Paulina Lyskawa (lyskawa@umd.edu) & Rodrigo Ranero (rranero@umd.edu)

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

Abstract

We investigate optional predicate agreement in Santiago Tz'utujil (Mayan). We show that all the features of the agreement controller must be exponed in some structural configurations, whereas a 3rd singular morpheme can be exponed in others. Several generalizations emerge: (i) inanimate arguments base-generated as complements control agreement optionally; (ii) a subset of animate arguments base-generated as complements control agreement optionally; and (iii) all arguments base-generated as specifiers control full agreement obligatorily. These generalizations lead us to propose that two conditions must be met in order for AGREE to succeed, resulting in the exponence of all the features of the agreement controller. First, a goal must be visible (i.e., bear the feature that the probe is looking for). Second, a goal must be accessible (i.e., be in the right structural position to be targeted by the probe). If one or both of these conditions are not met, AGREE fails, but the derivation converges and 3rd singular agreement is exponed. In other words, while the syntactic operation AGREE is deterministic, surface optionality arises when the operation fails. A consequence of our proposal is that optional agreement serves as a diagnostic for underlying syntactic structure. In applying the diagnostic, we shed light on the proper analysis of understudied constructions in Santiago Tz'utujil and Mayan more broadly (e.g., nominalizations and Agent Focus clauses). We end by discussing microvariation in the phenomenon across Mayan and within Santiago Tz'utujil, highlighting methodological considerations that arise when we take an I-language approach to investigating a phenomenon of this nature.

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).

Empirically, we observe that the availability of optional agreement with *inanimat*e nouns in Santiago Tz'utujil tracks the distinction between agreement controllers base-generated as complements and those base-generated as 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. This generalization constitutes a novel diagnostic for establishing the base position of arguments: e.g., determining whether an intransitive predicate is unaccusative or unergative. We use this diagnostic to shed light on the syntax of Mayan-specific constructions like Agent Focus clauses and positional stative predicates. In turn, we observe that *animate* arguments obligatorily agree in most configurations, including some where the agreement controller is base-generated as a complement. Two factors, then, are relevant in optional agreement: (i) the base position of the agreement controller and (ii) its animacy status.

Analytically, we propose that the specifier vs. complement distinction determines the *size of the goal* in the AGREE operation: regardless of animacy status, arguments base-generated in a specifier position are always a potential goal for the AGREE probe because they are DPs and the probe is looking for D^0. Inanimate complements, meanwhile, may be reduced in size, lacking the DP layer, and thus not be a potential goal. 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 domain. Overall, then, we argue that optional agreement on the surface arises not because the syntactic operation AGREE is itself optional, but 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:

(1) *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

Let us illustrate concretely the phenomenon we analyze. In some Mayan languages, 3rd plural agreement is optional in a subset of the constructions where agreement obtains . Consider for

example the Kaqchikel data below, where the nominal 'three tomatoes' optionally controls 3rd plural absolutive agreement *e–* on the verb:

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

X–{**e/Ø**}–in–pitz	ri	oxi'	xkoya'.
COM–{**3PL.ABSOLUTIVE/Ø**}–1SG.ERGATIVE–squeeze	D	three	tomatoes

'I squeezed three tomatoes.'

Different authors have pondered on what factors govern this kind of optionality. Looking at a handful of constructions, Henderson concludes that animacy plays a role in Kaqchikel, as well as the 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) whether the predicate is transitive, intransitive, non-verbal, etc. 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. Our goal in this paper 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

[1] List of abbreviations used in the paper: A = Set A (ergative/genitive) agreement, ADV = adverb, AUX = auxiliary, AF = Agent Focus voice, AP = antipassive voice, B = Set B (absolutive) agreement, CAUS = causative, CLF = classifier, COM = completive aspect, DEM = demonstrative, D = determiner, DIR = directional marker, EXS = existential, EPP = extended projection principle, FOC = focus particle, INTR = intransitive, NMLZ = nominalization, PASS = passive voice, PERF = perfect, PL = plural, POS.ST = positional stative, POSS = possessive, PREP = preposition, RN = relational noun, SG = singular, SS = status suffix, STZ' = Santiago Tz'utujil, TAM = tense/aspect/mood, TR = transitive, TRANS = transitivizer.

deep structural factors govern a pattern that would be otherwise obscured if we limited our analysis to surface considerations.

The paper is structured as follows. In section 2 we provide relevant background for interpreting the STz' data. In section 3 we present our data: first, we discuss data involving agreement controllers base-generated as specifiers; second, we discuss data involving agreement controllers base-generated as complements. We then summarize the empirical generalization that has emerged thus far: inanimate noun phrases base-generated as complements control agreement optionally, whereas those base-generated as specifiers, control agreement obligatorily. In section 4, we use this generalization as a diagnostic for the underlying structures of other constructions: intransitives, stative predicates, Agent Focus clauses, and progressive constructions. In section 5, we zoom in on the agreement pattern with animate controllers. In section 6 we put together all components of our analysis. Section 7 comments on the microvariation we find across Mayan and within STz' regarding optional agreement. We comment as well on our methodology noting some issues that may arise when pooling judgments across consultants. Section 8 concludes.

2 Santiago 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 STz'. 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 by 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 by some Santiago inhabitants. We refer to the language simply as STz'.

[4] Ethnologue reports that Eastern Tz'utujil (which includes STz') is in vigorous use. In carrying out fieldwork in Santiago, we have noticed that the language appears to be in broad use

(1985) describes the dialect of San Juan la Laguna, only briefly comparing the phonology of that dialect with the phonology of STz'. García Ixmatá (1997) discusses the San Pedro la Laguna dialect only. Neither source, however, delves at length into optional agreement, which we turn to now.

2.1 Previous work on optional agreement in Tz'utujil

Dayley (1985, p. 68) alludes to the phenomenon of optional agreement 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, positional statives, 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 (3) 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–*:

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

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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 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.

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 Properties of STz'

Here, we sketch some basic properties of STz' that are relevant for understanding the data in this paper (see Aissen et al., 2017b for a general overview of the grammar of Mayan languages). Before delving into our discussion, note that we have chosen to represent our transcriptions faithfully rather than to use standard orthography for Tz'utujil. STz' phonology would be irremediably obscured via the official orthography (see Dayley, 1985 for a sketch of STz' phonology; Levin et al., 2020; Lyskawa & Ranero, 2021a, 2021b).[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. (2017a) for a discussion of standardized orthography across Mayan.

We are now ready to delve into the grammatical properties of STz'. Mayan roots tend to follow the form of Consonant-Vowel-Consonant, e.g., √loq' /loɋ/ 'buy', √tzaq /t͡saq/ 'fall'. Some of these roots can surface as stems without any further derivational morphology, i.e., they may combine with inflectional morphology directly, while other roots must bear derivational morphology. Consider this distinction in transitive stems:

(4) *Underived and derived transitive stems in STz'*

a.	*Underived transitive*	√*loq'* 'buy'	
	can be further derived	√*loq'–taj*	√*loq'–x–ik*
		buy–PASS	buy–PASS–NMLZ
b.	*Derived transitive*	√*sik'–iij*	(*cf.* *√*sik*)
		call–TRANS	

[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 STz', the pronunciation is *nxjaab', w*ith a CCC cluster at the beginning.

We see above that some roots of the same category may surface as underived or derived.[6] We also see that the underived stems can be further derived and change their voice or category. In some derivations (e.g., antipassive, passive) the choice of allomorph depends on whether the stem of affixation is derived or underived. We will comment on such cases whenever relevant.

Moving on, STz' 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 STz' is shown below.

(5) *Verbal template in STz'*
TAM–ABSOLUTIVE–ERGATIVE–√ROOT–DERIVATION–SS=(OTHER)

The right edge of the verbal complex in STz' hosts derivational morphology (e.g., voice morphemes) and what is known as a status suffix (Aissen, 2011; Coon, 2016; Craig, 1977; Henderson, 2012). In STz', the intransitive status suffix *-a* appears to be obligatory clause finally, but more work is needed to determine its distribution precisely (see Dayley, 1985, p. 82; Henderson, 2012 for K'iche'; Royer, 2021 for K'iche' and Chuj). The final slot is reserved for clitics and particles that have a variety of uses, such as indicating direction (see Dayley, 1985, pp. 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 STz' agreement paradigms, including (mostly phonologically conditioned) allomorphic variants where relevant:[7]

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

	SINGULAR	PLURAL
1	n–, nu(u)–, in–, w–	q(a)–
2	a(w)–	i(w)–
3	ru–, r–, u–	k(i)–

[6] There are also some categories that never surface underived, see positionals in 4.2.

[7] It is possible that these forms are actually derived phonologically rather than via suppletion (see Kenstowicz, 2013 for Kaqchikel).

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

	SINGULAR	PLURAL
1	in–	oq–
2	at–	ix–
3	Ø	e–/ i–

Note that Set B 3SG is morphophonologically Ø. In examples where a 3PL marker would be expected, but none arises, we gloss an empty agreement slot as Ø. As a visual note, the headings in examples that manipulate agreement variants in Set B will state 3SG.B=Ø (starting with example (26)). The headings in examples that manipulate agreement variants in Set A, where 3SG.A is not a morphophonological null, will state 3SG.A/Ø (starting with example (27)).

The examples below show that Set A morphology co-indexes the subject a transitive clause, whereas Set B co-indexes the object of a transitive, and the subject of an unaccusative:[9]

(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 subject of an auxiliary in the progressive construction and the argument of a deverbal nominalization (11).

[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 (Lyskawa & Ranero, 2021a). We will provide our transcriptions of this agreement morpheme faithfully.

[9] We use the conventional term *subject* to refer to either the sole argument in an intransitive frame or an external argument in a transitive frame. We use the conventional term *object* to refer to an internal argument in a transitive frame. In other words, we do not use these terms to refer to a particular base or derived structural position (e.g., we do not claim that STz' subjects land in Spec, InflP position).

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

(11) *Agreement on nominalization*
Nu–mjuon **ki**–kan–x–ik i–k'e' nuu–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 subject of passives (12), antipassives (13), nominal predicates (14), existential predicates (15), and positional stative 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.'

