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Pronouns and agreement in San Juan Atitán Mam

by

Tessa Scott

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Linguistics

and the Designated Emphasis

in

Indigenous Language Revitalization

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Amy Rose Deal, Co-chair

Professor Peter Jenks, Co-chair

Professor Line Mikkelsen

Professor Patricia Baquedano-López

Spring 2023

Pronouns and agreement in San Juan Atitán Mam

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Tessa Scott

Abstract

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Doctor of Philosophy in Linguistics

and the Designated Emphasis in

Indigenous Language Revitalization

University of California, Berkeley

Professor Amy Rose Deal, Co-chair

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The focus of this dissertation is the San Juan Atitán (SJA) variety of Mam, a Mayan language spoken in the highlands of Guatemala. This work brings together descriptive, theoretical, and revitalization threads research on this variety of Mam, which is a highly underrepresented variety in the literature on Mam. The dissertation contains a broad sketch of SJA Mam grammar as a whole, which contributes to the documentation and formal description of variation within the Mam language. The main empirical domain examined in this dissertation is that of pronouns and agreement. While object pronouns in Mayan languages are consistently realized on the verb via agreement, object pronouns in SJA Mam co-occur with default agreement on the verb and full pronouns in object position. This structure has consequences for syntactic theories of object licensing, the movement of objects over subjects, syntactic ergativity, and the realization of agreement morphology– in Mayan languages and beyond. Similarly unique in SJA Mam are subject and possessor pronouns: these pronouns are realized on the verb via agreement as well as reduced pronouns in argument position. The generalization emerges that pronouns undergo reduction only when they trigger agreement morphemes on the verb. The distribution of double marking of pronouns (agreement and pronouns) and the pattern of reduction suggests that morphological operations can be sensitive to whether individual morphosyntactic features have been Agreed with.

This theoretical research has been carried out alongside collaborative work with members of the Mam community, namely via Mam language and culture classes in which I was a co-instructor for over three years. In this dissertation, I discuss the history and impacts of the courses in addition to technologies and teaching strategies in order to inspire and provide examples for others engaged in revitalization work.

kye kyaqil qi wuk'l

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Chapter 1

Introduction

1.1 Preface

1.1.1 Positionality

The focus of this dissertation is the San Juan Atitán variety of Mam, a Mayan language spoken in the highlands of Guatemala. This work brings together descriptive, theoretical, and revitalization threads of my research on this variety of Mam, which is highly underrepresented in the literature on Mam. Before diving into the main theoretical contributions of this research, I feel it is essential to make explicit my positionality with respect to the Mam language, this research, and my research collaborators. I am a white, Anglo-American, English-speaking woman born and raised in the United States. As I write this I have two degrees in linguistics, and completing this dissertation will grant me a third. I first want to acknowledge that the act of being welcomed into spaces which allow me to learn Mam and to travel to many places throughout Guatemala to learn from and connect with the people and the land is a gift, one that I am not entitled to but have been so graciously given by the people I work with: a gift that I am endlessly grateful for and try to never take for granted.

Second, my ability and opportunities to even begin to ask questions about the structure of Mam from a theoretical syntactic perspective is an enormous privilege, one that is not granted to the vast majority of Indigenous Mam people. This privilege is disproportionately given to white, English-speaking, western-educated people like myself. The spaces in which I am encouraged to think analytically about the structure of the Mam language, as well as projects for revitalization, are within settler colonialism and the western university, whose ideological and physical foundations are rooted in colonizing desires (Simpson, 2017; la paperson, 2017).

However, it is within the context of the university that I aim to find pathways towards a future built by systems with decolonizing desires. Linguistics as a field of research has been built on and often continues to operate within these default colonizing methodologies. I hope that through my collaborative work as an ally to Indigenous communities, I can be an active participant, active listener, and active builder in constructing projects that center Indigenous futures, Indigenous prosperity, decolonizing methodologies (Tuhiwai Smith, 2021), and decolonizing desires. I hope to

continue towards a collaborative linguistic research program that has identifiable positive impacts on the lives of Mam individuals and communities.

1.1.2 Collaborators

The research in this dissertation is the result of extensive collaboration. My main collaborators are Henry Sales, Silvia Lucrecia Carrillo Godínez, and Cristina Méndez. While I worked with other speakers, and collaborated with other linguists in creating the appendices, these three constitute my main collaborators, and they have heavily shaped the direction, nature, and understanding of this research.

Henry Sales is a man in his early thirties born in San Juan Atitán. He immigrated to the US in 2011 and has lived in California since then, with interspersed trips back to San Juan Atitán. He learned Mam in the home and learned Spanish in secondary school starting around the age of 14. He started to learn English when he moved to the US in at the age of 20. Silvia Lucrecia Carrillo Godínez is a woman in her mid twenties born in San Juan Atitán. She lived in Huehuetenango for a number of years while she studied, though has moved back and now lives in San Juan Atitán. She learned Mam and Spanish in the home, and has been learning English mainly in school since the age of 21. Cristina Méndez is a Chicana woman in the doctoral program in Education at UC Berkeley engaged in an ethnographic and community-based research design projects with Maya Mam activists.

Sales and Carrillo Godínez were my main linguistic consultants for this research; elicitation interviews were conducted with each of them individually, and sometimes together. I worked with all three main collaborators– Sales, Carrillo Godínez, and Méndez– to provide Mam language and culture classes, discussed more in §1.4.

I also worked with Rebeca Martín Domingo and Geovany Aguilar García, two Mam speakers in their early twenties born in and living in San Juan Atitán. With these two speakers, much of my learning from them was done in the classroom or out in the community or on the land, though elicitation was also used. In addition to these named individuals, I attribute many hypotheses and ideas about the structure of the language, as well as my understanding of language ideologies and cultural beliefs, to countless spontaneous conversations with various community members in San Juan Atitán. This not only aided in my language learning as a second language speaker, but my structural understanding of the language as well.

Lastly, I collaborated with many undergraduate students at UC Berkeley through the Linguistics Research Apprentice Practicum (LRAP) throughout this research. Many of the LRAP participants attended and aided in the Mam language and culture classes; these students are Samba Kane, Nina Sirna, Jesus Urbano Gonzalez, Xingyue Tu, Marisa Benedito, Yanira Garcia, Kenneth Gallanosa, and Lorianne Fan. Additionally, three of these LRAPs have been directly involved in helping to produce the three appendices of this dissertation. Samba Kane and I worked together to produce the abbreviation guide in Appendix A; Lorianne Fan and I collaborated on the technology guide for the Mam language and culture classes in Appendix B, and Kenneth Gallanosa aided in the process of translating the texts in Appendix C, as well as subtitled the accompanying

videos for the texts that are available in the California Language Archive. More details on the nature of the collaboration are given in each appendix.

1.1.3 Methodology

1.1.3.1 Philosophy of collaboration

In my research I aim to use methodologies that center around collaboration and growth. For example, the labels “linguist” and “speaker” seem like safe labels to use in my research, linguist referring to myself, and speaker to the Mam speakers I collaborate with. But using those labels with too much rigor could stifle the growth of my Mam collaborators into “linguists” – meaning a person who is interested in and engaged in studying language scientifically, as well as my growth into a “speaker” of Mam – meaning a second-language learner, a person who actively speaks in Mam with others.

One important characteristic of the research in this dissertation is that I have been actively engaged in learning to speak Mam myself, in addition to actively sharing my thoughts, hypotheses, and analyses with my Mam collaborators – analyses which themselves often arise through discussions with native Mam speakers about their intuitions about the meaning and use of words and phrases, as well as their hypotheses and analyses of those words and phrases. In this sense, I try to find and create spaces where individuals in our collaboration team can fluidly transition their identities between speaker, linguistic, teacher, and student, as well as embody all at once.

I will give one specific example to highlight how I attempt to accomplish the above goal of creating spaces in which the roles of speaker, linguistic, teacher, and student are ever-changing and overlapping. In summer 2022, while visiting San Juan Atitán, I made a number of video and audio recordings of Carrillo Godínez and other Mam speakers speaking Mam in various settings. These texts can be found in Appendix C. After my trip, we decided to translate each text into both Spanish and English, and I decided to gloss each text to start building a glossed corpora of Mam. In order to produce the glossing and translation of the text in English and Spanish, we started with transcription of the Mam narrative. I uploaded the audio and video files to a shared drive and Carrillo Godínez transcribed each text in Mam. From there, I attempted to break the text down into sentences and clauses, working simultaneously to translate them to English and produce a linguistic gloss. This step resulted in informed guesses about the meaning and the structure of the sentences in the texts. From there, I quickly used Google translate to translate the English text into Spanish.

With the Mam transcription, my English guess, and the translator-generated Spanish, I met with Carrillo Godínez over Zoom. We listened to the texts and I gave the original Mam transcription provided by Carrillo Godínez phrase by phrase and asked for a Spanish translation. As she provided it, I typed it out, and took that as the final Spanish translation. I then, in the moment, had that automatically translate to English so that I could quickly grasp new vocabulary given in Spanish. We then often discussed a particular word or phrase in any or all of the three languages (Mam, Spanish, English), attempting to find the word or phrase in each language that accurately

captured the meaning being originally expressed in Mam. Eventually, we would decide on the best English and Spanish translation together.

Throughout this process, the roles that we each embodied overlapped and varied. Carrillo Godínez was the speaker (for the majority of the texts), the transcriber, and the translator to Spanish and often times English as well. She was also a teacher of both Mam and Spanish, helping me to more deeply understand the meaning of each word and phrase in Mam– using all three languages to explain it to me– as well as teach me new words in Spanish. As for myself, I was the videographer and data manager, a preliminary translator (to English), a linguist and “glosser,” but also a student of Mam and Spanish and often times a teacher of English when words came up in the English translation that were new to Carrillo Godínez. I also frequently had questions about Mam words I couldn’t parse or find the root of, in which case Carrillo Godínez, with her astute linguistic awareness and analytical skills, became the linguist as well, showing me where morpheme breaks were and giving me other examples of a given morpheme that she knows I am familiar with. The intricacies of this translation methodology are forever evolving as I learn more Mam and Spanish and Carrillo Godínez learns more English, and as the two of us learn to communicate using all three languages.

This collaborative philosophy of conducting linguistic research applies to goal setting and the direction of the research, aiming for clearly communicated collaborative principles at the outset of projects, as discussed by Leonard (2021). Different individuals within collaborations have different agendas/reasons for participating. While my initial agenda for doing this research was to collect data and produce analyses that furthered the goals of formal theoretical syntax, my Mam collaborator, Henry Sales, began a project to teach Mam language classes, which I talk about in depth in §1.4, expressing his goal of teaching the wider Oakland community about the Mam language and culture. Centering the collaboration between the two of us, I began to re-shape my research goals to include language teaching, and more broadly language revitalization. My goals continue to be molded and change as the collaboration teams I am apart of grow and evolve.

