possessors. Although the genitive-assigning (Set A) head is $Poss^0$, instead of v^0, the possessor is also base-generated in a position where it is accessible:

(78) *Successful agreement with a possessor*

45
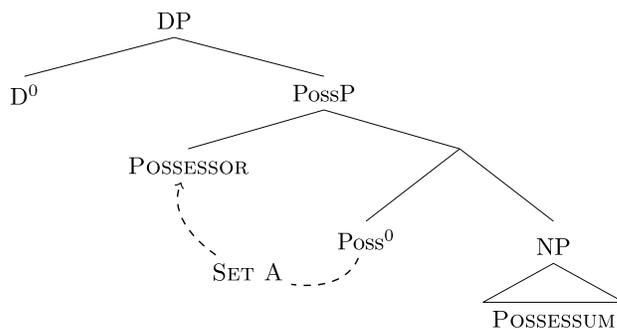
As far as the progressive construction is concerned, its syntactic structure has not been well-established in the literature so far (see, e.g., Coon 2013 and Imanishi 2014 for conflicting accounts and fn. 15). Adopting our analysis of agreement optionality can inform the proper analysis of the progressive construction in ST. First, recall that the subject of an auxiliary must agree regardless of its animacy status (Section 3.1.4). Under our proposal, this shows that the subject of an auxiliary is generated in a specifier position and is accessible to the AGREE probe. In other words, it occupies a position analogous to that of transitive subjects and possessors, discussed above:

(79) *Agreement with subject of an auxiliary*

```
                    AuxP
             ┌───────┴────────┐
        SUBJECT              │
          ↗            ┌──────┴──────┐
         ╱            Aux⁰         PossP
       SET A ─ ─ ─ ─ ╱          ┌───┴───┐
                            NOMINALIZATION
```
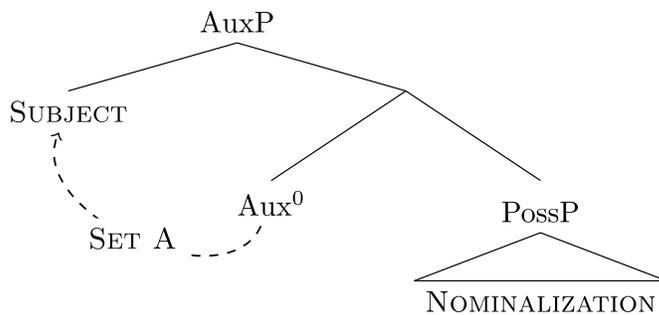
Second, the argument within a nominalization must agree if it is animate and optionally agrees if it is inanimate. This behavior resembles the behavior of subjects of passives and unaccusatives. The difference in the type of morphology plays no role here (Set A for the argument of a nominalization and Set B for the others). We assume that the v^0 in the nominalization bears [EPP], so the complement argument moves inside the nominalization, becoming accessible to Poss^0 for AGREE. Independent evidence for this proposal comes from analyzing the -*x* suffix in these nominalizations as a passive v^0 (see Dayley 1985), which as we have already proposed, bears [EPP].

(80) *Agreement with object within a nominalization*[31]

---

[31] If the nominalizing n^0 were a phase head (as argued e.g. by Simpson and Park 2019), one would need to assume a second movement step and a final position for the object in Spec-nP.

PossP

Poss[0] nP

n[0] vP

Object

$v^0_{\text{PASS, [EPP]}}$ VP

Set A V[0] <Object>

EPP movement
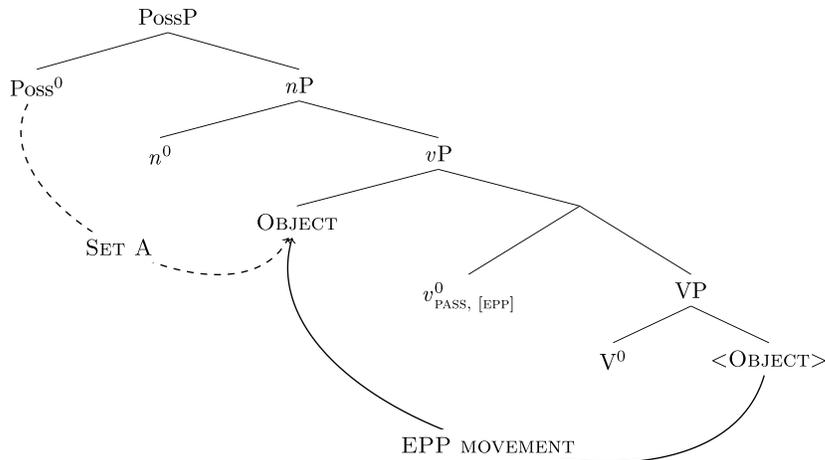
The reason why agreement is optional here when the controller is inanimate is because inanimate arguments can be generated without D^0 when they enter the structure as complements (see 6.1).