(15) *Agreement with the argument 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 stative predicate*
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 lexical class in Mayan (and other Mesoamerican) languages that 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 subject or object (García Ixmatá, 1997; see Aissen, 2017b for

a discussion of AF across Mayan; see Preminger, 2014 for K'ichean in general). We will discuss Agent Focus in more depth later in the paper.

Another property of STz' 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 (adapted from Dayley, 1985, p. 311)*
Inin x–Ø–in–ya' jun kotoon **chee** **Aa** **Xwaan** r–xin
1SG COM–3SG.B–1SG.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.'

We have not carried out an in-depth investigation of word order in STz', 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 in an elicitation context, offering preverbal subjects instead. Regardless of the conditions governing the order of predicate and arguments in STz', we have not found any effect of word order for the data reported in this paper. For instance, the agreement pattern of transitive subjects is the same whether the subject appears pre- or post-verbally.

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 (Set B agreement shaded in gray)*

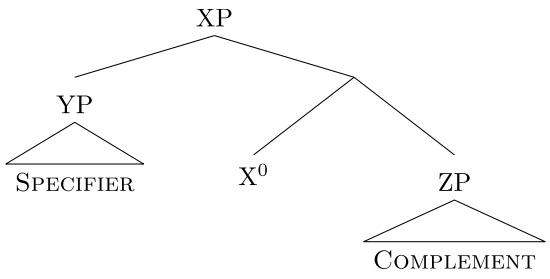
transitive subject	Set A
possessor	Set A
subject of auxiliary in the progressive construction	Set A
argument of a nominalization in the progressive construction	Set A
transitive object	Set B
intransitive subject (agentive and non-agentive)	Set B
passive subject	Set B
antipassive subject	Set B
Agent Focus subject	Set B
Agent Focus object	Set B
subject of stative predicates (nominal, adjectival, positional, and perfect)	Set B
existential argument	Set B

3 Optional agreement in STz': establishing a specifier vs. completement generalization

In this section, we discuss STz' data that allow us to establish a novel diagnostic for the base position of arguments. 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 arrive at an empirical generalization based on constructions whose structure is well-established cross-linguistically: root transitives, antipassives, possessors, nominal and adjectival predicates, passives and existentials. We focus only on plural noun phrases controlling agreement, leaving the behavior of pronouns (including 1st and 2nd persons) for section 6.2.3. Before presenting the data, however, we must delve briefly into (i) the specifier vs. complement distinction, (ii) plural nominal morphology and (iii) nominal concord in STz'.

First, we define a complement as an argument that is first-merged as sister to a head (ZP in (19) below). In contrast, arguments that are not first-merged as a sister to a head are specifiers (YP in (19) below):

(19) *Specifier versus complement distinction*



This structural asymmetry between specifiers and complements will inform our discussion moving forward.

Let us turn to nominal morphology. Only a subset of noun phrases in STz' 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; 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*) (20)-(21) but 'chicken' cannot (**ak'–a/i*) (22), they both behave the same with respect to verbal agreement:

(20) *Optional predicate agreement with plural 'wolf' bearing nominal plural agreement*[10]

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–**Ø**–u–tzu' i–uxi' utiw–a.
CLF Maria COM–**Ø**–3SG.A–see PL–three wolf-PL
'Maria saw three wolves.

(21) *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–**Ø**–u–tzu' i–uxi' utiw.
CLF Maria COM–**Ø**–3SG.A–see PL–three wolf
'Maria saw three wolves.'

(22) *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–**Ø**–u–loq' i–k'e' ak'.
CLF Juan COM–**Ø**–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:

(23) *Forms of numerals in STz'*

'one'	jun	
	PLURAL CONCORD FORM	NON-CONCORD FORM
'two'	i–k'e'	ki'e'
'three'	i–uxi'	uxi'

[10] When the presence or absence of the 3PL agreement morpheme has consequences - or is predicted to have consequences - on the form of other morphemes (as in this example), we do not collapse the examples as in (2).

(24) *Forms of demonstratives in STz'*

	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:

(25) *Independence of modifier concord and predicate agreement*

a. A Xwaan x–**i**–ru–loq' ki'e' ak'.
CLF Juan COM–**3PL.B**–3SG.A–buy two chicken
'Juan bought two chickens.'

b. A Xwaan x–**Ø**–u–loq' **i**–k'e' ak'.
CLF Juan COM–**Ø**–3SG.A–buy **PL**–two chicken
'Juan bought two chickens.'

In (25)a above the predicate shows agreement with the object even though the numeral does not show number concord. In turn, in (25)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:[11]

(26) *Inanimate argument of a positional 3PL.B/*3SG.B=Ø*

a. {**I/Ø**}–k'iy ab'aj **e–**q'e'–el–a chwech tz'aq.
{**PL/Ø**}–many stone **3PL.B**–lean–POS.ST–SS PREP.3SG.A.RN wall
'Many stones are leaning against the wall.'

b. *{**I/Ø**}–k'iy ab'aj **Ø–**q'e'–el–a chwech tz'aq.
{**PL/Ø**}–many stone **Ø**–lean–POS.ST–SS PREP.3SG.A.RN wall
Intended: 'Many stones are leaning against the wall.'

[11] We have observed that modifier concord is not optional across the board. For example, our consultant rejects 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.

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 specifier

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 will discuss the following: transitive subjects, antipassive subjects, possessors, and subjects of some non-verbal predicates. A transitive subject is a canonical base-generated specifier (Chomsky, 1970). It has also been argued that the subject of an antipassive (Polinsky, 2017) and certain possessors (Abney, 1987) are merged as specifiers. Similarly, the subject of nominal and adjectival predicates have been analyzed as being merged in SpecPredP (Baker 2003, 2008).

3.1.1 Subject of transitives

Let us discuss first the availability of agreement with 3PL subjects of transitives, cross-referenced by the Set A marker *ki-*. First, observe below that Set A is obligatory with animate controllers:[12]

(27) *Transitive animate subject 3PL.A/*3SG.A/*Ø*

I–k'e'	tz'e	x–Ø–{**ki/*u/*Ø**}–raq	jal	siaw.
PL–two	dog	COM–3SG.B–{**3PL.A/*3SG.A/*Ø**}–tear	DEM.SG	cat

'Two dogs ripped apart that cat.'

In example (27) we see that 3PL *ki-* is the only acceptable agreement morpheme. Neither the 3SG marker *–(r)u,* nor a null morpheme (which could 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:

(28) *Transitive inanimate subject 3PL.A/*3SG.A/*Ø*

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

'Those two trees destroyed a car.'

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

In parallel fashion to animate arguments, then, inanimate subjects of transitives must be cross-referenced by a 3PL morpheme, rather than a 3SG or Ø. Put differently, 3PL agreement is obligatory here regardless of the controller's animacy status.

3.1.2 Subject of antipassives

In STz', 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:

(29) *Antipassive animate subject with 3PL.B/*3SG.B=Ø*

J'ela'	i–k'e'	ak'al–a	x–{**i/*Ø**}–por–on–a		r–xiin	a–k'ayib'al.
DEM.PL	PL–two	child–PL	COM–{**3PL.B/*Ø**}–burn–AP–SS		3SG.A–RN	2SG.A–portrait

'Those two children 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 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 STz' akin to that reported for other Mayan languages—Dayley (Dayley, 1978, 1985) does not report any such construction either. García Ixmatá (1997, pp. 393–394) 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 STz', we do not discuss it.

(30) *Antipassive inanimate subject 3PL.B/*3SG.B=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:

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

'Those two candles burnt it.'

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 Possessor

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:

(31) *Animate possessors of a noun 3PL.A/*3SG.A/*Ø*

{ki/*ru/*Ø}–plaj	ch'uuch'–a
{**3PL.A/*3SG.A/*Ø}**–face	baby–PL

'babies' faces'

Inanimate possessors also control agreement obligatorily:

(32) *Inanimate possessors of a noun with 3PL.A/*3SG.A/*Ø*

{Ki/*ru/*Ø}–skil	uxi'	k'um	x–Ø–q'oy–a.
{3PL.A/*3SG.A/*Ø}–seed	three	squash	COM–Ø–rot–SS

'The seeds of three squashes rotted.'

In sum, possessor agreement exhibits the same pattern as transitive subjects and antipassive subjects.

3.1.4 Subject of nominal and adjectival predicates

Nouns can serve as stative predicates in STz'. In this construction, the subject is cross-referenced on the predicative noun and there is no copula. Animate subjects control agreement obligatorily:

(33) *Animate subject of a nominal predicate 3PL.B/*3SG.B=Ø*

J'ela'	i–k'e'	ixq–i	{**e/*Ø**}–q'omanel.
DEM.PL	PL–two	woman–PL	{**3PL.B/*Ø**}–doctor

'Those two women are doctors.'

Inanimate subjects also control agreement obligatorily:

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

In sum, the sole argument of a nominal predicate controls agreement obligatorily, regardless of its animacy status.

Similarly to the nominal predicates above, the subject of adjectival predicates is cross-referenced on the predicative adjective and there is no copula. Here, animate and inanimate arguments also control agreement obligatorily:[14]

(35) *Animate subject of an adjectival predicate 3PL.B/*3SG.B=Ø*
J'ela' ak'al–a {**i**/*Ø}–nemaq.
DEM.PL child–PL {**3PL.B**/*Ø}–big.PL
'Those children are big.'

(36) *Inanimate subject of an adjectival predicate 3PL.B/*3SG.B=Ø*
J'ewra' i–k'e' maank {**i**/*Ø)–kow?
DEM.PL PL–two mango {**3PL.B**/*Ø}–hard
'Are these two mangoes hard?'

In sum, these two types of non-verbal predicates, nominal and adjectival, display obligatory agreement regardless of the animacy status of the controller, similarly to all other constructions described in this section. We will return to other non-verbal predicates whose underlying structure is less straightforward in 4.2.