1.1.3.2 Data collection

Data from San Juan Atitán Mam included in this dissertation was collected between 2017 and 2023, both taking place in Oakland, California, and San Juan Atitán, Guatemala. The methodologies used for collecting the data used throughout this dissertation include: elicitation, text analysis, language learning in classroom setting, and observations in spontaneous speech. For elicitations, almost all of which are recorded and archived in the California Language Archive, these occurred as in-person (in Oakland, CA and in San Juan Atitán, Guatemala) or on-line meetings in which I asked for translations to and from Mam, Spanish, and English, which also included a number of other methodologies such as providing a context and asking for the acceptability of an utterance (characteristic of semantic elicitation), explicitly discussing the meaning of a word or the structure of an utterance, and asking for examples of a morpheme, word, or phrase. Other methodologies outside of elicitation included recording linguistic and cultural explanations and transcribing, translating, and analyzing these texts, which are provided in Appendix C. The last two methodologies– language learning in classroom setting and observations in spontaneous

speech– are harder to define and document, though they constitute a main source of my perspective on the structure of the language.

1.1.3.3 Data from other sources

In addition to providing data that I collected myself with Mam speakers, throughout many places in this dissertation I provide data from other sources. Most of the data are from other varieties of Mam in order to compare how San Juan Atitán is similar or different, while other data compares Mam to other Mayan languages. When using data from other sources, I default to keeping the glossing consistent with the source, with some exceptions which I make explicit here. I draw extensively on work by Nora England, who published on Mam over the course of five decades– from the 1970s through to 2017. Throughout this time, England’s analyses of the language greatly evolved, as did the conventions of the field. For this reason, regardless of the year of publication, I have updated the glosses in examples drawn from England’s work to match her glossing conventions in her 2017 paper “Mam” published in the book *The Mayan Languages*. For example, in her early work, England analyzed *ma* as a ‘recent past’ marker; however, in England 2007, she argues that *ma* is actually a proximate aspect marker. For this reason, I gloss instances of *ma* in her work prior to 2007 as proximate aspect.

In addition to changing glosses in order to be consistent with a scholar’s most recent analysis, I have also changed some glosses for translation purposes. For example, Pérez Vail 2014 is written in Spanish, and I have translated the glosses and translations into English. Another example of editing examples from the source comes from source examples which lack glosses altogether. This is the case for some data in England 1983a, and all data from Canger 1969 and Collins 2007. In all cases, the glosses I provide are aimed to reflect the analysis of the source.

The result of the decision to largely keep all glosses true to the original– with only the exceptions listed above– is that there are some morphemes which function the same or similarly across varieties of Mam that are glossed differently by different scholars throughout this dissertation. For example, the Set A person prefix *t-* is used in both Ixtahuacán and San Juan Atitán Mam for both 2sg and 3sg contexts. I gloss this prefix as 2/3sg in the SJA Mam examples, though most other Mam scholars gloss this morpheme as 2sg or 3sg depending on context.

1.1.4 Purposes of the dissertation

Finally, I also use this space to be clear about the four broad purposes of this dissertation. First, in many places throughout, specifically in the grammar sketch of SJA Mam in Chapter 2, the purpose is to contribute to the documentation and description of Mayan languages, specifically adding to the literature on variation within Mam. Secondly, in Chapters 3 and 4, the purpose is to contribute to generative linguistic theory in the fields of syntax and morphology. Thirdly, I aim to describe and discuss the Mam language and culture classes of which I was a co-instructor and curriculum developer. I want to share how we implemented these classes (the goal of Appendix B, a technology and teaching strategy guide for running an online Indigenous language course), in order to encourage and support others in their similar independent projects teaching Indigenous

language classes. Lastly, in addition to these purposes, one desired outcome of this dissertation is that Mam learners use the hundreds of Mam data examples to learn more about the structure of the language, and gain new vocabulary and phrases, with the help of Appendix A, which provides easy to understand definitions of the abbreviations found in Mam examples.

1.2 Introduction

1.2.1 Theoretical contributions

Within the Mayan language family, one central line of syntactic investigation is the structural and morphological manifestations of ergativity. Mayan languages are famously both ergative and head marking, indexing person, number, and case values via verbal agreement. While recent work has argued for a unified analysis of ergative case throughout Mayan as Voice agreement with transitive subjects (Coon, 2017), there are two distinct pathways to absolutive case in Mayan (Coon et al., 2014). The two types of absolutive Mayan languages can be identified by a constellation of syntactic characteristics, including the presence of syntactic ergativity, realized as the restriction against extracting ergative subjects. The first type of language is ‘high-abs(olutive)’: in these Mayan languages, absolutive is realized immediately after *tesne*/aspect/mood (TAM) morphology in the verbal complex and extraction of transitive (ergative) subjects is restricted. The second type is ‘low-abs(olutive)’: in these languages, absolutive is marked stem-finally and extraction of transitive (ergative) subjects is *not* restricted (Tada, 1993). For Coon et al. (2014) and Coon et al. (2021), these two characteristics are connected. These authors argue that in high-abs languages, objects are assigned (nominative) case by Infl, and must raise above subjects in order to be within the domain of Infl, while in low-abs languages, objects are assigned (accusative) case by Voice, and do not need to raise. Their analyses attribute the restriction on ergative extraction to the height of the object—its position between the ergative subject and \bar{A} probe in C blocks the subject from extracting.

Previous descriptions of Mam indicate that it possesses all of the characteristics of a high-abs language (England, 1983a; Coon et al., 2014). In this dissertation, I present data from SJA Mam which places it neither as a high-abs nor low-abs language as described above. While the linear position of absolutive morphemes is generally ‘high’ in SJA Mam (immediately after TAM marking) and there is a restriction on extracting ergative arguments, indicating object raising, objects are not licensed by Infl. This is evidenced most clearly by the lack of absolutive agreement for objects. The dominant pattern of object marking in SJA Mam is to realize object features with independent pronouns in object position; in these clauses, default (2/3sg) absolutive agreement appears on the verb.

I argue that the high position of absolutive marking for intransitive objects is derived via Infl agreement, and that default absolutive agreement for objects reflects the failure of the probe to Agree with the object. Taken together, the facts in SJA Mam suggest that objects are licensed by Voice, like low-abs languages. SJA Mam differs from other low-abs languages in that the licensing does not result in ϕ -agreement, but rather, in movement of the object above the subject. Thus,

SJA Mam has characteristics of both high-abs and low-abs languages. Crucially, the abstract Case alignment in SJA Mam is tripartite, like low-abs languages according to [Coon et al. \(2014\)](#). The difference is that typical low-abs languages collapse nominative and accusative case in the morphology, resulting in ergative/absolutive agreement, while SJA Mam realizes all three Case values distinctly.

The pattern of the absence of object agreement in SJA Mam thus has a nominative alignment: subjects are indexed on the verb with ergative or absolutive agreement while objects are not. It turns out that this difference between subjects and objects correlates with the realization of pronouns in argument position. In particular, first person pronouns are realized as independent pronouns when in object position, but subject first person pronouns appear in a morphologically and phonologically reduced form. I argue that this difference is critically connected to the fact that subjects trigger verbal agreement while objects typically do not.

The generalization that only agreed-with pronouns undergo reduction is related to the connection between agreement and pro-drop, going back to [Huang \(1982\)](#), with the strong hypothesis being that full agreement is needed to license pro-drop ([Baker, 2008](#)). In SJA Mam, we find that agreement licenses pronoun reduction, not full pro-drop. This is likely functionally connected to the fact that while SJA Mam makes a four way person distinction (first inclusive, first exclusive, second, third), verbal agreement in SJA Mam collapses the distinction between second and third person and first plural inclusive and exclusive. Thus, we see in SJA Mam that partial agreement licenses partial pro-drop (pronoun reduction).

By closely examining the patterns of default object agreement in SJA Mam, we find that Mayan languages exhibit patterns beyond the high-abs/low-abs distinction in [Coon et al. 2014](#), but that existing syntactic tools can account for the new patterns. By investigating the distributions (both syntactic and morphological) of both subject and object pronouns in SJA Mam, I provide evidence that the reduced pronouns are not the realization of an additional Agree relationship (*contra* [Scott 2020a](#)), but instead is the result of the reduction of subject and possessor pronouns which is conditioned by Agree.

This analysis contributes to the literature on the pronouns and agreement within Mam, specifically the literature on what I call the “disagreement enclitic,” =i, which has cognate forms in several Mam varieties ([England, 1990, 2017](#)). This enclitic is the resulting reduced subject pronoun used for first person agreed-with pronouns. It is used for pronominal categories in which the two underlying person features disagree in value ([Noyer, 1992; Collins, 2005a; Harbour, 2016](#)). The analysis of this morpheme suggests that not only can the grammar reference both positive and negative values of syntactic features, but it can reference the disagreement in value between two features as well ([Despić and Murray, 2018; D’Alessandro, 2020](#)).

In addition to the syntactic and morphological theoretical contributions of my research, part of my research includes language and culture revitalization through Mam language and culture classes. These classes represent a collaboration between myself, Sylvia Lucrecia Carrillo Godínez, Henry Sales, and Cristina Méndez, introduced in §1.1.2. These classes developed over the course of four years, and eventually became part of a transnational project which included teachers and learners of Mam from all across the U.S., Mexico, and Guatemala.

In the remainder of this introductory chapter, I first continue in this section with an overview

of previous literature on Mam in §1.2.3, with a focus on Mam dialectal variation in §1.2.4. I then turn to a background on the language as it is used both in San Juan Atitán, Guatemala in §1.3.1 as well as in diaspora communities in the US, with a focus on the San Francisco Bay Area in §1.3.2. In §1.4, I describe the formation process and impacts of Mam language and culture classes. Finally, in §1.5, I provide a summary of the dissertation and appendices.

1.2.2 Mam background

Mam is a member of the Mayan language family, which consists of about 30 languages, spoken primarily in Guatemala, Mexico, Belize and Honduras. Figure 1.1 shows a map of the current-day Mayan speaking area.¹ Mayan languages are generally classified according to four major branches, two of which are sub-grouped into two further secondary branches. The other Mamean languages are Tekitek (Teko), Awakatek, and Ixil. The Mamean languages and the K'ichean languages make up the Eastern Mayan branch of the language family, illustrated in Table 1.1 from Campbell (2017, 44).²

¹This map is based on Law 2014, 25; It is a derivative of “Present geographic distribution of Mayan languages in Mexico and Central America” by noahedits and cited in Royer 2022, 12.

²In the original table in Campbell 2017, Choltí was listed as “extinct.” In line with Hinton (2001) and Leonard (2008), I replaced this with the term “sleeping.”