Recall that one conclusion from 5.2.1 and 5.2.2 was that only transitive objects, AF objects and arguments of an existential may stay low. Attributing the source of the pattern to two flavors of v^0 might predict that there should be semantic consequences that arise from choosing either variant. [32] For instance, one might predict scopal differences between structures with arguments that have remained low and those that have moved high: the height of the argument should interact with other scope taking elements in the clause. Currently, there is very little work on scope in Mayan (see Aissen 1992 on the scope of negation in Tzotzil, Martin 1998 on the scope of irrealis particles in Mocho'). We predict that if Tz'utujil has some scope-bearing element that scopes above the base-position of some argument, but below the derived-position of these same argument after EPP-movement, we should observe an interaction with the presence of agreement. We leave such work for the future.

---

[32] It would not be lethal to our proposal, however, if we did not find semantic consequences for the presence or absence of agreement. In languages like English, for example, we observe optionality in certain domains that seems to have no consequence on interpretation. Consider the placement of particles in verb+particle combinations. One would be hard pressed to find any difference in interpretation depending on whether the particle precedes or follows the complement noun (Johnson 1991): *I called up Mary.* vs. *I called Mary up.*

5.2.3 Pronouns revisited

Target accessibility should be relevant to pronominal arguments as well. In other words, if a pronoun target were inside a vP phase, for example and the probe were outside of that phase, we would expect agreement to fail. However, we showed in section 5.1 that agreement with pronouns, regardless of their animacy status, is always obligatory. Therefore, we need to ensure that pronominal targets are always within the domain of their AGREE probe.

In this context, it has been widely proposed in the literature that pronouns differ from nouns in their position within the syntactic structure (see Thráinsson 2001 and references). Pronouns either move mandatorily or are base-generated high. We will assume that this is the case in ST as well. In other words, pronouns cannot be reduced and are also located high in the clausal spine. This ensures that they are both visible and accessible to the relevant Agreement probe.

5.3   Summary of visibility and accessibility

There are two conditions that need to be met for AGREE to succeed. First, the argument needs to be *visible* to the probe (i.e. have D^0). Second, the argument needs to be *accessible* to the AGREE probe (i.e. be in the right structural position). Furthermore, the two conditions are orthogonal to each other. As a result, there exist three ways for AGREE to fail and only one way for AGREE to succeed.

(81) *Agreement outcome: visibility and accessibility*

		VISIBILITY (STRUCTURAL SIZE)	
		D^0	no D^0 (only inanimate base-complement)
ACCESSIBILITY (POSITION IN THE CLAUSE)	probe and goal within the same phase	successful AGREE	failed AGREE
	probe and goal in two different phases (only in constructions with no EPP movement)	failed AGREE	failed AGREE

In a nutshell, our analysis proposes that agreement/non-agreement on the surface does not arise because the syntactic operation AGREE is itself optional. Rather, variability in the size and accessibility of nominals that enter into the operation as Goals results in surface optionality. In other words, if AGREE succeeds because a relation is established between a Probe and a Goal,

then an exponent of this relation surfaces; if AGREE fails because no relation is established between a Probe and a Goal, then default morphology surfaces.

5.4 Microvariation across Mayan and within ST

While we leave an in-depth exploration for the future, we want to suggest how our proposal can shed light on the degree of variation across Mayan in the phenomenon we have analyzed. There are two approaches we could pursue in attempting to understand the ways in which Mayan languages, dialects, and idiolects differ regarding optional agreement with 3PL arguments. One possibility is that Mayan languages vary significantly and idiosyncratically regarding the conditions that govern the realization of agreement. In other words, there could be a language where, for example, agreement with transitive subjects is optional, but agreement with objects is obligatory (the flip-side of our pattern in ST). Alternatively, there could be a deep commonality governing the distribution of optional agreement among all languages, regardless of minor variation. We think the latter possibility is more promising conceptually. Empirically, as well, it seems to be on the right track.