3.1.5 Interim summary

We observe obligatory 3PL agreement (Set A or Set B) whenever a controller is base-generated in a specifier position: subjects of transitives, subjects of antipassives, certain types of possessors, and arguments of nominal and adjectival predicates. We now turn to discuss data in constructions where the agreement controller is base-generated in a complement position. Here, we see optionality across the board when the controller is inanimate. When the controller is animate, a more intricate pattern arises.

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[14] This is the only construction where our consultant has occasionally accepted a version without agreement. We attribute this to the possibility of interpreting the sentences offered as nominal fragments, where the adjective is a modifier bearing concord, instead of a predicate—e.g., judging a sentence like '*These tables are green*.' as '*these green tables*'.

3.2 Agreement controlled by base-generated complement

We now lay out the pattern where 3PL predicate agreement is controlled by nominals that are base-generated in a complement position. We discuss the following here: object of transitives, subject of passives, and the argument of an existential construction. First, a transitive object is a canonical complement argument (Chomsky, 1970). The subject of a passive has been argued to be merged as a complement in a long-tradition going back to Chomsky (1965). Finally, the sole argument of an existential predicate has been argued to be merged as a complement argument in Tz'utujil (Aissen, 1999) and in other languages (Deal, 2009). Agreement in optional in STz' 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.

3.2.1 Object of transitives

In transitive frames, the 3PL agreement marker is optional if the cross-referenced object is animate:

(37) *Transitive animate object 3PL.B/3SG.B=Ø*

X–**{i/Ø}**–qa–tz'et	i–k'e'	ch'uuch'–a.
COM–{**3PL.B/Ø}**–1PL.A–see	PL–two	baby–PL

'We saw two babies.'

In example (37) above, the plural animate object of a transitive can be cross-referenced either as Set B 3PL or Ø on the verb. Similarly, if the object of a transitive is inanimate, the realization of 3PL agreement is optional (38):

(38) *Transitive inanimate object 3PL.B/3SG.B=Ø*

X–{**e/Ø}**–q–raq=pij	i–k'e'	etzb'al.
COM–{**3PL.B/Ø}**–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 their animacy status.

3.2.2 Subject of passives

The use of passive voice is reflected by several possible affixes on the verbal stem (see García Ixmatá, 1998 for San Pedro Tz'utujil). There are three passive affixes in STz': (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, p. 341). Affix

(iii) is semantically distinct from (i) and (ii) and is referred to by Dayley as a "completive" passive (Dayley, 1985, p. 332). We will focus on this latter affix to illustrate the behavior of agreement with the sole argument of a passive.[15]

Descriptively, a passive clause has the following property: the notional theme is the sole argument of an intransitive verb form and the agent is either absent or realized as 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. Animate arguments control agreement obligatorily here, whereas inanimate arguments do not:

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

(40) *Passive inanimate subject 3PL.B/3SG.B=Ø*
Ki'e' nu–po't x–{**e/Ø}**–b'ik–taj–a r–wech k–maak al'–i.
two 1SG.A–güipil COM–{**3PL.B/Ø}**–rip–PASS–SS 3SG.A–face 3PL.A–RN boy–PL
'(The front of) my two *güipiles* were torn up by the boys.'[16]

To sum up, animate arguments in the passive control agreement obligatorily on the verb, while inanimate arguments do not. We will observe that certain intransitives behave identically to passives regarding agreement, lending credence to the analysis of those intransitives as unaccusative verbs (see 4.1).

[15] 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 the future. As far as we can tell from testing the different passives, this is not the case.

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

3.2.3 Argument in an existential construction

STz' does not have a copula verb for existential predicates, but uses instead a predicate *k'o(la)* meaning 'there is', 'there exists', 'to be located' or 'to have'.[17] *K'o(la)* is not marked with TAM morphology, takes a single argument, and that single argument controls Set B agreement. We observe that agreement with an animate argument here is optional:

(41) *Animate argument of an existential predicate 3PL.B/3SG.B=Ø*

Chwech	chtal	**{i/Ø}**–k'ola	i–k'e'	ch'uuch'–a.
PREP.3SG.A.RN	table	**{3PL.B/Ø}**–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:

(42) *Inanimate argument of an existential predicate 3PL.B/3SG.B=Ø*

{I/Ø}–k'ola	ki'e'	ktz'eej	chu	jaay.
{3PL.B/Ø}–EXS	two	flower	PREP.3SG.A.RN	garden

'There are two flowers in the garden.'

The possessive function of the existential predicate patterns similarly to the locative function reported above:

(43) *Animate argument of an existential (possessive) predicate 3PL.B/3SG.B=Ø*

{I/Ø}–k'ola	i–k'e'	w–ak'.
{3PL.B/Ø}–EXS	PL–two	1SG.A–chicken

'I have two chickens.' *Literally*: 'There are my two chickens.'

[17] Dayley (1985, p. 314) analyzes this predicate as a type of positional (see section 4.2). However, the distinct morphosyntactic patterning of existentials in STz' warrants treating them as a separate class from positionals. We currently have no analysis for the *–la* suffix that optionally surfaces on the existential. Dayley (1985) merely notes that there is a short form of the existential (no *–la*) and a long form (with *–la*). The morpheme resembles the positional stative morpheme –V*l* followed by an intransitive status suffix *–a.* However, the existential should not be decomposed synchronically into a positional root and a stative positional affix for a simple reason: *–la* is optional on the existential predicate while the stative positional morpheme is mandatory. Note finally that we have not observed any distributional differences between the short and long forms, nor does the appearance of agreement correlate with the presence of *–la*.

(44) *Inanimate argument of an existential (possessive) predicate 3PL.B/3SG.B=Ø*
{I/Ø}–k'ola i–k'e' n–chtal.
{3PL.B/Ø}–EXS PL–two 1SG.A–table
'I have two tables.' *Literally*: 'There are my two tables.'

To summarize, agreement with an argument of an existential patterns like agreement with objects of a transitive, regardless of the function of *k'o(la)* (locative/existential or possessive). This result is expected if the locative/existential and possessive functions of *k'o(la)* involve the same structure underlyingly (see Freeze, 1992).

3.3 A generalization regarding inanimate controllers

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 presented so far:

(45) *Interim summary of data*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	ANIMATE	INANIMATE
transitive subject	Set A	obligatory	obligatory
antipassive subject	Set B	obligatory	obligatory
possessor	Set A	obligatory	obligatory
argument of nominal and adjectival predicates	Set B	obligatory	obligatory
transitive object	Set B	optional	optional
passive subject	Set B	obligatory	optional
existential argument	Set B	optional	optional

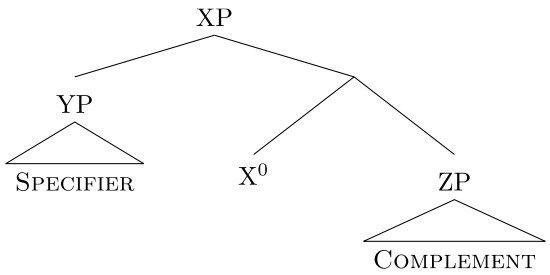
Two observations arise from the summary above: (i) obligatoriness appears both in Set A (ergative/genitive) and Set B (absolutive) agreement, and (ii) there is no surface subject/object asymmetry (Levin et al., 2020). Instead, the base-generated position of the agreement controller and its animacy status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

Setting aside animate controllers for now (see section 6.2), the main generalization is that when agreement is controlled by an inanimate noun, (non-)optionality tracks the distinction between different types of arguments. Note that the surface subject vs. object distinction cannot account for the Tz'utujil pattern, since we observe that not all inanimate *subjects* pattern together: for example, inanimate subjects of transitives control agreement obligatorily, while inanimate subjects of passives do so optionally. In other words, an account that attempted to

make the right distinction through the surface subject vs. object distinction would be inadequate (cf. Henderson, 2009 for Kaqchikel).

We argue instead that the base-generated specifier vs. complement distinction captures the pattern. We defined a complement as an argument that is first-merged as sister to a head (ZP in (46) below). In contrast, arguments that are not first-merged as a sister to a head are specifiers (YP in (46) below):

(46) *Specifier and complement distinction (repeated from (19))*



Let us now return to the empirical picture. Agreement is obligatory for transitive subjects, antipassive subjects, possessors, and arguments of nominal and adjectival predicates.

(47) *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
possessor	Set A	obligatory
argument of nominal and adjectival predicates	Set B	obligatory

Recall that transitive subjects (Chomsky, 1970), the sole argument of antipassives (Polinsky, 2017), certain possessors (Abney, 1987), and the subject of nominal and adjectival predicates (Baker 2003, 2008) have been analyzed as being merged as specifiers.[18]

In contrast, agreement is optional when controlled by transitive objects, subjects of passives, and the argument of an existential predicate.

[18] A reviewer notes that Coon (2013, pp. 96–99) shows that the DP theme in Ch'ol non-verbal predicates patterns like unaccusative subjects in relation to subextraction. Coon thus proposes that this argument is generated in a complement position. Many questions arise as to why Ch'ol and STz' would differ in where the agreement controller is base-generated, in particular because neither language has an overt copula. We leave a fuller discussion for the future.

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

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	3PL AGREEMENT
transitive object	Set B	optional
passive subject	Set B	optional
existential argument	Set B	optional

Transitive objects (Chomsky, 1970), the sole argument of a passive (Chomsky, 1965), and the sole argument of an existential predicate (Aissen, 1999; Deal, 2009) have been argued to be merged as complements.

We note that we looked for independent evidence to corroborate the conclusions of our diagnostic. For example, subextraction from complement arguments in the base position is allowed in many languages, while subextraction from specifier arguments is banned. However, Tz'utujil bans subextraction altogether, so we cannot use this diagnostic to test the base position of the arguments in question.[19] Currently, then, we do not have independent evidence that the grammar of STz' exhibits a specifier vs. complement asymmetry beyond the domain of optional agreement.

To summarize, we established a novel diagnostic for determining whether an argument is base-generated as a complement or a specifier: if an inanimate argument optionally controls 3PL agreement, it is base-generated as a complement. Conversely, if an inanimate argument obligatorily controls 3PL agreement, it is base-generated as a specifier. We now use this diagnostic to determine the underlying structure of other constructions in STz'.