Table 1.1: Classification of the Mayan Languages (Campbell, 2017, 44)

Huastecan	
	Huastec, Chicomuseltec
Core Mayan (Central Mayan)	
	Yucatecan
	Maya (Yucatec Maya), Lacandón
	Itzaj (Itzá, Itza'), Mopan
	Western Mayan
	Cholan-Tseltalan
	Cholan
	Ch'ol, Chontal (Yokot'an)
	Choltí (sleeping), Ch'orti'
	Tseltalan
	Tseltal, Tsotsil
	Greater Q'anjob'alan (Q'anjob'alan-Chujean)
	Q'anjob'alan
	Q'anjob'al, Akatek, Jakaltek (Popti')
	Mocho' (Motozintlec) (with Tuzantec)
	Chuj-Tojolabal
	Chuj, Tojolabal (Tojol-ab'al)
	K'ichean-Mamean (Eastern Mayan)
	K'ichean
	Q'eqchi'
	Uspantek
	Poqom
	Poqomam, Poqomchi'
	Central K'ichean (K'ichean Proper)
	K'iche'
	Kaqchikel, Tz'utujil
	Sakapultek
	Sipakapense
	Mamean
	Mam, Tekitek (Teko)
	Awakatek, Ixil

Mam is one of the largest of the Mayan languages with over 500,000 speakers in 2001 (Richards and Macario, 2003). It is spoken in the Departments of Huehuetenango, Quetzaltenango, and San Marcos in Guatemala.



Figure 1.1: Current-day Mayan speaking area (Law, 2014, 44)
Adapted by Royer (2022, 12)

1.2.3 Previous literature on Mam

One of the first modern descriptions of Mam was published by Sywulka (1966). This very short grammatical sketch describes Mam of San Ildefonso Ixtahuacán. Sywulka was a missionary and started working in the community in 1934. A few years later, Canger (1969) published her PhD dissertation at Berkeley called *Analysis in outline of Mam, a Mayan language*, which is a study of Mam spoken in Todos Santos Chuchumatanes written in the glossemic framework.

In the seventies, Nora England began publishing on San Ildefonso Ixtahuacán Mam, writing about the Mam person system (England, 1976a), directionals and verb semantics (England, 1976b), and space as a grammatical theme (England, 1978). England published an influential full length grammar in 1983 of San Ildefonso Ixtahuacán Mam (England, 1983b) and continued to publish through the 2010's until her death in 2022, mostly focusing on San Ildefonso Ixtahuacán Mam.

Topics in her research include ergativity (England, 1983a), the semantics of eating verbs (England, 1980), voice (England, 1988), adjectives (England, 2004), aspect (England, 2007), plural marking (England, 2011), word order (England, 1991), subordinate clauses (England, 1989, 2013a), text analysis (England, 2009, 2013b), dialectal variation within Mam (Cojtí and England, 1986; England, 1990), and revitalization and the state of Mayan linguistics (England, 1996, 1998, 2002b,a, 2003, 2007). In 2017, England published a 33 page grammar sketch of Mam (England, 2017) in *The Mayan Languages*, a comprehensive anthology of linguistic descriptions and analyses within the Mayan language family (Aissen, 2017b), which she co-edited with Judith Aissen and Roberto Zavala Maldonado.

In addition to England's 1983b grammar of San Ildefonso Ixtahuacán Mam, Pérez and Jiménez (1997) published a full length grammar of Cajolá Mam (Southern), which contains some comparative data with San Sebastian Huehuetenango Mam (Northern). Two studies of spatial reference and their relationship to culture were published by Godfrey (1981) on Tacaná Mam (Western) and Collins (2005a) on Comitancillo Mam (Central). Collins also published on code-switching avoidance as a strategy for revitalization (Collins, 2005b), and the inclusive/exclusive distinction (Collins, 2007). Recently Pérez Vail's 2014 master thesis provided an extensive description and analysis of the alignment of Cajolá Mam, arguing that transitive restrictions with respect to person and animacy constitute inverse and obviation systems.

None of the works listed above provide an in-depth description or analysis of San Juan Atitán Mam. Since I began working with Mam speakers in 2017, I have published on the placement of the polar question clitic in San Juan Atitán Mam (Scott, 2019), and the nature of subject and object licensing in San Ildefonso Ixtahuacán Mam (Scott, 2020b). I have also presented on several topics in Mam, including relative clauses (Scott, 2018), a phonological analysis of subtractive morphology in San Ildefonso Ixtahuacán Mam and San Juan Atitán Mam (Lapierre et al., 2019), and inclusivity in San Juan Atitán Mam (Scott, 2020a), San Juan Atitán Mam language and culture revitalization in a diaspora community (Méndez et al., 2021), as well as the topics in this dissertation on San Juan Atitán Mam: object licensing (Scott and Sales, 2021) (Chapter 3) and reduced subject/possessor pronouns (Scott, 2023) (Chapter 4).

1.2.4 Mam dialect variation

Mam is considered to be the most internally diverse Mayan language (England 1989; 1990; 2017), and has thus been of interest to linguists studying variation. Two dialect surveys were published around the same time in the eighties— Godfrey and Collins (1987) and Cojtí and England (1986)—and together these two works established three major dialect regions of Mam: Northern, Southern and Western, illustrated in Figure 1.2, a map of Western Guatemala divided into the three dialect regions from England (1983b, 8).³

³This map has been adapted by Kean Combs from the map in England 1983b, 8 to include color-coded dialect regions, remove town centers, and update language names.

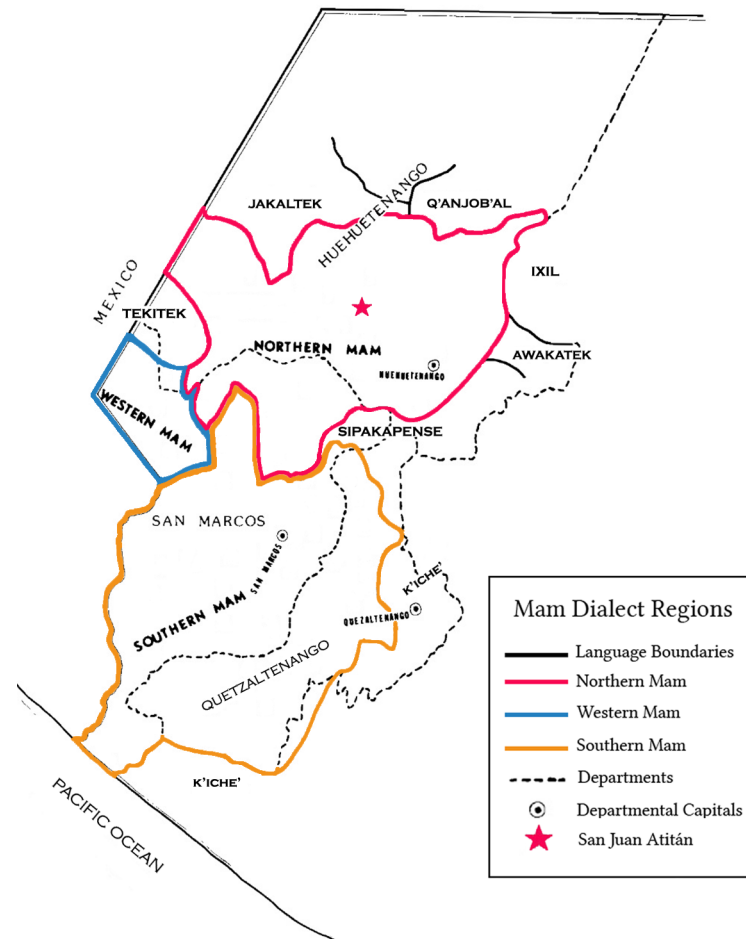


Figure 1.2: Mam dialect regions (adapted from England 1983b, 8)

Most recently, Simon (2019) argues for a reclassification of Mam varieties on the basis of phonetic distance research into four distinct dialect groups: Seleguá, Southern, Western, and Todos Santos. Her re-grouping mostly targets Todos Santos as distinct from the rest of the Northern Mam varieties, with Seleguá constituting ‘Northern Mam minus Todos Santos.’ Her reclassification is summarized in Table 1.2.

Table 1.2: Mam dialect groups (Simon, 2019, 39)

Group	Municipality
Seleguá	San Juan Atitán
	Santiago Chimaltenango
	San Gaspar Ixchil
	San Ildefonso Ixtahuacán
	San Pedro Necta
	San Rafael Pétzal
	Santa Bárbara
	San Sebastián H.
Southern	<i>Core:</i>
	Concepción Chiquirichapa
	San Martin Sacatepéquez
	San Juan Ostuncalco
	San Miguel Sigüilá
	Cajolá
	<i>Edge:</i>
	Cabricán
	Comitancillo
	Tajumulco
Western	Tacaná
	Tectitán
Todos Santos	Todos Santos Cuchumatán

Additionally, Pérez et al. (2000) provide a grammar sketch which includes rich dialectal comparison for the purposes of documenting the differences in order to develop a standard form of the language. In addition to Pérez et al. (2000), two full length grammars of Mam have been published, though none of these focus heavily on SJA Mam. Possibly the most well known grammar of Mam in the linguistic field was published by England (1983b).

1.3 Mam in context

1.3.1 Mam in Guatemala

Mam is spoken primarily in the departments of Huehuetenango, San Marcos, and Quetzaltenango in Guatemala. Though, there has been a large amount of internal migration of Indigenous groups within Guatemala, and thus Mam is spoken in many parts of the country. Given the nearly 500 years of contact with Spanish, and the internal migration within Guatemala, Mam has been in contact with a number of languages, and many Mam speakers are multilingual. Huehuetenango in particular is major area of linguistic contact between Mayan languages, involving Mamean,



Figure 1.3: San Juan Atitán, Guatemala. Photo by Silvia Lucrecia Carrillo Godínez.

K'ichean, and Q'anjob'alan languages, and has produced a number of discernable areal innovations (Law, 2017, 116).

The focus of this dissertation is the variety of Mam that is spoken by speakers who live in or who are from the town of San Juan Atitán, pictured in Figure 1.3. I refer to this variety throughout the dissertation as San Juan Atitán Mam or SJA Mam. Even within the town of SJA there is considerable variation among speakers, which I indicate throughout this dissertation, referring to speakers by name.

Based on informal interviews with speakers living in San Juan Atitán, as well as my own experience there in 2021 and 2022, San Juan Atitán is a town in which Mam is spoken daily by almost everyone living there; it is spoken in all domains of life, including schools and government meetings. According to Carrillo Godínez, in primary schools, instruction is almost completely in Mam, with only some Spanish, while in more advanced levels, instruction is about 75% in Mam and 25% in Spanish. All schools in SJA teach Mam as a language and some teach cultural classes as well. In one high school, students are required to wear their traditional clothes every Thursday, an initiative to ensure that Mam culture is passed on to the young generation.