For example, Henderson (2009) explores optional agreement in Kaqchikel through the lens of three properties: (i) the transitivity of the clause, (ii) the grammatical function of the argument co-indexed by the agreement marker, and (iii) the animacy status of said argument. He observes that animate subjects always require agreement, while inanimate subjects and all objects show optional agreement. In a similar vein, England (2011) focuses on similar factors for her corpus study of Mam and K'iche'. She reports that in the K'iche' corpus, all animate arguments control agreement, while inanimate arguments rarely do. For Mam, England shows that animate arguments strongly favor overt agreement, while inanimate arguments disfavor it. Nevertheless, agreement is possible with inanimate nouns. The results in Henderson 2009 and England 2011 for related Mayan languages are thus consistent with the type of grammars that we expect to exist: we expect complements to display more fragile agreement behavior (since complements can stay low if they do not move) and for inanimates to display less robust agreement (since they can be structurally reduced).

Our work, then, contributes to the overall picture of agreement optionality in Mayan by laying out in precise detail the optional agreement pattern across most constructions displaying agreement in a single language. .

6 Microvariation and pooling judgments

The data presented so far is based on acceptability judgments obtained from one consultant, Andrea, in individual elicitations where no other ST speaker was present. The judgments were robust and confirmed multiple times during three field trips separated by ~6-month periods. However, consistent judgments could not be replicated for two other consultants, who are Andrea's sisters and live in the same household: Andreína and Rosalía. These two consultants always participated in joint elicitations where they, for the most part, negotiated a common acceptability judgment, despite our attempts to identify any differences between the two. Below we present a data summary for Andreína and Rosalía. We note that the pattern of agreement here is more of a tendency, as opposed to the categorical behaviour exhibited by Andrea:

(82) *Data comparison for Andrea (left), and Andreína and Rosalía (right)*

	ANDREA		ANDREÍNA AND ROSALÍA	
	animate	**inanimate**	**animate**	**inanimate**
transitive subject	obligatory	obligatory	obligatory	obligatory/optional
antipassive subject	obligatory	obligatory	banned	banned
AF subject	obligatory	obligatory	obligatory	banned
subject of auxiliary in a progressive construction	obligatory	obligatory	obligatory	banned
subject of a nominal predicate	obligatory	obligatory	obligatory	optional
possessors	obligatory	obligatory	obligatory	obligatory
positional subject	obligatory	obligatory	obligatory	obligatory
transitive object	optional	optional	optional	optional
unaccusative subject	obligatory	optional	obligatory	optional
passive subject	obligatory	optional	obligatory	optional/obligatory/banned
AF object	optional	optional	banned	optional/banned
existential associate	optional	optional	obligatory	banned
argument of a nominalization in a progressive construction	obligatory	optional	obligatory	banned

At first glance, it looks like we are presented with a completely different pattern. For Andreína and Rosalía, we observe a ban on agreement in some cells where the controller is

inanimate, a pattern which was unattested in Andrea's data.[33] Although all three of our speakers are sisters living in the same household, are of similar age, and grew up exposed to the same regional dialect, it is not out of the ordinary to observe microvariation that is not attributable to core sociolinguistic factors like age, gender and dialect. This microvariation among individual grammars can be explained in terms of scarcity of the Primary Linguistic Data (PLD) in a child's input (Han et al. 2016).

Consider a child acquiring ST who might not be exposed to 3PL agreement in some constructions. For instance, we imagine that an example with a 3PL inanimate subject of an antipassive is scarce in the PLD. Let us assume, then, that the child has no reason to posit that the construction is ungrammatical but she must decide whether agreement with an inanimate subject of an antipassive will be obligatory, optional, or banned. She might do so based on some abstract grammar she has hypothesized so far without empirical evidence for this particular construction. However, it is possible that there exist more than one logically possible grammar consistent with the limited PLD (see Authors 2020a for microvariation in K'iche'). In contrast, her sister might hypothesize a different grammar.

The first step to lend credence to our reasoning here would be to look at the distribution of data in child-directed speech in ST. While we do not know of any such corpus, we hope that this gap will encourage further investigation into this topic. In the meantime, we refer the reader to England 2011's analysis of agreement optionality based on a corpus of narratives in K'iche' and Mam. As expected, some cells, (e.g. inanimate subjects of transitive predicates) are very scarce. See also Han et al.'s (2016) demonstration that, even in the face of this type of scarcity of data, the grammar chosen by individual speakers may be fully consistent, exactly as seen in Andrea's judgments reported above.