4 Optional agreement as a diagnostic of underlying structure

In this section, we will apply the diagnostic we developed in the preceding discussion to determine the underlying structure of different constructions. In a nutshell, if an inanimate argument controls agreement optionally, then it is base-generated as a complement; conversely, if it controls agreement obligatorily, it is base-generated as a specifier. We will discuss

[19] Looking at other Mayan languages, Little (2020b) shows that in Ch'ol left-branch extraction is allowed in some configuration. Imanishi (2014) shows that for Kaqchikel, subextraction is only allowed from doubly embedded phrases (but see Burukina, 2020). We have not found this to be true in Tz'utujil. A reviewer suggests investigating depictive and resultative secondary predication (see Mateo-Toledo, 2008) in the future.

intransitive verbs, positional stative predicates, perfect stative predicates, the Agent Focus construction, and the progressive construction.

4.1 Intransitives

Consider now agreement controlled by subjects of intransitives. To begin, we highlight a remark by Coon (2016) that no clear diagnostic for the unaccusative/unergative distinction has been established in Kaqchikel, a language closely related to STz'. To our knowledge, no such diagnostic had been established for Tz'utujil either. In section 3, we established one such diagnostic, which we apply here: if an inanimate subject controls agreement obligatorily, it is base-generated as a specifier and we are dealing with an unergative structure; if it controls agreement optionally, it is base-generated as a complement and we are dealing with an unaccusative structure.

Let us start with underived verbs that combine naturally with animate and inanimate arguments. Cross-linguistically, such verbs tend to fall into an unaccusative category. We have found only a handful of such verbs in STz'. If the agreement controller is animate, the agreement morpheme is obligatory:

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

In contrast, inanimate arguments control agreement optionally:

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

Based on the behavior of inanimates, the structure here is unaccusative. Note as well that for this verb class, animacy plays a role in determining the behavior of agreement. We will return to the implications of this finding in section 5.

There are also some underived intransitive verbs in STz' whose translation implies an agentive argument: √*oq'* 'to cry', √*eel* 'to go out', √*b'e* 'to go, √*wa'* 'to eat', etc.[20] We observe that 3PL agreement is obligatory:

(51) *Animate subject of an underived intransitive with an agentive meaning 3PL.B/*3SG.B=Ø*

Iwiir	x–**{i/*Ø}**–oq'–a	i–k'e'	nuu–ch'uuch'.
yesterday	COM–**{3PL.B/*Ø}**–cry–SS	PL–two	1SG.A–baby.

'My two babies cried yesterday.'

We cannot reliably test the agreement pattern in these predicates with an inanimate controller: constructing scenarios where such a nominal controls agreement runs the risk of anthropomorphizing the argument under analysis. For example, the agreement pattern in an example like '*My two puppets cried yesterday*.' would not provide clear evidence for the behavior of an inanimate controller with this verb class. Therefore, our diagnostic is inapplicable here and we cannot determine the base-position of the agreement controller in this configuration.

There also exist derived intransitives whose sole argument is agentive. To contextualize for STz' the structure of this predicate type, Coon (2019) shows that unergative stems in Mayan languages like Chuj are derived from different root types via the addition of (possibly overt) functional morphology. Concretely, Coon proposes that a morpheme *–w* in Chuj is the exponent of v^0/Voice^0 that selects for roots of different categories (transitive verb, nominal, positional) and introduces an argument in its specifier position. In a nutshell, the combination of this v^0/Voice^0 with a transitive root results in an antipassive, while its combination with nominal and positional roots results in a derived unergative verb.

In Tz'utujil, Dayley (Dayley, 1985, p. 116) reports for the San Juan dialect that an apparent cognate of the Chuj morpheme—the suffix *–ow*—is used to derive intransitives stems but provides no examples where the morpheme combines with non-verbal roots. This suffix also

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[20] Some STz' predicates whose meaning would map on to unergative verbs in other languages involve idiomatic phrases formed via a light-verb plus noun (similarly to Ch'ol in Coon & Preminger, 2009):

(i)

Iwiir,	i-k'e'	wunaq	x–Ø–ki–tej	krera	pb'ey.
yesterday	PL-two	people	COM–3SG.B–3PL.A–eat	race	PREP.street

'Yesterday, two people ran on the street.'
Literally: 'Yesterday, two people ate a race on the street.'

derives antipassives from root transitives. Relatedly, Dayley (1985, pp. 120–121) reports that the suffix *–Vn* also derives intransitive stems from non-verbal roots. This suffix, in turn, derives antipassives from derived transitives. García Ixmatá (1998, pp. 107–111) describes the *–ow* morpheme for San Pedro Tz'utujil only as an antipassive, showing examples where it combines with transitive roots.[21]

In our own fieldwork we have found several intransitive stems that seems to contain these morphemes in STz' (see section 3.1.2): e.g., (i) the stem *√xaj–ow* 'to dance', where *–ow* combines with a root *√xaj* of unclear category, (ii) the stem *√b'ix–en* 'to sing', where *–Vn* combines with a nominal root *√b'ix* 'song', and (3) the stem *√tzeb'–en*, where *–Vn* combines with a nominal root *√tzeb'* 'laughter'. However, we are unable to test the agreement pattern with inanimate controllers for these stems, given the issue of the agentive interpretation of the single argument (see above on 'cry'). Therefore, our diagnostic is inapplicable here as well.

To summarize this subsection, intransitive verbs that felicitously compose with inanimate arguments show optional agreement. We concluded that these have an unaccusative structure. We found no verbs that would take an inanimate argument and yet show obligatory agreement. As for those that take only animate arguments, all agreement is obligatory. In these cases, our diagnostic does not allow us to determine whether these verb classes are unaccusative or unergative.

4.2 Sole argument of stative predicates (revisited)

We expand the section on non-verbal predicates in 3.1.4, and discuss two other types of statives: (i) stative predicates derived from positional roots, and (ii) stative predicates formed via the perfect suffix. We will observe that agreement is obligatory in both of these constructions. We will conclude, then, that the agreement controller in these four stative predicates is base-generated as a specifier. Even though the generalization in 3.3 concerns inanimate controllers

[21] García Ixmatá (1998, pp. 92–93) also describes an *-ow* intransitivizer that is deemed "lentitivo" in Spanish, a "slowing" affix. It attaches to transitive and affective (ideophonic) roots, deriving stems whose meaning "*indicate an action that is done repeatedly but with slow movements*".

only, we report the data for animate controllers here as well, since we will return to them in in 6.2.

First, let us discuss stative predicates derived from positional roots. Positional roots are a class of CVC roots in Mayan languages that are characterized by their semantic properties and the fact that they require root-particular morphology to form surface stems (Haviland, 1994; England, 2001; Tummons, 2010; Coon, 2019; Henderson, 2019). Positional roots 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 in some respects (e.g., some of them are gradable) and verbs in other respects (e.g., they combine with similar morphemes). On the other hand, unlike most adjectives or verbs, they cannot surface as bare CVC roots.

In order to use a positional as a stative predicate, the CVC root takes a *–Vn* suffix if the second C is a liquid /r/ or /l/, or a *–Vl* suffix elsewhere, followed by an intransitive status suffix *–a*. Positional stative predicates do not show TAM marking. Observe that animate arguments of these predicates control agreement obligatorily:

(52) *Animate argument of a positional stative predicate 3PL.B/*3SG.B=Ø*

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

'Two children are leaning against the wall.'

Inanimate arguments control agreement obligatorily as well:

(53) *Inanimate argument of a positional stative predicate 3PL.B/*3SG.B=Ø*

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

'Many stones are leaning against the wall.'

In sum, the argument of a positional stative predicate, regardless of its animacy status, must be co-referenced by Set B agreement on the predicate. In this way, this argument patterns like the subject of an antipassive and of nominal and adjectival predicates. We conclude that the argument of a positional stative predicate is base-generated in a specifier position. [22]

[22] Henderson (2019, p. 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 stative predicate be merged as a specifier.

Now, let us discuss non-verbal predicates derived via the perfect suffix *–naq*, which combines with intransitive roots. The stems that result from this derivation do not bear TAM prefixes either. Coon (2016, p. 529) posits that stems derived via the perfect across Mayan languages are non-verbal predicates denoting a resulting state (see Bohnemeyer, 2009).[23]

The argument of these predicates controls agreement obligatorily, regardless of its animacy status:[24]

(54) *Animate sole argument of a perfect stative predicate 3PL.B/*3SG.B=Ø*
{**I/*Ø**}–tzaq–naq i–k'iy umuul.
{**3PL.B/*Ø**}–fall–PERF PL–many rabbit
'Many rabbits have fallen (in a hole).' ~ 'Many rabbits are fallen.'

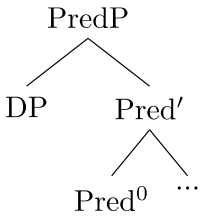
(55) *Inanimate sole argument of a perfect stative predicate 3PL.B/*3SG.B=Ø*
{**I/*Ø**}–tzaq–naq i–k'iy chi'a'.
{**3PL.B/*Ø**}–fall–PERF PL–many tree
'Many trees have fallen.' ~ 'Many trees are fallen.'

To summarize, all stative predicates show obligatory agreement. Based on this, we conclude that the argument in all of these constructions is base-generated in a specifier position (Spec,PredP; (Baker, 2003, 2008)):

[23] Dayley (1985) notes that some perfect stems derived from intransitive roots can function as adjectives. Non-perfect intransitives (e.g., intransitives bearing TAM prefixes, like those discussed in section 4.1), cannot function as adjectives.

[24] Note that examples (54) and (55) involve the same verbal root *tzaq* 'fall' as the non-perfect intransitive examples in (49) and (50). Nevertheless, we see a different agreement pattern: in the perfect forms, agreement controlled by an inanimate is obligatory, whereas in the non-perfect examples, agreement is optional. Based on our diagnostic, this must mean that the base-position of the argument is different between these examples, despite being constructed from the same verbal root. This finding might have consequences for proposals where roots combine directly with their complements (Coon, 2019).