In San Juan Atitán there have been efforts to celebrate and valorize not only Mam language and culture, but the diversity found within Mam itself. La Asociación Maya Mam de San Juan Atitán, a former Mam language and culture activist organization, organized two Mam cultural

festivals in 2021 and 2022. At these festivals, groups were invited from numerous Mam towns to perform traditional songs, dances, and cultural enactments, an act of celebrating diverse traditions uniting as Indigenous Maya people.

Another example of grassroots organization and activism supporting Mam people, language, and culture, can be found in the work of Silvia Lucrecia Carrillo Godínez, who currently works with Sic4Change (<https://www.sic4change.org/>), a social justice non-governmental organization in Guatemala. In her work with Sic4Change, Carrillo Godínez provides workshops to midwives, also known as *comadronas* in Spanish, and *ǰb'ol* in Mam. These workshops provide information and training about important health practices, the importance of vaccines, pregnancy and childbirth, and the physiological impacts of poor nutrition and pollution. Carrillo Godínez provides these workshops almost exclusively in Mam, since the vast majority of *ǰb'ol* are women in San Juan Atitán who do not speak Spanish. This work is an example of the presence of efforts in Guatemala to provide information and care in Mam, acknowledging its value and importance.

1.3.2 Mam diaspora

While the precise history of the migration of Mam people to the Bay Area is unknown, the first major migration from Guatemala to the US began in the 1970s due to oppression, war, and Indigenous genocide in Guatemala (Jonas and Rodríguez, 2015). Since then, thousands of Mam people from Guatemala have immigrated to the San Francisco Bay Area (SFBA).

While some Mam speakers in the SFBA are tri-lingual in Mam, Spanish and English, most Mam speakers are predominately bilingual in Mam and Spanish, or, for some Mam children born and raised in the US, Mam and English. Alongside the multilingualism in Mam communities, some Mam speakers living in the US are monolingual in Mam, or know a very limited degree of Spanish. For these Mam speakers in particular, living in the SFBA presents linguistic challenges, since Mam is not yet widely recognized as a language of public information, much of the work force, or the education system.

Henry Sales, native Mam speaker from San Juan Atitán living in the SFBA, estimates that there are 10,000 Mam speakers living in the SFBA, based on work he carried out in 2020 providing linguistic aid in Mam to individuals filling out the census. Mam speakers living in the SFBA tend mostly to be from the department of Huehuetenango, with the two towns San Juan Atitán and Todos Santos being the most represented. In addition to these towns, Mam speakers in the SFBA have migrated from San Pedro Necta, Santiago Chimaltenango (Chimb'al), San Sebastian H. (Sanse, Sqisan, Sqisal), and San Rafael Petzal. While many more towns are likely represented in the SFBA, this preliminary list reveals the SFBA is a destination for migrants from several Northern Mam towns, all in Huehuetenango.

San Juan Atitán migrants have a large community in Oakland, though this is not the only location of folks who migrated from San Juan Atitán. Likewise, Mam speakers from various town have settled in large communities all across the US, with large populations in large communities are in Washington, Oregon, Texas, and Florida. The two most important factors influencing the destination for migration are i) whether a relative or friend is there and ii) whether there is work.

For the first reason, the number of people from San Juan Atitán in Oakland continues to grow as people choose that destination due to there already being a community settled there.

Indigenous Mayan people, with Mam speakers making up one of the largest groups of Mayan migrants, face many challenges arriving in and living in the US, and chief among them is a language barrier. Mam speakers, many of whom are unaccompanied minors, most of the time do not speak English, and many times little to no Spanish either. One issue with respect to this language barrier can be seen in the legal system. In the 2020 *New Yorker* article, “A translation crisis at the border,” Rachel Nolan writes that Mam was the ninth most common language used in immigration courts in 2019, according to the Department of Justice. This high demand for Mam language interpretation is met with a low supply of Mam language interpreters, resulting in countless Mam speakers being rejected asylum based on translation-based miscommunications (Nolan, 2020).

The language barrier is a huge challenge: without English and Spanish language fluency, Mam speakers struggle to find transportation, housing, and a job. It can also make it difficult get a US education, as most high schools and colleges are English-instruction, and while some offer Spanish instruction, there are no designated Mam-instruction schools. However, one school in East Oakland is working to provide support for teen and young adult immigrants, most of whom speak Mam. Rudsdale Newcomer High School (RNHS) is the first and only school in the US which is both a newcomer school, meaning that it serves recently arrived immigrants, and a continuation school, offering an alternative high school diploma program with a flexible school schedule due to students’ jobs outside of school, family needs, or other circumstances. According to Vice Principal Batten-Bowman, the majority of RNHS students are Indigenous and around 65% RNHS student speak Mam or come from a Mam-speaking community. Several of the staff at RNHS are Mam speakers, allowing close communication with students’ families that would otherwise not be possible.

I volunteered at RNHS in 2022 and had the opportunity to meet the students, teachers, staff, and administrators. The personnel at RNHS not only provide the students with support tailored to their needs as Indigenous immigrants, but are excited about learning and celebrating Mam language and culture, visible by their commitment to learning Mam language and supporting students in wearing traditional clothes and performing traditional music and dance.

RNHS is one among many efforts in the SFBA to support Mam people and celebrate Mam language and culture. Other examples of support for Mam people include food drives for Mam families and Mam language services for filling out the 2020 census as well as unemployment paperwork (Garofoli, 2020). One example of celebrating and using Mam language and culture include cultural festivals, featuring live marimba music, traditional dance performances, home-made Guatemalan food and chances to learn about Mam traditions and language (Williams, 2018; Rasilla, 2022). Other efforts include a Mam radio station, Radio B’alam (Simas, 2020), church services in Mam, and Mam language and culture classes, taught by a group of instructors including myself, discussed in §1.4.

1.4 Mam language and culture classes

1.4.1 Overview

Mam language and culture classes began in Oakland in 2019. Envisioned by Henry Sales, and eventually co-taught by Silvia Lucrecia Carrillo Godínez, myself and Cristina Méndez, the classes aimed to teach second-language learners of Mam in the San Francisco Bay Area about the Mam language so that they could better understand and relate to the Mam population in their communities. Méndez (2021) describes the possibility of transformational change through language students learning; she shows how this change opens space for solidarity and community building by challenging western ideologies and has the potential to create communities that actively support Indigenous language revitalization movements.

The main audience for our classes were second-language learners of Mam who either wanted to connect with their own Mam/Maya heritage or to connect with the Mam people in their lives, or both. While the majority of our classes were taught in English, Spanish was used to teach many times as well, as many of the students of the class spoke Spanish either as a first or second language.

The demographic of the students in our classes makes our project unique compared to many other language revitalization efforts that mostly focus on efforts directly with members of the linguistic and cultural community (Hermes et al., 2012). For this reason, our language and culture classes can hopefully expand what it means to do linguistic and cultural revitalization work, and what it means to be a revitalization project. An overarching goal of our classes is to create spaces to celebrate Mam language and culture, and to expand its use across time and place, including both the ancestral homelands of Mam in Guatemala and throughout the diaspora, both now and in the future. Crucially needed for this goal is a strong coalition between Indigenous Mam communities and allies. This leads to the long term goal of building projects which continuously support and strengthens Mam ways of knowing and being.

1.4.2 History of the classes

The idea to start a Mam language class was born in Fall 2018. This was the first semester following a year long field methods course on Mam at UC Berkeley, taught by Lev Michael. Henry Sales was the language consultant for the course, and I was one of the students in the class. During the year long course, Sales and I met regularly for both one-on-one and class elicitation, and I developed an excitement about studying Mam, partly due to its rich morphology and syntax and its phonology that was challenging to learn, and partly due to Sales's energy and passion about Mam. In Fall 2018, Sales was inspired by the Nauatl program at Laney College and began talking with Professor Arturo Dávila about the possibility of starting Mam classes at Laney. By Spring 2019, Sales invited me to join his Saturday Mam lessons on Laney's campus, and I joined enthusiastically.

During this first semester, we met once a week at the Latinx Center on Laney College's campus, though we eventually upgraded to a medium sized classroom. A small group of three to five

people came to these initial lessons, most of whom wanted to learn Mam as a second (or third) language, because they work with Mam speakers in their professional positions. At the beginning, while I was a student of the class, I was able to provide help in explaining how to produce certain sounds that are hard for native English speakers, and I took on a dual role as both learner and an assistant to Sales's lessons.

During the summer of 2019, a group led primarily by Sales and Emily Clem, professor of linguistics at UC San Diego and then recent graduate of UC Berkeley's linguistics PhD program, facilitated five weekly Mam language workshops, organized by theme. The topics included: the sounds of Mam, health, body, and clothing, the classroom and playground, and food. It was after these summer workshops that Sales and I decided to co-teach the courses together. Over the course of the next two semesters, we started an email list serve, made a website to host our materials and announcements, and added in more classes. In Spring 2020, we held both beginner classes and intermediate classes, the latter for learners who had already taken our Mam class and wanted to progress in their learning. As the collaboration between myself and Sales grew, we began to create semester-long plans, offer homework, and develop a curriculum of topics, including cultural topics, and teaching strategies. It was during this semester that the COVID-19 pandemic shook the world and sent all gatherings on-line.

1.4.3 Online teaching

Our classes in Spring 2020 ended with a few meetings using an online video meeting software, as we all—teachers and students—dealt with the effects of the pandemic as well as the online classroom learning curve. In Fall 2020, we offered a fully online Mam language and culture class. Adapting to an online learning environment resulted in two incredibly beneficial developments for our class. The first is the addition of Mam teachers in Guatemala into our classroom, and the second is the international and sprawling reach of our class to students all across the U.S., Canada, and Mexico.

Upon moving our classes online, we were able to invite Mam teacher Silvia Lucrecia Carrillo Godínez to join our teaching team. Carrillo Godínez is a native Mam speaker, Mam teacher, and women's and Indigenous rights activist living in San Juan Atitán, and since Fall 2020 has become deeply integrated into our teaching team. Having her training as a Mam teacher, her perspective on cultural topics, and her lived experiences and knowledge about life as an Indigenous Mam woman was extremely influential to our classes. In addition, her energy, patience, and passion became fundamental to our joyful class environment. Over the course of Fall 2020 and the following four semesters, we were also joined via Zoom by the several Mam language experts living in Guatemala. Both our teaching team and students are incredibly grateful for their contributions, and for their continued work in language revitalization work. Their addition to the class came as a direct result of moving our classes online, a change we made in direct response to the COVID-19 pandemic.

The second unexpected positive outcome of moving our classes online is that we were no longer limited to only teaching students who live in the Bay Area. Students from all across North America and Mexico have taken our Mam classes. Since 2020, we have had students residing in

at least 20 different U.S. states register for our classes including Washington, Oregon, California, Montana, Colorado, New Mexico, Texas, Minnesota, Illinois, Indiana, Ohio, Kentucky, Tennessee, North Carolina, Florida, Pennsylvania, Maryland, New Jersey, New York, and Massachusetts. This incredible fact reflects the increasing presence of Mam communities across the U.S., and that these communities are spread out across the country, not confined to one state or region.