Consider another difference between the summary of the data for Andrea vs. Andreína and Rosalía. In some cells for the latter two, judgments were not consistent across time. For instance, agreement with an inanimate argument of a passive was judged obligatory, optional, or banned at different points. The fact that we observed different judgements within one cell might suggest that we are not capturing the right factor governing the availability of optional agreement. For

---

[33] Note, however, that a strong dispreference for agreement with inanimates has been reported for other Mayan languages, e.g. K'iche' (England 2011).

example, we might hypothesize that there is a more fine-grained syntactic factor (e.g. different types of passives), semantic distinction (e.g. more discrete categories along the animacy scale) or even pragmatic context that underlie the variable judgments for these two speakers. However, we found different judgments even for the very same lexical items within the same context, differing only in the day of the elicitation. We hypothesize, therefore, that the following factor was decisive: frequently during joint elicitations, an initially conflicting judgment or hesitation from one speaker was quickly replaced by a consensus following a discussion among the consultants. In other words, variable judgments were obscured by a forced consensus that has not allowed us to make a model of the grammar of either Andreína or Rosalía.

Our reasoning for laying out the variable pattern that arose from these two speakers is to highlight a consequence of attempting to generalize the grammar of an entire language via pooling judgments across speakers. Imagine that we had only elicited a subset of the entire paradigms with Andrea and a subset with Andreína and Rosalía. We would have ended up with a random set of judgments, underlying no grammar at all. Therefore, we leave this discussion as a cautionary tale regarding the care that needs to be taken when reporting on an intricate phenomenon such as optional agreement across a wide range of constructions.

7   Conclusions and future work

In this paper, we presented novel data from Santiago Tz'utujil regarding the realization of agreement. If the agreement controller is an inanimate noun, optional agreement is possible depending on the controller's base position. We argued that inanimate complements can lack D^0 in ST, thus being invisible for the AGREE probe, which results in default morphological agreement. In contrast, when the agreement controller is an animate DP, the availability of agreement optionality is determined on a construction-specific basis. We proposed that in some constructions, the agreement controller can stay low in the syntactic structure, thus being inaccessible to the AGREE probe— this also results in default morphological agreement. Finally, we correctly predicted that all pronouns in ST control agreement obligatorily because they are always visible and accessible to the AGREE probe.

On the typological side, we made the claim that the pattern above is subject to micro-variation, possibly at the level of idiolects. We discussed the problem of aggregating data from different consultants, since that would obscure (and does obscure) the pattern. We hope that the

present paper will provide a useful template for similar investigations of agreement realization in other Mayan languages and beyond.

There are two primary areas of investigation worth exploring in the future. First, it would be valuable to find independent evidence corroborating the distinction between base-generated complement and specifier arguments that ST references in the domain of agreement. As we have pointed out, there are no subextraction asymmetries in ST, unlike what is reported for closely related Kaqchikel (Imanishi 2014), since ST seems to disallow subextraction altogether. Second, we should look for corroborating evidence for the differences in the lexical specifications of heads such as transitive v^0. A final area to explore is the independence of predicate agreement and nominal concord. As mentioned before, there seems to be no correlation between the presence of agreement and concord. This has been noted in the literature on agreement optionality in other Mayan languages before (England 2011, Henderson 2009) and we have confirmed this observation in ST. This might be expected if agreement and concord are underpinned by different syntactic operations (see Norris 2014), but not if they are underpinned by the same operation (see Carstens 2020).

References

Aissen, J. (1987). *Tzotzil clause structure*. Reidel: Dordrecht.

Aissen, J. (1992). Topic and focus in Mayan. *Language*, 43-80.

Aissen, J. (1999). External Possessor and Logical Subject in Tz'utujil. In: I. Barshi and D. Payne (eds.) *External Possession.* Amsterdam: Benjamins. 451-485.

Aissen, J. (2011). On the syntax of agent focus in K'ichee'. In Proceedings of FAMLi, ed. Kirill Shklovsky, Pedro Mateo Pedro, and Jessica Coon. MIT Working Papers in Linguistics.

Aissen, J. (2017a). Correlates of ergativity in Mayan. In: J. Coon, D. Massam and L. Travis (eds.), *Handbook of Ergativity*. OUP.

Aissen, J. (2017b). Complement clauses. In: J. Aissen, N. C. England and R. Zavala Maldonado (eds.), *The Mayan Languages*. New York, Routledge, 259-292.

Aissen, J. (2017c). Information structure. In: J. Aissen, N. C. England and R. Zavala Maldonado (eds.), *The Mayan Languages*. New York, Routledge, 293-325.