(56) *Base-position of argument of stative predicate in STz'*



4.3 Agent Focus (subjects and objects)

The Agent Focus (AF) construction (also known as the focus antipassive) has received much attention in the Mayanist literature (Aissen, 2017b). 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 (Aissen, 2011; Assmann et al., 2015; Coon et al., 2014; Douglas et al., 2017; Erlewine, 2016; Hale, 2002; Ordóñez, 1995; Polinsky, 2016; Ranero, 2021; Stiebels, 2006). The syntactic details of the analysis of AF do not concern us yet (see section 6.2.1). Instead, what is relevant for now is the particular agreement pattern that surfaces when AF is used in STz'. Much like in other K'ichean languages, AF is unique in that only one agreement marker (Set B) surfaces on the verbal stem. AF verbs carry either a *–ow* or *–Vn* suffix (the same suffix that appears in the oblique antipassive construction; see section 3.1.2). 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 (in a manner parallel to other K'ichean languages):

(57) *K'ichean agreement hierarchy in AF*
1, 2 > 3PL > 3SG

Descriptively, the two arguments of an AF construction are compared with respect to their **φ**-features. The argument whose **φ**-features are higher on the above hierarchy controls agreement and its **φ**-features are exponed. The **φ**-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:

(58) *Agent Focus 2SG subject and 3SG object (Kaqchikel; Preminger, 2014, p. 18)*

Ja	rat	x–{at/*Ø}–ax–an	ri	achin.
FOC	2SG	COM–{2SG.B/*3SG.B}–hear–AF	DET	man

'YOU saw the man.'

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 (58) surfaces:

(59) *Agent Focus 3SG subject and 2SG object (Kaqchikel; Preminger, 2014, p. 18)*

Ja	ri	achin	x–{at/*Ø}–ax–an	rat.
FOC	DET	man	COM–{2SG.B/*3SG.B}–hear–AF	2SG

'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:

(60) *Summary of AF agreement optionality in STz'*

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. They were elicited in a specific context where one speaker corrects another speaker regarding 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, agreement is obligatory:

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

J'ela'	i–k'e'	ixq–i	x–{**i/*Ø}**–k'ay–in–a	jun	ch'eech'.
DEM.PL	PL–two	woman–PL	COM–{**3PL.B/*Ø}**–buy–AF–SS	one	car

'THOSE TWO WOMEN bought a car.'

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

(62) *Agent Focus: inanimate subject 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:

J'ela'	i–k'e'	kandeel	x–{**i/*Ø}**–por–on–a	jun	a–k'ayib'al.
DEM.PL	PL–two	candle	COM–{**3PL.B/*Ø}**–burn–AF–SS	one	2SG.A–portrait

'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.

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

(63) *Agent Focus object animate 3PL/3SG=Ø*

Majoon,	ya	Mriiy	x–{**e/Ø}**–q'et–en–a	j'el	tz'e.
no	CLF	Maria	COM–{**3PL.B/Ø}**–hug–AF–SS	DEM.PL	dog

'No, MARIA hugged those dogs.'

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

(64) *Agent Focus object inanimate 3PL/3SG=Ø*

Jal	ixoq	x–{**i/Ø}**–k'ay–in–a	i–k'e'	ch'eech'.
DEM.SG	woman	COM–{**3PL.B/Ø}**–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, regardless of animacy.

To recap, Agent Focus subjects and objects behave identically to the arguments of a transitive in the active voice in terms of agreement optionality. We conclude as a result that Agent Focus subjects are base-generated as specifiers and Agent Focus objects are base-generated as objects. This is in line with the proposals by Stiebels (2006), Aissen (2017b) and Ranero (2021).

4.4 The progressive construction

The progressive construction is formed by a combination of an auxiliary *mjuon*[25] and a nominalized verb whose valence has been reduced to one (see Aissen, 2017a on these nominalizations in Tz'utujil). The logical subject is indexed with Set A agreement on the

[25] It is possible that this auxiliary is morphologically complex and decomposable into a root *mj* and the perfect suffix that combines with transitive stems *–uon* (Dayley, 1985, p. 400 briefly mentions this possibility for San Juan Tz'utujil). Diachronically, this might be interesting to investigate; synchronically, we suspect that we are dealing with coincidental homophony, given that the semantics of the perfect and progressive are distinct.

auxiliary. [26] First, consider an animate controller of agreement on the auxiliary. Agreement here is obligatory:

(65) *Animate subject of a progressive with 3PL.A/*3SG.A/*Ø*
J'ela' i–k'e' ixq–i {**ki/*ru/*Ø**}–mjuon r–mich–x–ik
DEM.PL PL–two woman–PL {**3PL.A/*3SG.A/*Ø**}–AUX 3SG.A–pluck–PASS–NMLZ
jun ak'.
one chicken
'Those two women are plucking a chicken.'

The same pattern is observed with inanimate subjects as well:

(66) *Inanimate subject of a progressive with 3PL.A/*3SG.A/*Ø*
Context: There is a storm, and you are witnessing trees falling on a car.
Puk'iy chi'a' {**ki/*ru/*Ø**}–mjuon r–waq'–x–ik jun ch'eech'.
many tree {**3PL.A/*3SG.A/*Ø**}–AUX 3SG.A–destroy–PASS–NMLZ one car
'Many trees are destroying a car.'

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

The nominalization in the progressive construction is formed by the addition of the *-ik* suffix to a passive verb (but see Lyskawa & Ranero, 2021b for some nuances). 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:

(67) *Animate argument of nominalization 3PL.A/*3SG.A/*Ø*
Anen nu–mjuon {**ki/*r/*Ø**}–kon–x–ik i–k'e' nuu–tz'i'.
1SG 1SG.A–AUX {**3PL.A/*3SG.A/*Ø**}–search–PASS–NMLZ PL–two 1SG.A–dog
'I am looking for my two dogs.'

In contrast, an inanimate argument controls agreement optionally here. This differs from all other constructions where we have assessed Set A agreement:

[26] The STz' progressive construction we report here is different from Chuj and Ch'ol's (Coon & Carolan, 2017; Imanishi, 2014). In those languages, the nominalization bears Set A and Set B agreement, where Set A is controlled by a matrix subject. In STz', the matrix subject controls Set A on the auxiliary, not the nominalization. In turn, the nominalization in STz' does bear Set A – however, agreement is controlled by the logical object of the nominalization, not the matrix subject.

(68) *Inanimate argument of nominalization 3PL.A/3SG.A/*Ø*

Anen	nu–mjuon	{**ki/r/*Ø**}–kon–x–ik		i–k'e'	nu–mees.
1SG	1SG.A–AUX	{**3PL.A/3SG.A/*Ø**}–search–PASS–NMLZ		PL–two	1SG.A–table

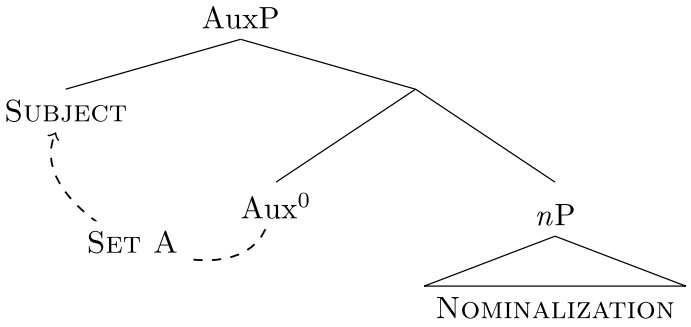
'I am looking for my two tables.'

The data from agreement on nominalizations, then, 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—optionality does not track the Set A vs. Set B distinction at all (Levin et al., 2020).

Based on the agreement behavior described above, we conclude that the subject in the progressive construction is base-generated as a specifier and the logical object is merged as a complement. Note that both of these arguments control the same type of morphology (Set A) but their base-position must be different. Thus, the type of morphology that is exponed must be dissociable from the base-position of the agreement controller.

The following diagram represents our proposed structure of this auxiliary verb and its agent argument in STz':[27]

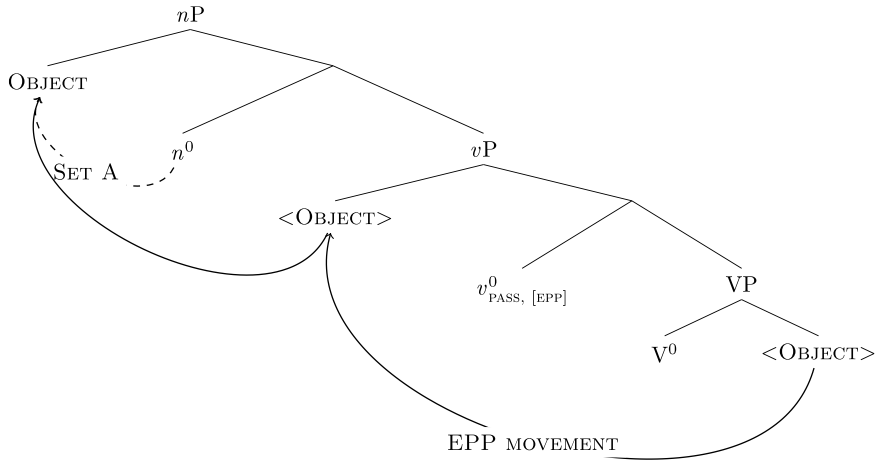
(69) *Proposed structure of an auxiliary in STz'*



In turn, we propose the following structure for the nominalization in the progressive construction: the logical object is generated in a complement position and moves to Spec,*n*P. In other words, the possessor moves to its final landing site, where it controls Set A agreement:

[27] The auxiliary in this STz' construction, with its agent generated as a specifier, might be comparable to a light transitive verb *cha'l* in Ch'ol (e.g., Coon, 2012 ex. (12)).