1.4.4 Impacts on the students

One of the most unique aspects of our classes is that most of students do not speak Mam as a native language. The overwhelming majority of our students are folks living and working in communities with increasing numbers of Mam speakers, e.g. – lawyers with Mam clients, teachers with Mam students, and health care workers with Mam patients. Our students work with large Mam populations and often face language barriers when trying to communicate. While speaking Spanish may seem like an obvious solution to the language barrier, it is not uncommon for Mam speakers to speak little to no Spanish, particularly for Mam women, who have less opportunities in Guatemala to attend school where Spanish is taught, as they face greater expectation to raise children and work in the home than men. These community-oriented workers in Oakland wanted to reduce the language barrier by learning Mam. To get a better idea of why our students take our classes, below are some anonymous student answers to the question “Why are you interested in participating in these Mam language workshops? Describe any relevant experience you have with Mam speakers or the Mam language.”

- (1)
 - a. I work with unaccompanied migrant children to provide legal services, many of whom are Guatemalan and native Mam speakers. I often encounter children who speak Mam, and it would be very useful to have a basic knowledge of the Mam language to be able to connect with these children and build rapport with them in their native language.
 - b. I teach at an elementary school where a large population of my school’s students are speakers of Mam. There are no teachers who speak Mam. I speak Spanish fluently but need to learn Mam to be able to communicate with my students and their families and support the importance of your mother tongue and multilingualism, especially for Indigenous languages.
 - c. I currently provide special education services to a student who speaks Mam.
 - d. I work as an emergency medicine physician. I want to provide better and appropriate care to my Mam patients.
 - e. I have lived in Fruitvale for the past year and would like to have a stronger connection with my neighbors, some of whom are Mam speakers.

As these quotes illustrate, the Mam diaspora community all across the U.S. is being recognized by many facets of the broader community. The response to recognizing Mam people is a desire to connect, to provide appropriate care, to build rapport in their native language.

Additionally, we have had several students with Mam or Mayan heritage who take the class as

a way to re-connect with their culture, their family, and their identity. In response to the question of why they are taking the class, one student responds:

- (2) My grandfather was from a Mam community and his mother was the last in our family to speak our language. I hope to learn enough Mam to speak with Mam speakers here in Oakland as well share my knowledge with my family.

While the student population in these courses included individuals with Mam heritage, there were very few Indigenous Mam students who already had high first or second language proficiency in the language. Understanding why this might be the case comes back to the initial motivations for starting the classes, which were to meet the requests of non-Mam allies in Oakland to learn Mam as a second language in order to strengthen their abilities to communicate and connect with Mam speakers in their lives and their work. Because that is where the classes began, we created materials and lessons for learning the language from scratch, which in turn continued to draw in that student population. It is an important area of future growth in these classes to ask how we can meet the needs of Mam speakers with a wide range of heritages, proficiencies, goals, and motivations.

In the courses, we taught vocabulary, grammar, and conversational skills. In addition to these linguistics aspects of Mam life, instructors Sales and Carrillo Godínez led lessons dedicated to sharing their personal experiences and knowledge of Mam cultural practices, spiritual beliefs, histories and world views which we called “Cultural Lessons.” All of these lessons together– both linguistic and cultural– head towards beginning to understand Mam as *un mundo* ‘a world,’ exemplifying the belief that language encompasses not only words but knowledge systems, beliefs, and values (Méndez, 2021).

Méndez (2021) examines the experiences of students in the Mam classes and theorizes how the context and pedagogies of the class create a space for the decolonial practice of changing perspectives and joining cultural worlds. Méndez has been a student, teacher, and researcher of the class, and at times all three. Through her observations and interviews with students and instructors, she discusses how the course “invites students to engage with other worldviews” and the impacts of stepping into new worldviews and negotiating cultural understandings with patience and care. Sales explains that the goal for the students is not necessarily fluency in Mam, but an understanding of the experiences of Mam people, and to create a safe space to combat the discrimination that Mam speakers have experienced.

Informal conversations with students suggests that, for some individuals who took the classes, these goals have been met and the impacts have been tangibly felt. One student, Ashton Crowley,⁴ an elementary school teacher with many Mam speaking students, after taking the class for two semesters, offered her reflections via email:

“What I learned profoundly deepened my experience with my students. I still have an extremely basic understanding of Mam and know very little. What I do speak, I say with such a thick accent that most of my kids don’t understand much. But here’s what your class did in my/our world:

⁴The student's name has been replaced with a pseudonym.

It widened the resources I had available to my students. Though I had already found the legend of the hummingbird, I certainly didn't know about the poetic Nab'l Ajaw that my students spent weeks exploring. They got to see and listen to Henry and Lucrecia read it, and through that, see themselves represented in literature in school. I also have access now to the other stories you all have written and recorded, and that's a huge resource!

I learned about the sounds of Mam and a systematic way to spell. Though I am imperfect in it, having formally learned those sounds and letters helps me decipher the different sounds I hear. I can even try to write down things my students say and go back and reread them in a way that I couldn't have if I had only written it phonetically in English. I might not have captured the sounds of the xwinaq or different ks and qs.

The students could hear me learn and practice their language, in a way that I think was more exciting to them than if I had barely progressed beyond those ten or so words I mentioned earlier. It made them want to say more to me, and feel confident in being my teacher, too. I've snuck in simple phrases like "okx ten" [that's all] or "at nim u'j" [there's a lot of paper] (when I hand them a lot of paper!) in conferences with parents, and I've watched kids' faced LIGHT UP. The parents sometimes light up just as much. I'm not sure I would have found a reason to use the word "cat" or "dog" in a conference.

I still have a very limited vocabulary in Mam, but I have so much more language and cultural knowledge than I ever could have had otherwise, and that is thanks to the class you offered. It has made my relationships with my students so much richer.

Finally, there was the impactful experience of visiting Xjan Xwan [San Juan Atitán, Guatemala], which was an honor that I didn't even deserve. Going to Xjan Xwan with the class also positioned me to visit a student's family and build that relationship. The trip also vastly widened by perspective of what my students' worlds may be like, though I recognize how little I really know, and that everybody's story is unique."

I include Ashton's full reflection on the class to highlight the multiple dimensions of impact. Ashton reveals that her understanding of the language has helped her understand her students better. This understanding was also communicated to the students and their families through not only words but actions— seeing traditional prayers in Mam in the classroom, as well as being able to use Mam in interactions with the students' families is an act of showing understanding and dedication to hold multiple perspectives and experiences in life and in the classroom.

Ashton's testimony invites us to continue investigating and questioning the impacts of the course on other students, such as those working in legal and healthcare sectors. How have students' understandings of Mam life, language, and history changed and how has that impacted their work with Mam people? Additionally, how have the classes impacted the lives of the students taking our class to re-connect with their own heritage? Méndez (2021) highlights that the

classes have the potential of changing relations between Mam people and wider communities, and Ashton's testimony invites us ask about the experiences of Mam speakers who have interacted with, worked with, and lived in community with the students of our class by asking: how have the decolonial potentialities of building safe spaces of resistance, greater relationality, and bridges between communities been realized and evolved?

1.5 Summary and structure of the dissertation

This dissertation is divided into three main content chapters. The first provides a grammatical sketch of SJA Mam grammar. The second and third chapters constitute case studies of the syntax and morphology of pronouns in the language. The chapters are followed by appendices consisting of practical guides and glossed texts.

As mentioned, Chapter 2 provides a grammatical sketch of SJA Mam. As outlined above, while there is much work on Mam, there is almost no work on the variety spoken in San Juan Atitán. In Chapter 2 I describe the structure of this variety, highlighting key areas of the grammar which differ from previous analyses of Mam. I start with providing an overview of the phonology, including consonant allomorphy processes and a brief discussion of the use of pitch. I then turn to words, phrases, matrix and embedded clauses, and complex clauses involving extraction and question formation. This grammatical sketch provide more information than is necessary for understanding the theoretical arguments of Chapters 3 and 4. It serves as a description of San Juan Atitán, to add to our understanding of the language as a whole, as well as our understanding of the variation present within the language.

Chapter 3 provides an analysis of the unique pattern of pronominal transitive object marking in SJA Mam. I provide an analysis of case licensing and the nature of Agree within the clause, concluding that SJA Mam has a tripartite licensing system, and that this is manifested as morphologically tripartite system of verbal inflection. Finally, I situate these findings in the literature on Mayan case licensing, concluding that SJA Mam is predicted if we loosen the connection between the height of absolutive (Set B) morphology and the licenser of transitive objects, as well as the connection between the licenser of transitive objects and syntactic ergativity.

Chapter 4 provides an analysis of the reduced pronouns used for subjects and possessors. First I provide diagnostics showing that the reduced subject/possessor pronouns are in argument position and do not constitute agreement. I then summarize the literature on what I refer to as the 'disagreement' enclitic pronoun, =*i* in SJA Mam, showing that it realizes the disagreeing values of bivalent person features, following previous work on this morpheme by Noyer (1992); Collins (2005a); Despić and Murray (2018). Lastly, highlighting the differences between full pronouns and reduced subject/posses pronouns, I argue that an impoverishment rule is necessary to account for the reduced pronouns in SJA Mam.

Appendix A, a collaboration with Samba Kane, provides a guide for understanding the abbreviations used throughout this dissertation. The intended audience for this Appendix are those interesting in learning about the structure of Mam and do not have a background in linguistics. While providing an understandable guide to all of the concepts in this dissertation is not feasible,

this appendix explains the meanings of the abbreviations found in the three (or four) line linguistic examples, so that learners can gain new vocabulary and new insights into the structure of Mam.

Appendix B, a collaboration with Lorianne Fan, provides a practical guide outlining the use of technology in the Mam language and culture courses. The purpose of the guide is to provide a detailed description of the tools, strategies, and methods we utilized, in order to demystify the process of independently implementing a language course, and in order to lay the groundwork for future conversations about the impacts of technology on teaching Indigenous languages online.

Appendix C provides several glossed texts in SJA Mam. All of the texts were recorded in 2022 and 2023, and each of the texts is linked to subtitled videos archived in the California Language Archive (CLA) in the collection “Documentary Materials on Mam” (CLA 2020-15) (Carrillo Godínez et al., 2023). These texts include short narrations given to exemplify the use of a singular morpheme, recordings of explanations of word in the fields of San Juan Atitán, and a discussion of discrimination.