Aissen, J., England, N. C. & Zavala Maldonado, R. (2017). Introduction. In: J. Aissen, N. C. England and R. Zavala Maldonado (eds.), *The Mayan Languages*. New York, Routledge, 1-14.

Aldridge, E. (2004). *Ergativity and word order in Austronesian languages*. Doctoral dissertation, Cornell University.

Assmann, A., Georgi, D., Heck, F., Müller, G., & Weisser, P. (2015). Ergatives move too early: On an instance of opacity in syntax. *Syntax*, *18*(4), 343-387.

Authors. (2020a). (removed for purposed of review). Paper to appear in edited volume.

Authors. (2020b). (removed for purposes of review). Paper to appear in edited volume.

Authors. (2021a). (removed for purposes of review). Talk to be presented.

Authors. (2021b). (removed for purposes of review). Talk to be presented.

Baker, M. (1996). *The Polysynthesis Parameter*. Oxford University Press.

Can Pixabaj, T. (2017). K'iche'. In: J. Aissen, N. C. England & R. Zavala Maldonado. *The Mayan languages,* 461-499.

Can Pixabaj, T. & England, N. (2011). Nominal topic and focus in K'ichee'. In: R. Guitérrez-Bravo, L. Mikkelsen, & E. Potsdam *Representing Language: Essays in Honor of Judith Aissen,* 15-30.

Carstens, V. (2020). Concord and labeling. In: P. Smith (ed.) Agreement in the Minimalist Program. *Language Sciences Press Open Generative Syntax Series*.

Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz, *Ken Hale: A life in language* . Cambridge, MA: MIT Press, 1-52.

Citko, B. (2014). *Phase theory: An introduction*. Cambridge University Press.

Clemens, L., & Coon, J. (2018). Deriving verb-initial word order in Mayan. *Language 94*(2), 237-280.

Coon, J. (2012). Split ergativity and transitivity in Chol. *Lingua* 122:241–256.

Coon, J. (2013). *Aspects of split ergativity*. Cambridge: Oxford University Press.

Coon, J. (2016). Mayan morphosyntax. *Language and linguistics compass*, *10*(10), 515-550.

Coon, J. (2018). Building verbs in Chuj: Consequences for the nature of roots. *Journal of Linguistics.*

Coon, J., & Preminger, O. (2009). Positional roots and case absorption. *New perspectives in Mayan linguistics*, 35-58.

Coon, J., Pedro, P. M., & Preminger, O. (2014). The role of case in A-bar extraction asymmetries: Evidence from Mayan. *Linguistic Variation*, 14(2), 179-242

Corbett, G. G. (2006). *Agreement* (Vol. 109). Cambridge University Press.

Craig, C. G. (1977). *The structure of Jacaltec.* Austin: University of Texas Press.

Dayley, J. (1985). *Tzutujil Grammar*. University of California Press.

Deal, A. R. (2009). The origin and content of expletives: Evidence from "selection". *Syntax*, *12*(4), 285-323.

Douglas, J., Ranero, R., & Sheehan, M. (2017). Two kinds of syntactic ergativity in Mayan. In: M. Erlewine, *Proceedings of GLOW in Asia XI (MIT Working Papers in Linguistics)*, *2*, 41-56.

Eberhard, D. M., Simons, G. F., & Fennig, C. D. (eds.). (2019). *Ethnologue: Languages of the World.* Twenty-second edition. Dallas, Texas: SIL International.

Elbourne, P. (2001). E-type anaphora as NP-deletion. *Natural Language Semantics*, *9*(3), 241-288.

England, N. (1991). Changes in basic word order in Mayan languages. *International Journal of American Linguistics*, *57*(4), 446-486.

England, N. (2011). Plurality Agreement in Some Eastern Mayan Languages. *International Journal of American Linguistics, 77(3)*, 397-412.

Erlewine, M. Y. (2016). Anti-locality and optimality in Kaqchikel Agent Focus. *Natural Language & Linguistic Theory*, *34*(2), 429-479.

García Ixmatá, A. P. (1997) *Gramática Tz'utujiil*. Editorial Cholsamaj: Guatemala

Hale, K. (2002). Eccentric agreement. In: B. Fernández and P. Albizu (eds), *Kasu eta Komunztaduraren gainean [On Case and Agreement]*. Vitoria-Gasteiz: Euskal Herriko Unibetsitatea, 15-48.

Han, C. H., Musolino, J., & Lidz, J. (2016). Endogenous sources of variation in language acquisition. *Proceedings of the National Academy of Sciences*, *113*(4), 942-947.