(70) *Proposed structure of a nominalization in STz'*



Note that proposing that the argument of these nominalizations is generated as a complement does not necessitate that it remain in that position. In a nutshell, we are proposing that this nominalization in STz' is akin to possessive constructions in English like 'the city's destruction'. By proposing that the argument of the nominalization is base generated as a complement, we capture optional agreement with inanimate controllers; simultaneously, we capture the generalization that Set A agreement is controlled by elements whose final position is a specifier. We return to more details in section 6.[28]

Before we turn to a more detailed discussion of agreement controlled by animates, let us summarize all empirical findings presented in sections 3 and 4:

[28] A reviewer observes that our proposed structure in (70) is informative as to the nature of Set A morphology and nominalizations in K'ichean and Mayan more broadly. Specifically, our proposal is incompatible with Coon & Royer 2021's analysis of nominalizations of the STz' type, since they posit that the possessor is base-generated in a specifier position and binds PRO in the complement of V^0. Our results suggest that this cannot be the right structure for STz'. If control involves movement (Hornstein, 1999), though, Coon & Royer's analysis would be difficult to distinguish from ours.

(71) *Summary of data (obligatory agreement shaded in gray)*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	ANIMATE	INANIMATE
transitive subject	Set A	obligatory	obligatory
possessor	Set A	obligatory	obligatory
subject of auxiliary in the progressive construction	Set A	obligatory	obligatory
antipassive subject	Set B	obligatory	obligatory
argument of stative predicates (nominal, adjectival, positional, and perfect)	Set B	obligatory	obligatory
Agent Focus subject	Set B	obligatory	obligatory
argument of nominalization in the progressive construction	Set A	obligatory	optional
passive subject	Set B	obligatory	optional
intransitive subject (non-agentive)	Set B	obligatory	optional
intransitive subject (agentive)	Set B	obligatory	N/A
transitive object	Set B	optional	optional
Agent Focus object	Set B	optional	optional
existential argument	Set B	optional	optional

This summary concludes our primary novel set of data for which we lay out a detailed formal analysis in section 6. We are now ready to zoom in on animate agreement controllers.

5 Animate controllers: construction-specific pattern

The generalization that arguments base-generated in a specifier position control agreement obligatorily whereas arguments base-generated in a complement position control agreement optionally applies to inanimates only. The generalization for animate arguments is as follows: animate arguments base-generated as specifiers obligatorily control agreement, but some animate arguments generated as complements do so as well. We observe optional agreement only with transitive objects, AF objects, and the sole argument of existential constructions.[29]

[29] A reviewer suggests that these three constructions might form a natural class, so the fact that they pattern alike could arise from more principled grounds. In a nutshell, if we assume that there is a null expletive merged above the argument of the existential construction, then these three configurations would involve one argument moving over another in order to be accessible to an agreement probe. Under this analysis, the failed agreement variant would be the result of defective

(72) *Optionality of agreement with animate arguments (obligatory agreement shaded in gray)*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	3PL AGREEMENT
transitive subject	Set A	obligatory
possessor	Set A	obligatory
subject of auxiliary in the progressive construction	Set A	obligatory
argument of nominalization in the progressive construction	Set A	obligatory
antipassive subject	Set B	obligatory
argument of stative predicates (nominal, adjectival, positional, and perfect)	Set B	obligatory
Agent Focus subject	Set B	obligatory
passive subject	Set B	obligatory
intransitive subject (non-agentive and agentive)	Set B	obligatory
transitive object	Set B	optional
Agent Focus object	Set B	optional
existential argument	Set B	optional

We will argue that the optionality we observe in some constructions with animate controllers arises due to the specific syntactic make up of functional heads in those constructions. In the following section, we will encode this as a lexical specification: some heads bear an [EPP] feature that 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.

6 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 (Ø for Set B and /ru-/ for Set A):

intervention, not due to phasal accessibility (as we propose in 6.2). While this is an interesting alternative, we currently have no way to adjudicate between our proposal and the reviewer's.

(73) *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.

6.1 Inanimate controllers: visibility (structural size)

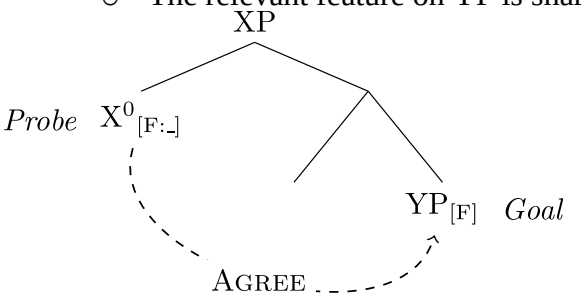
Based on well-understood structures (e.g., transitives), we argued earlier that when the agreement controller is inanimate, the optionality vs. obligatoriness of agreement depends on whether the agreement controller was initially merged as a complement. Given this systematic behavior, we proposed that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

We propose that inanimate arguments generated in the complement position may be reduced in size, i.e., they may be merged as DPs or as a smaller nominal like NP. Let us justify why complements may be reduced by drawing a parallel to another linguistic phenomenon. Consider some results from the literature on noun-incorporation (Baker, 1996; Levin, 2015; Massam, 2001; 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. 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. Note that we are not claiming that non-agreeing arguments in STz' are (pseudo-)noun-incorporated. We are proposing instead that the analyses of both phenomena rely on a shared component: arguments in complement position may reduce is size, i.e., lack D^0; specifiers may not.

Let us now lay out our assumptions regarding the mechanism of agreement. We assume that AGREE is a syntactic operation that transmits **φ**-features, (e.g., person and number), from an argument to a predicate:

(74) 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 **φ**-feature [F: _]
- *Result*:
  - The relevant feature on YP is shared with X^0.



We assume Bare Phrase Structure (Chomsky, 1995); a specifier-head relation therefore meets the description in (74). 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).

(75) *Agreement and argument size – proposal for STz'*

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.
   - No D^0 → failure to AGREE → default agreement morphology

The gist of (75) is that inanimate complements can be merged lacking D^0, but such an argument cannot serve as a goal in the AGREE operation.[30] In contrast, a specifier must be headed by D^0. Such an argument, then, is always visible to the probe and always controls agreement.

[30] 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

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 STz' 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:

(76) *Optional agreement with transitive object*[31]

a.	Iwiir	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.	Iwiir	x–**Ø**–in–tzu'	i–k'e'	ch'uuch'–a.
	yesterday	COM–**Ø**–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:

3.1.2. However, in related languages like K'iche', pseudo-incorporated NPs can appear with fully transitive morphology (Aissen, 2011).

[31] One might be tempted to decompose the form of the Set A marker *in–* in (76)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.'

(77) *Obligatory agreement with overt pronouns*[32]

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

b. *Iwiir x–**Ø**–in–tz'et j'iye'.
yesterday COM–**Ø**–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 STz' 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 (78)b-(78)c, in contrast to agreement with a non-pronominal controller (78)a:

(78) *Obligatory agreement with null pronouns*

a. Iwiir **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.

We predict that 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 (1PL and 2PL) 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 3.2.3:

[32] The verbal roots in (76) *tzu'* and (77) *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.

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

Ajoj	{**oq/*in/*Ø}**–k'ola	chu	jaay.
1PL	{**1PL.B/*1SG.B/*Ø}**–EXS	PREP.A3S.RN	garden

'We're in the garden.'

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

Ixix	{**ix/*at/*Ø}**–k'ola	chu	jaay.
2PL	{**2PL.B/*2SG.B/*Ø}**–EXS	PREP.A3S.RN	garden

'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.[33]

Returning to non-pronominal arguments, a strong version of the proposal in (75) 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 could be assumed to occupy a different structural position, there might be a link between using a definite/specific demonstrative and a definite/specific

[33] 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 STz' 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 STz' 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.

determiner. We have found no systematic effect of the presence of any demonstratives on agreement, since the pattern remains the same:[34]

(81) *Optionality of agreement with inanimate definite (subject of a passive)*
Jaw ki'e' etz'bal x–{**i/Ø**}–waq'–taj–a.
DEM.SG two toy COM–{**3PL.B/Ø**}–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, 2020b, 2020a 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 STz', which has consequences for the availability of agreement, should not trouble us.[35]

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

[35] A reviewer wonders whether the agreement target could be [PERSON], as opposed to D^0, since a connection between animacy and [PERSON] has been proposed for other languages (e.g., Ritter, 2014 on Blackfoot). This would make the wrong prediction for 3rd person pronouns if these lack [PERSON] (HARLEY & RITTER, 2002), since we observe that they control agreement obligatorily (see (77)-(78)). Another reviewer wonders if [ANIMACY] could be the agreement target. This also makes the wrong predictions since (i) inanimates control agreement obligatorily when base-generated as specifiers, (ii) inanimate pronouns control agreement obligatorily, and (iii) animates show optional agreement when base-generated as complements. It is conceivable that

6.2 Animate arguments: construction-specific accessibility

Recall the pattern of agreement with animate arguments:

(82) *Optionality of agreement with animate arguments (obligatory agreement shaded in gray)*

AGREEMENT CONTROLLER	TYPE OF AGREEMENT	ANIMATE
transitive subject	Set A	obligatory
possessor	Set A	obligatory
subject of auxiliary in the progressive construction	Set A	obligatory
argument of a nominalization in the progressive construction	Set A	obligatory
antipassive subject	Set B	obligatory
argument of stative predicates (nominal, adjectival, positional, and perfect)	Set B	obligatory
Agent Focus subject	Set B	obligatory
passive subject	Set B	obligatory
intransitive subject (non-agentive and agentive)	Set B	obligatory
transitive object	Set B	optional
Agent Focus object	Set B	optional
existential argument	Set B	optional

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 objects, and existential arguments) does not obviously constitute a natural syntactic class to the exclusion of the other constructions (though see fn. 29).

The fact that animates display agreement more frequently, however, is expected. As suggested earlier, we will assume that the structural 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).

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our analysis could be refined while maintaining its spirit intact—e.g., a detailed featural breakdown of nominals in STz' could shed light on the issue that seems to be a concern of the reviewers (see also fn. 33).

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, 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 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).[36] 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).