Chapter 2

San Juan Atitán Mam grammar sketch

2.1 Introduction

In this chapter, I provide a detailed overview of various aspects of SJA Mam grammar. As mentioned in Chapter 1, Mam is considered to be the most internally diverse Mayan language (England 1989; 1990; 2017), and it is therefore important to document different varieties of Mam. This chapter constitutes an overview of the grammar of Mam spoken in San Juan Atitán, Huehuetenango, Guatemala. This variety has not been described in depth; the only linguistic documentation of SJA Mam includes brief data points in dialect surveys and comparative work (Cojtí and England, 1986; Pérez and Jiménez, 1997; Simon, 2019). Simon (2019) locates SJA Mam as part of the Seleguá dialect group, a grouping which includes all of the Northern Mam dialects of Mam (as described in England (1983b)) to the exclusion of Todos Santos, which Simon (2019) categorizes in its own group.

SJA Mam displays several unique characteristics that have not been widely documented for other varieties of Mam, ranging from visibility requirements on demonstratives to the lack of consistent object agreement on verbs. I use the space in this chapter to describe both aspects of the language that are consistent across Mam varieties as well as to highlight the areas where SJA Mam differs. In order to create an in-depth grammatical overview of SJA Mam, this chapter does not feature in-depth dialectal comparison. Instead, I focus on aspects of SJA Mam grammar, focusing on areas of the grammar that are unique to Mam within the Mayan language family, and areas of SJA Mam that are unique within the Mam varieties.

I begin in §2.2 with a description of SJA Mam phonology. This does not constitute a thorough investigation into the phonology, but an overview of the phonemic inventory, some vowel and consonant processes, and a brief note on pitch. In §2.3, I describe major word and phrasal categories including inflection, the noun phrase, relational nouns and demonstratives. §2.4 breaks down the verbal complex, describing aspect, verbs, and nonverbal predicates. In §2.5, I provide a description of simple clause structure, touching on ergativity, voice, word order, and negation. In §2.6, I discuss the various types of embedded clauses. Lastly, in §2.7, I describe operations of extraction and question formation in SJA Mam. §2.8 summarizes the chapter.

2.2 Phonology

2.2.1 Inventory: consonants and vowels

Shown in Tables 2.1 and 2.2, SJA Mam has an extensive phoneme inventory. In the tables, the IPA symbols are given for each sound, and, when different, the orthography is provided in angle brackets. The orthography used throughout this dissertation is that which was adopted by La Academia de Lenguas Mayas de Guatemala for Mam in 1991.¹ Throughout this section, examples given in the orthography are given in <>, underlying representations are given in // and surface representations are given in []. In later sections, only the orthography is used unless otherwise noted. In addition to the 27 consonants shown in Table 2.1, some Spanish loan words retain the sounds [b], [d], [r], and [g]. Within the series of glottalized consonants, the bilabial /ɸ/ and the uvular /q/ are implosives, while the rest are ejectives. Note that vowel length is not indicated in the current orthography; single vowel graphemes are used for both short and long vowels.

Table 2.1: Consonant phonemes

	bilabial	dental	alveolar	post alveolar	retroflex	palatal	velar	uvular	glottal
plosive	p	t					k	q	ʔ <'>
affricate			t͡s <tz>	t͡ʃ <ch>	t͡ʂ <tx>	kʲ <ky>			
glottalized	ɸ <b'>	tʰ	t͡sʰ <tz'>	t͡ʃʰ <ch'>	t͡ʂʰ <tx'>	kʲʰ <ky'>	kʰ	qʰ <q'>	
fricative			s	ʃ <š>	x ʂ <x>			χ <j>	
nasal	m		n						
flap			r <r>						
approx.	w		l			j <y>			

Table 2.2: Vowel phonemes

	short		long	
	front	back	front	back
high	i	u	i: <i>	u: <u>
mid	e	o	e: <e>	o: <o>
low		a		a: <a>

2.2.2 Vowel qualities and processes

There are ten vowel phonemes in SJA Mam distinguished by frontness, height, and length. Minimal pairs illustrate the vowel inventory for short vowels in Table 2.3 and long vowels in Table 2.4.

¹The post alveolar affricate, /ʃ/ <š>, is alternatively spelled with <xh>, <sh> or <x>.

Table 2.3: Short vowel contrasts

Vowel qualities	Minimal and near minimal pairs	
i ≠ e	/ik ^j / [ik ^j] ‘pass by’	/ek ^j / [ek ^j] ‘chicken’
e ≠ a	/qe/ [qe] ‘to us, INCL’	/qa/ [qa] PLURAL
a ≠ o	/aχ/ [aχ] REL DET	/oχ/ [oχ] ‘avocado’
o ≠ u	/soχ/ [soχ] ‘wolf’	/suχ/ [suχ] ‘woman’

Table 2.4: Vowel length contrasts

Vowel quality	Minimal and near minimal pairs	
i : ii	/tʃi/ [tʃi] ‘go’	/sii/ [sii] ‘fire wood’
e : ee	/ʃe/ [ʃe] ‘road/path’	/tʃee/ [tʃee] ‘tree’
o : oo	/tlok ^ʔ / [tlo ^w ʔ] ‘3SG.POSS root’	/tloq ^ʔ / [tloo ^ʔ] ‘3SG.POSS adobe’
a : aa	/taq ^ʔ / [taʔ] ‘pain’ ‘start’	/taa ^ʔ / [taaʔ] ‘3SG.POSS tongue’

In SJA Mam, surface vowels are also distinguished by creaky voice. These are not phonemic vowels, but rather arise due to an underlying adjacent glottal stop, illustrated in (1). Vowels followed by an underlying glottal stop are pronounced with a creaky quality on the second half of the vowel. Vowels in this environment are always long, making it difficult to tell the underlying length of the vowels in these contexts. I assume that the vowels in these words are underlyingly short, though, nothing prevents their underlying forms from also being long.

- (1) Phonetic creaky vowels: /Vʔ/ → [Vʔ̰]
- | | | |
|---------------------|-------------|------------------|
| <i ^ʔ x> | ‘corn’: | /iʔx/ → [iʔ̰x] |
| <jte ^ʔ > | ‘how many’: | /jteʔ/ → [jteʔ̰] |
| <qo ^ʔ > | ‘us’: | /qoʔ/ → [qoʔ̰] |
| <u ^ʔ j> | ‘book’: | /uʔj/ → [uʔ̰j] |
| <a ^ʔ > | ‘water’: | /aʔ/ → [aʔ̰] |

Previous analyses of Mam also describe creaky vowels as arising from a nearby glottal stop or glottalized consonant (England, 1983b; Simon, 2019). In SJA Mam, the vowel + glottal stop (Vʔ) sequence always results in a creaky quality on the vowel and never results in a true glottal stop consonant. However, the surface sequence [Vʔ̰] is found in the language as the phonetic realization of underlying /Vq/ sequences.² This phonological process creates a contrast between a creaky vowel [Vʔ̰] deriving from /Vʔ/ and a [Vʔ̰] sequence originating from a /Vq/ sequence. In SJA Mam, all word final /q/ are realized as [ʔ], shown in (2). This particular reduction of /q/ to [ʔ] word finally creates a contrast between a creaky vowel and a true Vʔ sequence, and minimal pairs are abundant, shown in Table 2.5.

²Some ejectives are also reduced to glottal stops in these environments, discussed in §2.2.3.2.

- (2) Phonetic glottal stops: /Vq/ → [Vʔ]
- | | | | |
|----------|----------------------|------------------------------------|--------------------------------------|
| <kyq'i'> | 'air, wind': | /k ^h q ^h iq/ | → [k ^h q ^h iʔ] |
| <le'> | 'thief': | /leq/ | → [leʔ] |
| <q'o'> | 'chilacayote squash' | /qoq/ | → [qoʔ] |
| <q'u'> | moutain name | /quq/ | → [quʔ] |
| <q'a'> | 'fire' | /qaq/ | → [qaʔ] |

Table 2.5: Creaky vowel / Vʔ contrast

Vowel qualities	Minimal and near minimal pairs	
[ɯ] ≠ [uʔ]	/q ^h uuʔ/ [q ^h uu]	'group of 10 chicks' /q ^h uq/ [q ^h uʔ] 'mountain name'
[a] ≠ [aʔ]	/aʔ/ [aa]	'water' /aq/ [ʔaʔ] 'vine'
[o] ≠ [oʔ]	/tlooʔ/ [tloo]	'3SG.POSS fruit' /tlood/ [tlooʔ] '3SG.POSS adobe'

Pérez et al. (2000, 43) discusses the reduction of the glottalized uvular consonant in Mam. In their study, the authors do not discuss whether this sound is an ejective or implosive, but refer to this sound as [qʔ] represented as <qʔ> in the orthography. I understand this sound to be the equivalent of /q/ in SJA Mam, as it represents the uvular member of the glottalized series. Pérez et al. (2000, 43) believe that this erosion began in San Rafael Petzal, the pattern shown in (3), and spread to other Northern towns such as Santiago Chimaltenango, San Sebastian H. San Pedro Necta, San Gaspar Ixhil, Todos Santos, Cabricán, San Martín Sacatepéquez and Tajumulco.

- (3) San Rafael Petzal Mam /qʔ/ erosion Pérez et al. (2000, 43)
- | | | |
|---------|-----------|-----------|
| 'fire' | /qʔa:qʔ/ | → [qʔa:ʔ] |
| 'adobe' | /lo:qʔ/ | → [lo:ʔ] |
| 'bean' | /tʃenaqʔ/ | → [tʃenʔ] |

England (1983b, 52) describes Ixtahuacán Mam, a Northern Mam variety not in the Pérez et al. 2000 sample, as allowing free alternation between ejectives/implosives and glottal stops word finally, though throughout the grammar, only the forms with uvular consonants, shown in (4), are presented in her grammar.

- (4) SJA Mam / Ixtahuacán Mam (England, 1983b, 34) comparison
- | | | SJA | Ixtahuacán |
|--------|----------------------|---------------|------------|
| <q'o'> | 'chilacayote squash' | /qoq/ → [qoʔ] | [q'ooq'] |
| <q'u'> | moutain name | /quq/ → [quʔ] | [q'uuq'] |
| <q'a'> | 'fire' | /qaq/ → [qaʔ] | [q'aaq'] |

In particular, Pérez et al. (2000, 44) show that in Tacaná Mam a similar process of /qʔ/ erosion is happening in the younger generations but more generally across the environments of the word.

In Tacaná, in addition to word final erosion of /qʔ/, even some word initial instances of /qʔ/ are deleted or realized as [ʔ] shown in (5).

- (5) Tacaná Mam /qʔ/ erosion Pérez et al. (2000, 44)
- | | |
|---------------|------------------|
| ‘fire’ | /qʔa:qʔ/ → [aaʔ] |
| ‘adobe’ | /lo:qʔ/ → [lo:ʔ] |
| ‘anger/fight’ | /qʔo:χ/ → [ʔo:χ] |

The emergence of [Vʔ] sequences arising from underlying glottal uvular consonants is important for the inventory of vowels in SJA Mam for two reasons. The first is that it creates a surface contrast between [V̥] and [Vʔ], which could lead to the phonemicization of creaky vowels. The second is that speakers consider both [V̥] and [Vʔ] as types of vowels. Silvia Lucrecia Carrillo Godínez, Mam speaker from San Juan Atitán, when discussing the inventory of vowels in Mam, lists the five base vowel qualities [i, e, o, u, a] as each having 4 variants, shown in Table 2.6.