Heaton, R. (2017). *A typology of antipassives, with special reference to Mayan*. Doctoral dissertation, University of Hawai'i at Manoa.

Henderson, R. (2009). *A Case-Agreement Split in Kaqchikel*. Ms., UC Santa Cruz.

Henderson, R. (2012). Morphological alternations at the intonational phrase edge. *Natural Language and Linguistic Theory* 30(3). 741–787.

Henderson, R. (2019). The roots of measurement. *Glossa,* 4(1): 32, 1-31.

Imanishi, Y. (2014). *Default ergative*. Doctoral dissertation, MIT.

Johnson, K. (1991). Object positions. *Natural Language & Linguistic Theory*, *9*(4), 577-636.

Kenstowicz, M. (2013). Realize morpheme in Kaqchikel. *Studies in Kaqchikel grammar*, *8*.

Legate, J. A. (2003). Some interface properties of the phase. *Linguistic Inquiry*, *34*(3), 506-515.

Legate, J. A. (2008). Morphological and abstract case. *Linguistic Inquiry*, *39*(1), 55-101.

Legate, J. A. (2014). Split ergativity based on nominal type. *Lingua*, *148*, 183-212.

Levin, T. (2015). *Licensing without Case*. Doctoral dissertation, MIT.

Little, C. R. (2019). *Left branch asymmetries in Tumbalá Ch'ol*. Presented at WSCLA 24 at the University of Maryland, College Park.

Little, C. R. (2020a). Left branch extraction, object shift, and freezing effects in Tumbalá Ch'ol. *Glossa: a journal of general linguistics*, *5*(1).

Little, C. R. (2020b). *Interdependencies of nominal and clausal syntax: A view from Ch'ol.* Doctoral dissertation. Cornell University.

Martin, L. (1998). Irrealis constructions in Mocho (Mayan). *Anthropological linguistics*, 198-213.

Massam, D. (2001). Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory*.

Mateo-Toledo, B'. E. (2008). *The family of complex predicates in Q'anjob'al (Maya); their syntax and meaning*. Doctoral dissertation, University of Texas at Austin.

Mithun, M. (1984). The Evolution of Noun Incorporation. *Language, 60* (4): 847-894.

Norris, M. (2014). *A theory of nominal concord*. Doctoral dissertation, UC Santa Cruz.

O-Brien Rothe, L. (2015). *Songs that Make the Road Dance: Courtship and Fertility Music of the Tz'utujil Maya*. University of Texas Press.

Ordóñez, F. (1995). The antipassive in Jacaltec: A last resort strategy. *Catalan Working Papers in Linguistics (CatWPL)* 4 (2): 329–343.

Polinsky, M. (2016). *Deconstructing ergativity: Two types of ergative languages and their features*. Oxford University Press.

Polinsky, M. (2017). Antipassive. *The Oxford handbook of ergativity*.

Postal, P. (1966). On so-called 'pronouns' in English. In F. Dinneen (ed.),*19th Monograph on Languages and Linguistics*.201–24. Washington, D.C.: Georgetown University Press.

Preminger, O. (2014). *Agreement and its failures*. Cambridge MA: MIT Press.

Sauerland, U. (2003). Intermediate adjunction with A movement. *Linguistic Inquiry* 34:308–314.

Simpson, A., & Park, S. (2019). Strict vs. free word order patterns in Korean nominal phrases and Cyclic Linearization. *Studia Linguistica*, *73*(1), 139-174.

Smith-Stark, T. C. (1974). The plurality split. *Chicago Linguistic Society*. Vol. 10. 1, pp. 657–672.

Stiebels, B. (2006). Agent focus in Mayan languages. *Natural Language and Linguistic Theory* 24(2): 501-70.

Tada, H. (1993). *A/A-bar partition in derivation*. Doctoral dissertation, Massachusetts Institute of Technology.

Thráinsson, H. (2001). Object Shift and Scrambling. In: M. Baltin and C. Collins (eds), *The Handbook of Contemporary Syntactic Theory.* Wiley-Blackwell, 149 – 202.

Tummons, E. J. (2010). *Positional Roots in Kaqchikel Maya*. Doctoral dissertation, University of Kansas.

Woolford, E. (1997). Four-way case systems: Ergative, nominative, objective and accusative. *Natural Language & Linguistic Theory*, *15*(1), 181-227.

Zavala, R. (1992). El kanjobal de San Miguel Acatán. Mexico, D.F.: Universidad Nacional Autónoma de México