It has been argued that v^0 is a phase head (Chomsky, 2001; Legate, 2003; Sauerland, 2003 a.o. see Citko, 2014 for discussion).[37] As a result, a nominal must be at the edge of v^0 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 Spec,*v*P. 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.

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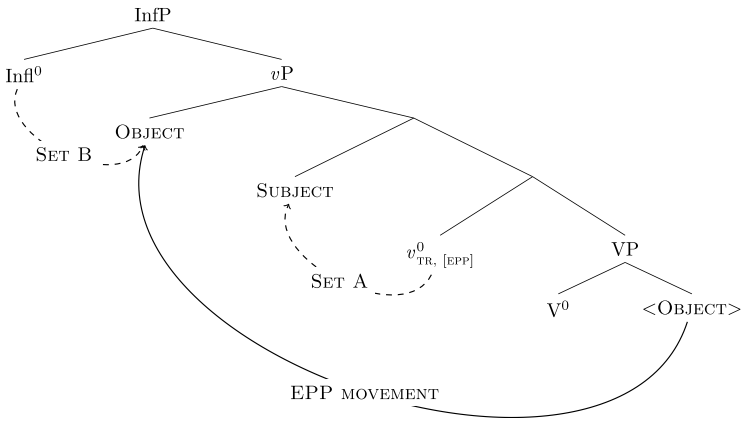
[36] There are many different flavours of phase-theory, with variations regarding (i) which heads constitute phases, (ii) whether elements become inaccessible upon Spell-out for all syntactic operations, or just a subset of these, etc. Our point here is not to debate which version of phase theory is 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.

[37] Note that we abstract away for ease of exposition from separating the highermost head in the verbal domain into $Voice^0$ and v^0 (Harley, 2017).

6.2.1 Accessibility and Set B agreement

First, consider successful 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.[38] 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,*v*P 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 (83) below.

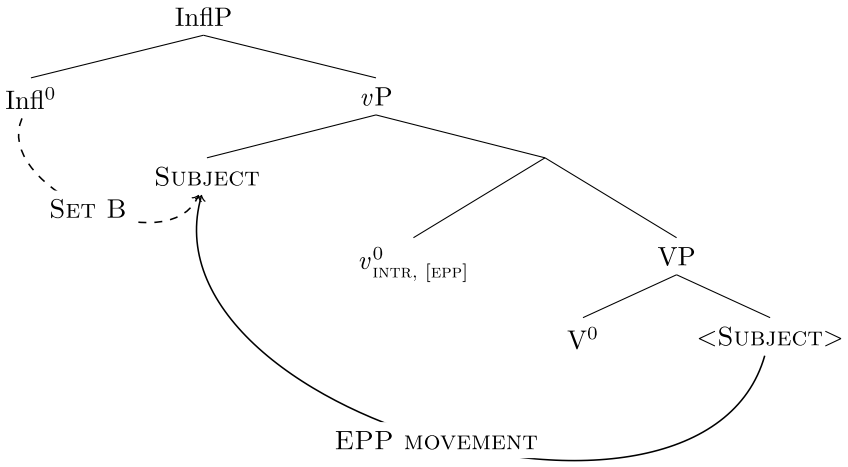
(83) *Successful agreement with transitive object and transitive subject*



A similar movement and AGREE takes place in unaccusative clauses, where the sole argument originates as a complement of V^0:

[38] 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 ABS=NOM languages.

(84) *Successful agreement with unaccusative subject*



The same scenario, delivering a parallel result, occurs with the sole argument in a passive. Conversely, we assume that the sole argument in antipassive and stative 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.

As indicated above, Infl^0 is likely not the only source of Set B agreement. Coon et al. (2014) argues that the absence of TAM marking goes hand in hand with the absence of Set B agreement, e.g., in non-finite embeddings. Thus, if Infl^0 is not only the source of Set B agreement, but also a host of the TAM exponent, we need to address the issue of predicates that do not bear TAM prefixes but do bear Set B agreement, e.g., stative predicates. In other words, what is the source of Set B agreement in (53) repeated as (85) below?

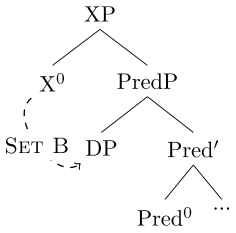
(85) *Inanimate argument of a positional stative predicate 3PL.B/*3SG.B=Ø*

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

'Many stones are leaning against the wall.'

Recall from 4.2 that we proposed a Pred(icative)P(hrase) projection for all stative constructions à la Baker (2008) with the sole argument base-generated in the specifier of PredP. We propose that a higher probe (here labelled X^0) targets an argument in Spec,PredP in these cases (Levin et al., 2020, p. 347). The consequence of this proposal is that a DP argument in Spec,PredP is accessible to the probe without the need for a movement step.

(86) *Successful agreement with an argument in statives*



This proposal captures the source of Set B in the existential construction as well, since these do not bear TAM prefixes. The difference is that the agreement controller in the existential construction is merged as a complement and must move in order to be accessible to the probe.

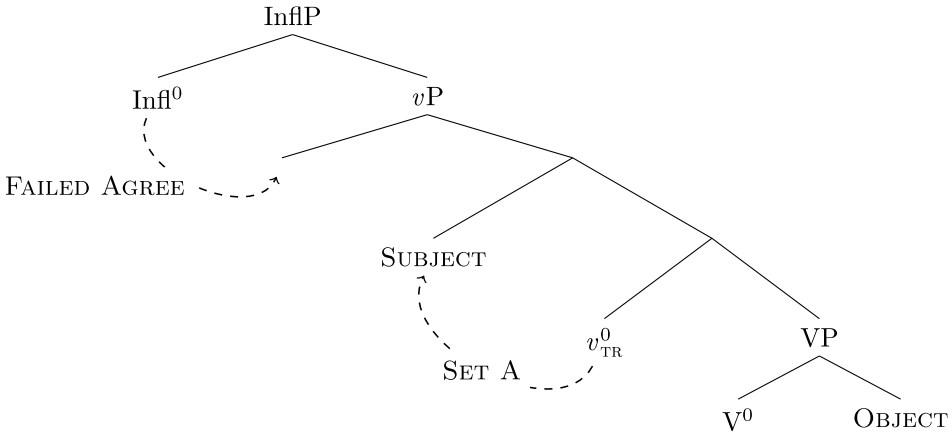
Let us now turn to examples where AGREE fails so 3PL agreement does not surface. We argue that in addition to the scenario where the structural size condition is not met, AGREE fails also if the relevant argument stays low (i.e., if there is no [EPP] on v^0)—it is inaccessible. In a nutshell, then, for 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 flavors in STz': (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 (87)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 (87)b-(88):

(87) *Optional agreement with transitive object*

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

(88) *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 arguments.

However, recall from the summary table in (82) that among the constructions we described, there are some that show obligatory Set B agreement when the controller is animate and base-generated as a complement: unaccusatives and passives. 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].[39]

Crucially, even though the relevant head in unaccusatives and passives comes 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.

[39] An alternative analysis for the obligatory nature of agreement with animates in unaccusatives and passives would posit that v^0 in these constructions is not a phase (see Chomsky, 2001; cf. Legate, 2003; Sauerland, 2003); see below on nominalizations that exhibit a passive morpheme as well. 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.

A consequence of our proposal that an object can stay low in its base-generated position is a potential interaction with syntactic ergativity and the triggering of Agent Focus. Coon et al. (2014) and Coon et al. (2021) propose analyses of syntactic ergativity where movement of the object in a transitive blocks A'-extraction of the subject. Only in such configurations, where the object moves, is AF possible. According to these analyses of AF, if there are Mayan languages where object raising does not take place (as we propose for STz' in some configurations), A'-extraction of the subject out of regular transitives should be possible. More precisely, in examples where an animate object does not control 3PL agreement, it must have stayed low. This would entail that extraction should be possible without AF. This prediction is not borne out in STz'; AF is still necessary in subject questions even when the object does not control agreement as in (89)b:

(89) *Unavailability of subject question in the active voice in STz'*

a.	*Naq	x–i–ru–loq'	i–k'e'	ak'?
	who	COM–3PL.B–3SG.A–buy	PL–two	chicken
	Intended: 'Who bought two chickens?'			
b.	*Naq	x–Ø–u–loq'	i–k'e'	ak'?
	who	COM–Ø–3SG.A–buy	PL–two	chicken
	Intended: 'Who bought two chickens?'			

(90) *Subject question in AF in STz'*

Naq	x–i–lq'–ow–a	i–k'e'	ak'?
who	COM–3PL.B–buy–AF–SS	PL–two	chicken
'Who bought two chickens?'			

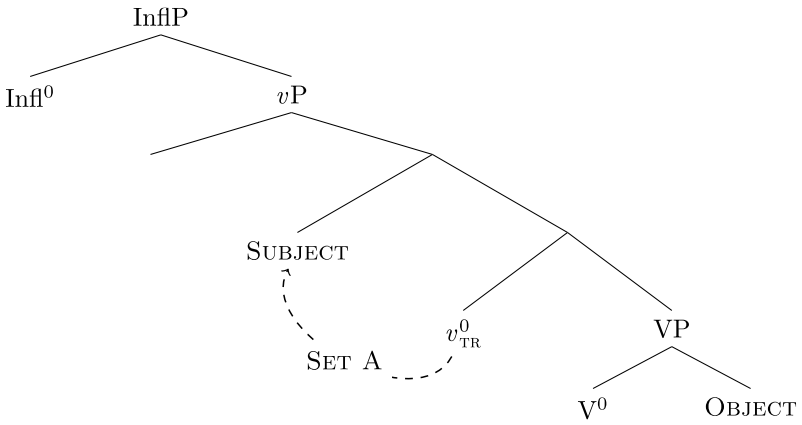
The data above have two consequences. First, the analyses of Coon et al. (2014) and Coon et al. (2021) for the source of syntactic ergativity cannot apply to STz'. In other words, the source of syntactic ergativity is different in STz', an issue that requires closer investigation in the future.[40] Second, the asymmetric behavior of the AF subject and object regarding optional agreement should be considered one of the properties of the construction in need of explanation, informing its analysis across Mayan.