Table 2.6: SJA Mam vowel inventory – by Silvia Lucrecia Carrillo Godínez

short	long	creaky	glottal
i	ii	i̠	iʔ
e	ee	e̠	eʔ
o	oo	o̠	oʔ
u	uu	u̠	uʔ
a	aa	a̠	aʔ

I add Carrillo Godínez’s twenty vowels of SJA Mam to this discussion because as a native speaker and teacher of Mam, her perspective on these categories is crucial. In addition, the predictability of the creaky vowels and [Vʔ] sequences may be decreasing: while at one point word final /q/ may have been in free variation with /ʔ/, this erosion is becoming obligatory in SJA Mam, and full minimal pairs for creaky vowels and [Vʔ] suggest a path towards phonemicization.

2.2.3 Consonant processes

In this section, I describe two major patterns of consonant allomorphy: nasal assimilation and glottal ejective/implosive erosion. These two processes are robust throughout SJA Mam and constitute the major consonant phonological processes that create discrepancies between the orthography and the phonology. In addition to the two processes in this section, SJA Mam seems to follow the same consonant allomorphy patterns described by England (1983b) for Ixtahuacán Mam: the plosives /p/, /t/, and /k/ become aspirated in final position; the plosive /q/ becomes affricated in final position; the glottal /ɸ/ is always an implosive, and it is almost always voiceless. As for affricates and fricatives, they do not show notable allophonic differences. For further discussion, I direct the reader to England 1983b, 25 for an overview of these processes in Ixtahuacán Mam.

2.2.3.1 Nasal assimilation

Nasal consonants in some words seem to be unspecified for place of articulation and alternate based on the following consonant as well as their position in the word. In these words, nasal consonants are pronounced velar word finally, bilabial before bilabials, and alveolar elsewhere, illustrated in (6) for the root /tʃaŋ/ ‘nose’ where N stands for a place assimilating nasal. This pattern seems to be a lexical property of some morphemes and is not constant across the language: (7) shows that not all word final nasals are velar, and (8) shows that not nasals before the bilabial consonant /b/ are bilabial.

- (6) root /tʃaŋ/ ‘nose’
 <txamb’j> ‘nose’: [tʃamɸχ]
 <ntxa’ni> ‘my nose’: [ntʃaŋni]
 <t-txa’n> ‘3SG.POSS nose’: [ttʃaŋ]

- (7) Not all word final nasals are velar:
 <on> ‘bee’: [on] / *[oŋ]
 <ch’im> ‘grass’: [tʃim] / *[tʃiŋ]

- (8) Not all nasals before /b/ are bilabial:
 <onb’il> ‘help’: [onɸil] / *[omɸil]

Two morphemes with place assimilating nasals are the antipassive $-(\text{ə})\text{N}/$ and the directional suffix $-(\text{ə})\text{N}/$. The antipassive suffix appears on most intransitive verbs, regardless of the presence of an object. When the antipassive suffix is word final, the nasal consonant is velar; when the antipassive is followed by the disagreement enclitic $=/i/$,³ the nasal is alveolar, illustrated in (9).

- (9) [ma qo waŋ]
 Ma qo wa-n.
 PROX B1PL eat-AP
 ‘We (inclusive) ate.’

- (10) [ma qo wani]
 Ma qo wa-n=i.
 PROX B1PL eat-AP=DISAGR
 ‘We (exclusive) ate.’

In (9) and (10), the only morpheme distinguishing first plural inclusive from first plural exclusive is the person marking enclitic $=/i/$. This morpheme also distinguishes second person singular from third person singular, illustrated for transitive subjects in (11) and (12), where the phonetic form of the verb root and affixes is given in the first line. In transitive clauses, verbs typically appear with the directional suffix, $-(\text{ə})\text{N}/$, a glottalized nasal that follows the verb stem. When

³See §2.3.1.3 and Chapter 4 for more details about this enclitic.

this suffix is word final, the nasal is velar; when this suffix is followed by the person marking enclitic, =/i/, the nasal is alveolar– the same pattern as the nasal in the antipassive suffix. Despite the person marking enclitic =/i/ in (11) being the only morpheme distinguishing the subject as second person, speakers often omit this enclitic in fast speech, shown by the optionality of the enclitic in (11). Interestingly, even if the enclitic is dropped, the nasal consonant of the directional suffix remains alveolar, indicating that it is not word final. Thus, speakers can infer the presence of the person marking enclitic from the alveolar place of articulation of the nasal, and in turn infer that the subject is second person, not third.

- (11) ... [tʃoŋ(i)] ...
 Ma Ø tzaj t-q'o-'n(=i) pan w-i=y.
 PROX B2/3SG DIR:come A2/3SG-give-DS=DISAGR bread A1SG:RN:DAT=DISAGR
 'You gave me bread.'

- (12) ... [tʃoŋŋ] ...
 Ma Ø tzaj t-q'o-'n pan w-i=y.
 PROX B2/3SG DIR:come A2/3SG-give-DS bread A1SG:RN:DAT=DISAGR
 'She gave me bread.'

2.2.3.2 Glottal consonant erosion

As previously discussed in §2.2.2, the uvular implosive /q/ is reduced to a glottal stop [ʔ] word finally. In this section, I provide data from the ejectives /kʰ/ and /k'/ as well as the implosive /q/ in initial, medial, and final position. For each of these glottalized consonants, some amount of reduction to glottal stops is found, although the degree of reduction and environment of reduction differs for each sound.

Starting with the uvular implosive, /q/, it is always reduced to [ʔ] in word final position, as we saw in the previous section.

- (13) *[q]# *word final [q]
 <q'o'> 'chilacayote squash' /qoq/ → [qoʔ] *[qoq]
 <q'u'> mountain name /quq/ → [quʔ] *[quq]
 <q'a'> 'fire' /qaq/ → [qaʔ] *[qaq]

In addition, in V_C context, the uvular implosive /q/ is typically but not always reduced to [ʔ]. Shown in (14), the verb /meqt/ 'to heat up' or 'to reheat' must be pronounced with a glottal stop.⁴ However, word medial /q/ is not always reduced, shown in (14) for the noun *ajxnaq'tzal* 'teacher,' in which both the uvular implosive and glottal stop are acceptable.

⁴The underlying form of this verb /meqt/ is inferred given its form in Ixtahuacán Mam: <meq't> 'to heat up' (England, 1983b, 116, 265, 268).

- (14) word medial /q/
- | | | | | |
|---------------|---------------|--------------|---------------|---------------|
| <meq't> | 'to (re)heat' | /meqt/ | *[meqt] | ✓[meʔt] |
| <ajxnaq'tzal> | 'teacher' | /aχsnaqʔsal/ | ✓[aχsnaqʔsal] | ✓[aχsnaʔʔsal] |

In intervocalic position, /q/ is reduced to [ʔ] in unstressed syllables only. The primary data suggesting that this is the pattern comes from the minimal pair in (15) and (16). The verb /leqal/ 'to lick' has initial stress, and (15) shows that when /q/ is the onset of an unstressed syllable, reduction to [ʔ] is obligatory.⁵ Compare that to the verb /laqol/ 'to buy' in (16), which has final stress, and the uvular implosive is the onset of a stressed syllable. The opposite pattern is found; only the uvular /q/ is acceptable and reduction to [ʔ] is impossible. In line with this pattern, /q/ is never reduced to [ʔ] in word initial position in monosyllabic words, shown in (17). Speakers comment that pronouncing these words with an initial glottal stop sounds like a child's language before they learn to make the implosive [q] sound.

- (15) unstressed /q/
- | | | | | |
|---------|-----------|----------|-----------|-----------|
| <le'al> | 'to lick' | /'leqal/ | *['leqal] | ✓['leʔal] |
|---------|-----------|----------|-----------|-----------|
- (16) stressed /q/
- | | | | | |
|----------|----------|----------|-----------|-----------|
| <laq'ol> | 'to buy' | /la'qol/ | ✓[la'qol] | *[la'ʔol] |
|----------|----------|----------|-----------|-----------|
- (17) word initial /q/
- | | | | | |
|---------|-----------------|--------|--------|--------|
| <q'il> | 'to take/bring' | /qil/ | ✓[qil] | *[ʔil] |
| <q'e'n> | 'alcohol' | /qe'n/ | ✓[qeɲ] | *[ʔeɲ] |
| <q'ol> | 'to give' | /qol/ | ✓[qol] | *[ʔol] |

The ejective /k^j/ undergoes a similar erosion process as the uvular /q/ to [ʔ]. However, when it is reduced, the glottal stops retains a forward or somewhat palatal quality from the palatal ejective, and is not a simple glottal stop [ʔ]. I transcribe it as [iʔ], though, alternatively, this sound could be a glottalized glide, such as [jʔ]. The reduction is optional in word final position, shown in (18) and V_C contexts, shown in (19).

- (18) word final /k^j/
- | | | | | |
|---------|---------------------|---------------------|----------------------|----------------------|
| <niky'> | 'what time' | /nik ^j / | ✓[nik ^j] | ✓[ni ⁱ ʔ] |
| <eky'> | 'chicken' | /ek ^j / | ✓[ek ^j] | ✓[e ⁱ ʔ] |
| <toky'> | 'hole' | /tok ^j / | ✓[tok ^j] | ✓[to ⁱ ʔ] |
| <maky'> | 'affirmative/ready' | /mak ^j / | ✓[mak ^j] | ✓[ma ⁱ ʔ] |
- (19) word medial /k^j/
- | | | | | |
|-------------|------------------------|-------------------------|--------------------------|--------------------------|
| <toky'san> | 'there are many holes' | /tok ^j 'san/ | ✓[tok ^j 'saɲ] | ✓[to ⁱ 'saɲ] |
| <yeky'b'il> | 'presentation' | /yek ^j 'bil/ | ✓[yek ^j 'bil] | ✓[ye ⁱ 'b'il] |

⁵The underlying form of this verb /leqal/ is inferred given its form in Ixtahuacán Mam: <leeq'al> 'to lick' in (England, 1983b, 301).

The few intervocalic examples of /kʲ/ in my data show full optionality between [kʲ] and [iʔ], the same pattern found for word final position. Additionally, as expected, monosyllabic words beginning with /kʲ/ cannot be reduced.