[40] Interestingly, STz' seems to exhibit partial syntactic ergativity (see Douglas et al. 2017), since AF is not required in relativization (see Dayley 1985, p. 348 as well, which shows examples for San Juan Tz'utujil without AF).

6.2.2 Accessibility and Set A agreement

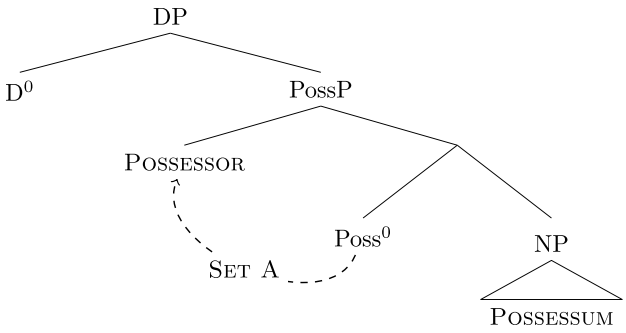
Now, consider Set A agreement. We assume that ergative (Set A) morphology arises from agreement between v^0 and an argument in its specifier (Aissen, 1992; Coon et al., 2014; see also Aldridge, 2004; Legate, 2008; Woolford, 1997 for arguments for inherent ergative case assignment). Hence, in a transitive construction, a subject is base-generated in the right position to Agree and trigger Set A agreement:

(91) *Successful agreement with a transitive subject*



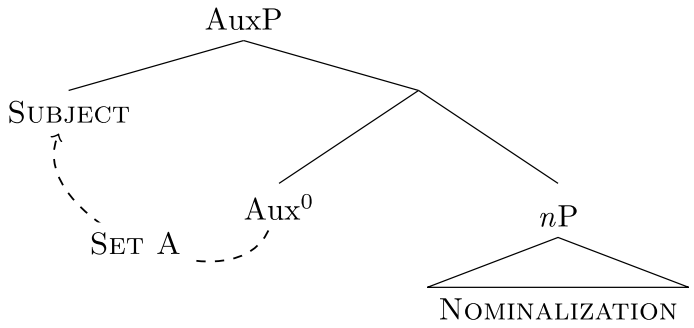
We assume that a parallel scenario is found with possessors. Although the head that triggers genitive (Set A) is Poss^0, instead of v^0, the possessor is also base-generated in a position where it is accessible:

(92) *Successful agreement with a possessor*



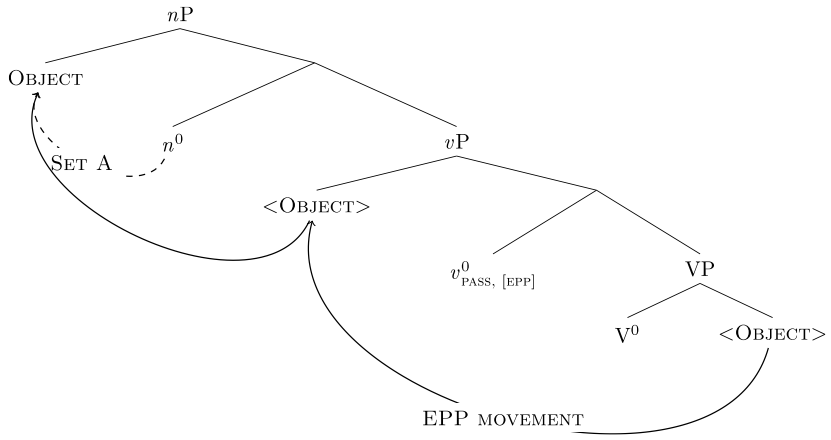
Turning to the progressive construction, we showed that the subject of the auxiliary must agree regardless of its animacy status (section 4.4). We proposed, then, that the subject of the auxiliary is generated in a specifier position and is accessible to the AGREE probe on Aux^0. In other words, it occupies a position analogous to that of transitive subjects and possessors, discussed above:

(93) *Agreement with subject of an auxiliary (repeated from (69))*



Second, the argument within a deverbal 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, even though we observe Set A in this case, not Set B. We assume that the complement argument moves inside the nominalization, becoming accessible to n^0 for AGREE.[41] Independent evidence for our proposal comes from analyzing the *-x* suffix in these nominalizations as a passive v^0 (see Dayley, 1985), which as we proposed, bears [EPP].

(94) *Agreement with object within a nominalization*[42]



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).

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[41] The final landing site could be either Spec,*v*P or Spec,*n*P; what is crucial is that the argument become accessible to the probe in n^0 above the v^0 phase boundary. We assume a landing site of Spec,*n*P, however, to maintain the generalization that Set A agreement always arises in a local specifier-head relation.

To conclude this section, let us discuss a prediction of our proposal that only transitive objects, AF objects, and arguments of an existential may stay low. We predict that there should be semantic consequences that arise from arguments staying low, signalled by the absence of agreement. For instance, one might predict scopal differences: 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 Tsotsil; Martin, 1998 on 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.

6.2.3 Pronouns revisited

Target accessibility should be relevant to pronominal arguments as well. In other words, if a pronoun target were inside a *v*P phase, for example, and the probe were outside of that phase, we would expect agreement to fail. However, we showed in section 6.1 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 STz' 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 AGREE probe.

6.3 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.

(95) *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.

7 Microvariation

In this section, we comment on microvariation regarding (optional) 3PL agreement across the Mayan family and within STz'. While we leave an in-depth exploration for the future, we lay out how our proposal and methodology can guide this research on Mayan and beyond.

7.1 Microvariation across Mayan

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 STz'). 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 agreement controller, 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. We would expect as well that this exercise would be fruitful when applied beyond the Mayan language family.

7.2 Microvariation in STz' and a methodological note

The data we presented are based on acceptability judgments obtained from one consultant, Andrea, in individual elicitations. All the judgments were robust and confirmed multiple times during three field trips separated by ~6-month periods as well as during on-line elicitations in 2021. We consider our methodology appropriate given that we take an I-language (Chomsky, 1986) approach to description and analysis (see, e.g., Paster, 2019). This approach readily accommodates microvariation among members of one speech community. Since we showed that the phenomenon of optional agreement (in STz' and Mayan more broadly) is regulated by a multiplicity of factors, it is not unexpected that microvariation would arise (see Fried et al., 2020 for microvariation in agreement optionality in K'iche' and a proposal of how it arises). We do indeed find this microvariation in STz', which we will illustrate briefly. Our purpose is to highlight some consequences that arise in pooling judgements across multiple speakers.

Let us contrast, then, the empirical picture we analyzed with data elicited with two other consultants, who are Andrea's sisters and live in the same household: Andreína and Rosalía. For reasons of space, we do not discuss all constructions but provide a representative snapshot:

(96) *Data comparison for all speakers; 3PL agreement (obligatory agreement shaded in gray)*

	ANDREA		ANDREÍNA AND ROSALÍA	
	Animate	**Inanimate**	**Animate**	**Inanimate**
	IDENTICAL PATTERN ACROSS ALL SPEAKERS			
possessor	obligatory	obligatory	obligatory	obligatory
positional stative argument	obligatory	obligatory	obligatory	obligatory
intransitive subject (non-agentive)	obligatory	optional	obligatory	optional
transitive object	optional	optional	optional	optional
	OBLIGATORINESS VS. OPTIONALITY CONTRAST			
argument of nominal predicate	obligatory	obligatory	obligatory	optional
	BAN ON AGREEMENT			
existential argument	optional	optional	obligatory	*banned*

First, some data are identical for all three consultants: agreement with possessors, positional statives (but not nominal statives), transitive objects, and unaccusative subjects. Second, some data differ between Andrea on the one hand, and Andreína and Rosalía on the other.

In carrying out our investigation, the first four data rows could lead us to assume that there is no variation across speakers. With this assumption in place, one could begin eliciting some examples with Andrea and others with Andreína and Rosalía, in order to fill in all cells for all constructions under analysis. Imagine a scenario in which in assessing the subject of a nominal predicate, we elicited data on animate controllers with Andrea (obligatory agreement) and data on inanimate controllers with Andreína and Rosalía (optional agreement). We would still arrive at an attested grammar (Andreína's and Rosalía's), but we would not have captured the individual grammar (Andrea's) where both types of arguments control agreement obligatorily. This mix-and-match approach would produce an even more undesirable result if we applied it to existential arguments. If we elicited data on animate controllers with Andrea again (optional agreement) and data on inanimate controllers with Andreína and Rosalía (banned agreement), we would arrive at a pattern (optional-banned agreement) that is not a part of anybody's grammar. Similarly, if we elicited data on animate controllers with Andreína and Rosalía (obligatory agreement), and data on inanimate controllers with Andrea (optional agreement), we would

arrive at a different pattern (obligatory-optional agreement) that is once more not a part of anybody's grammar.

To summarize, given the existence of microvariation here, the mixing-and-matching of data across speakers would have been inappropriate for the I-language approach we take.

8 Conclusions and future work

In this paper, we presented novel data from Santiago Tz'utujil regarding the realization of agreement. We argued that inanimate complements may lack D^0 in STz', thus being invisible for the AGREE probe, which results in default 3SG 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. Our proposal correctly predicted that all pronouns in STz' control agreement obligatorily because they are always visible and accessible to the AGREE probe.

Overall, our analysis made two broad contributions. First, we established a diagnostic for the base-position of an agreement controller based on optional agreement. This diagnostic is applicable to distinguish unaccusative and unergative predicates. Second, we proposed a source for optional agreement. While the syntactic operation AGREE is deterministic, optional agreement results from the availability of two syntactic representations, where one results in successful AGREE and another in failed AGREE.

From a comparative perspective, we showed that the phenomenon is subject to micro-variation, possibly at the level of idiolects. Assuming and I-language approach, 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 STz' references in the domain of agreement. 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 STz'. This might be expected if agreement and concord are underpinned by different syntactic operations (Norris, 2014, 2017), but not if they are underpinned by the same operation (Carstens, 2020).

Acknowledgments

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