- (20) intervocalic /kʲ/
 <qoniky'an> 'night' /qo'nikʲ'an/ ✓[qo'nikʲ'an] ✓[qo'niʲʔan]
 <spiky'an> 'clear' /'spikʲ'an/ ✓['spikʲ'an] ✓['spiʲʔan]
- (21) word initial /kʲ/
 <ky'aj> 'lazy' /kʲ'aχ/ ✓[kʲ'aχ] *['iʔaχ]
 <ky'ixb'il> 'punishment' /'kʲ'ixb'il/ ✓['kʲ'ixb'il] *['iʲixb'il]
 <ky'lel> 'shepard' /'kʲ'lel/ ✓['kʲ'lel] *['iʲlel]

Lastly, the voiceless velar ejective /k'/ can be reduced to a simple glottal stop in final position for some speakers, for some words, illustrated in (22). Speakers agree on the optionality between [tuk'] and [tuʔ] for the conjugated relational noun meaning /tuk'/ 'with.' All speakers also agree on the unacceptability of [ʔsaʔ] as for /ʔsak'/ 'rough.' For other words, speakers disagree on whether the final /k'/ can be reduced; some accept [uʔ] and some do not. Carrillo Godínez explains that in the pronunciation of [uk'], there is truly a [k'] sound in final position, though it is "extremely quiet".

- (22) word final /k'/
 <tuk'> 'with' /tuk'/ ✓[tuk'] ✓[tuʔ]
 <uk'> 'louse' /uk'/ ✓[uk'] % [uʔ]
 <tzak'> 'rough' /ʔsak'/ ✓[ʔsak'] * [ʔsaʔ]

When /k'/ appears after [o], the ejective can optionally reduce to a glottal stop with the addition of a small [w] approximant following the [o], which I transcribe as [ʷʔ], illustrated in (23). The /ok'/ in this context cannot be reduced to [oʔ].

- (23) /ok'/ sequence
 <k'ok'j> 'delicious' /k'ok'j/ ✓[k'ok'j] ✓[k'oʷʔj]
 <tlok'> '(3SG POSS.) root' /tlok'/ ✓[tlok'] ✓[tloʷʔ]

In a V_C context, /k'/ can optionally be reduced to [ʔ], illustrated in (24). There are not many examples of intervocalic [k'] in my data, but the pattern in /yek'an/ suggests that it optionally reduces in onset of unstressed syllables. Lastly, as we saw for both /q/ and /ky'/, /k'/ cannot reduce to [ʔ] in word initial position, regardless of whether it is followed or preceded by consonants, shown in (25).

(24) word medial /k'/

<tuk'l>	'with'	/tuk'l/	✓[tuk'l]	✓[tuʔl]
<ak'j>	'new'	/ak'χ/	✓[ak'χ]	✓[aʔχ]
<yek'an>	'show'	/yek'an/	✓[yek'an]	✓[yeʔan]

(25) word initial/onset /k'/

<k'ul>	'plant (noun)'	/k'ul/	✓[k'ul]	*[ʔul]
<k'ol>	'to shut up'	/k'ol/	✓[k'ol]	*[ʔol]
<sk'et>	'to be chosen'	/sk'et/	✓[sk'et]	*[sʔet]
<k'wa'l>	'child'	/k'waʔl/	✓[k'waʔl]	*[ʔwaʔl]

In summary, the glottalized consonants /q/, /kⁱ/, and /k'/ each lose their primary place of articulation in some environments, with each sound showing a slightly different pattern. Reduced versions of each phoneme are /q/ > [ʔ], /kⁱ/ > [iʔ], and /k'/ > [ʔ] (and [wʔ] after [o]). Some generalizations can be made; the first is that /q/ is the only one to show any obligatory reduction (in word final, V_C, and unstressed V_V environments). The sounds /kⁱ/ and /k'/ show no obligatory reduction; both optionally reduce in all environments except word initial, with the caveat that at least one word resists reduction of final /k'/. This suggests a continuum of reduction for each, with /q/ being the farthest along, and /k'/ being the least far along.

2.2.4 A brief note on pitch

In SJA Mam, while pitch does not carry a considerable functional load, there are noticeable and obligatory pitch difference that accompany certain vowel qualities. As illustrated in Table 2.7, short vowels followed by a glottal stop (arising from /q/ or /k'/) are produced with a high level pitch while long vowels followed by a glottal stop have a low dipping pitch contour. These two pitch patterns also contrast with glottalized vowels which have a mid falling pitch contour. This creates pairs and triplets of words which differ in vowel length, vowel quality and final [ʔ] and also very clearly differ in pitch. In Table 2.7, ʔ represents high-level pitch, ʔ-ʔ represents low dipping pitch, and ʔ-ʔ represents mid falling pitch.

Table 2.7: Pitch minimal pairs

orth.	UR	SR	tone	vowel	English
<ta'>	/taq̄/	[taʔ]	ᵛ	short	'pain' / 'start'
<ta'>	/taaq̄/	[taaʔ]	ᵛH	long	'his/her/their (sg.) tongue'
<ta'>	/taaʔ̄/	[taa]	ᵛ	creaky	'is'
<tlok'>	/tlok'̄/	[tloʷʔ]	ᵛ	short	'(3SG poss.) root'
<tlo'>	/tlook'̄/	[tlooʔ]	ᵛH	long	'(3SG poss.) adobe'
<tlo'>	/tlooʔ̄/	[tloo]	ᵛ	creaky	'(3SG poss.) fruit'
<kyaj>	/k ^j aaχ/	[kyaaj]	ᵛH	long	'four'
<kya'j>	/k ^j aaʔ̄χ/	[kyaaj]	ᵛ	creaky	'sky'

While pitch alone is not contrastive amongst minimal pairs, it does clearly accompany vowel length and vowel quality in the examples illustrated above. These preliminary data warrant more investigation into the pitch pattern within and across words, as well as how vowel length, glottalization, adjacent glottalized segments, as well as vowel quality affect pitch.

2.3 Words and phrases

2.3.1 Person/number inflection

There are three types of person/number inflection in Mam: Set A agreement, Set B agreement, and a series of reduced subject/possessor pronouns.⁶ After describing the forms and distributions of the Set A and Set B paradigms, I turn to discussing the reduced subject pronouns, which include the disagreement enclitic pronoun =*i* (glossed DISAGR based on the morphological analysis provided in Chapter 4).

2.3.1.1 Set A

Set A agreement inflects transitive verbs for subjects and co-occurs with reduced subject/possessor pronouns. In (26), the transitive verb bears the Set A prefix *n-*, as well as the disagreement enclitic pronoun =*i*, both reflecting features of the first person singular transitive subject.

- (26) Ma ∅ tzaj n-laq'o-'n=i pan.
 PROX B2/3SG DIR:come A1SG-buy-DS=DISAGR bread
 'I bought bread.'

⁶In addition to the inflectional paradigms of Set A/B and reduced subject/possessor pronouns, independent pronouns express person and number features. Subjects of nonverbal predicates and transitive objects are expressed via independent pronouns and no inflection on the verb. See Section 2.4.3 for more on these pronouns.

Set A agreement, along with reduced subject/possessor pronouns, also inflect nouns with the features of the possessor. In (27), the second person singular possessor is referenced on the noun via the Set A prefix *t-* and the disagreement enclitic pronoun *=i*.

- (27) **t-wiḡ=i**
 A2/3SG-cat=DISAGR
 ‘your cat’

Set A agreement always appears as a prefix on the verb root, with little variation throughout the paradigm; the only allomorphy is found for first person singular which has a prevocalic allomorph (*w-*), and a preconsonantal allomorph (*n-*), shown in (28) and (29) respectively.

- (28) **w-uj=i**
 A1SG-book=DISAGR
 ‘my book’
- (29) **n-yol=i**
 A1SG-word=DISAGR
 ‘my word’

Set A agreement makes a singular/plural distinction, and while the language as a whole makes a four way person distinction (first inclusive, first exclusive, second, and third), Set A collapses second and third person, creating a first/non-first person distinction. I gloss the ‘non-first’ person category, as ‘2/3’ meaning ‘second and third’ person. The full paradigm of Set A markers and reduced subject/possessor pronouns combining in a possessive context is shown in Table 2.8, in which the prefixes constitute Set A agreement and the ‘...’ indicates the slot for the noun. An example paradigm of the possessed noun *wiḡ* ‘cat’ is given in Table 2.9.

Table 2.8: Possessive inflection paradigm: Set A- ... reduced pronoun

	SG		PL
1SG	n-/w- ... =i	1 EXCL	q- ... =i
		1 INCL	q-
2SG	t- ... =i	2PL	ky- ... =i
3SG	t-	3PL	ky- ... qa

Table 2.9: Possessive noun inflection for *wiḡ* ‘cat’

	SG		PL
1SG	n-wiḡ=i	1EXCL	q-wiḡ=i
		1INCL	q-wiḡ
2SG	t-wiḡ=i	2PL	ky-wiḡ=i
3SG	t-wiḡ	3PL	ky-wiḡ qa

2.3.1.2 Set B

Set B agreement and reduced subject/possessor pronouns inflect intransitive verbs for subjects. In (30), the intransitive verb is preceded by the Set B marker *chin*, and is followed by the dis-

agreement enclitic pronoun =i, both reflecting features of the first person singular intransitive subject.

- (30) Ma **chin** yo-n=i.
 PROX B1SG wait-AP=DISAGR
 ‘I waited.’

In other varieties of Mam and in other Mayan languages, Set B markers inflect for transitive objects in addition to intransitive subjects (England, 1983a; Coon, 2016). While Set B markers referencing transitive objects are acceptable for speakers of SJA Mam, shown in (31), the most common way to express transitive objects is with *default* Set B agreement (2/3SG) and full object pronouns, shown in (32), both for a first person singular object. See Section 2.5.2 of this chapter as well as Chapter 3 §3.3.2 for more on the realization of transitive objects in SJA Mam.

- (31) Agreeing Set B for objects
 Ma **chn**=ok t-ke’y-an Mintz.
 PROX B1SG=DIR:in A2/3SG-see-DS Mintz
 ‘Mintz saw me.’
- (32) Default Set B for objects
 Ma **tz**'=ok t-ke’y-an Mintz **qin**=i.
 PROX B2/3SG=DIR:in A2/3SG-see-DS Mintz 1SG=DISAGR
 ‘Mintz saw me.’

Set B markers alternate between independent words (when preceding a consonant initial word) and proclitics (when preceding a vowel initial word). For most person/number combinations, namely, 1SG, 1PL, and 2/3PL, the prevocalic forms are derived from the preconsonantal forms by either deleting the vowel in the preconsonantal form (1SG) or transforming the vowel into an approximant or fricative in the preconsonantal form (1PL and 2/3PL). The full paradigms for preconsonantal and prevocalic Set B forms are given in Table 2.10 and Table 2.11, respectively.

Table 2.10: Intransitive subject inflection paradigm (preconsonantal): Set B= ... reduced pronoun

	SG		PL
1SG	chi(n) ... =i	1EXCL	qo ... =i
		1incl	qo
2SG	∅ ... =i	2PL	chi ... qi
3SG	∅	3PL	chi ... qa

Table 2.11: Intransitive subject inflection paradigm (prevocalic): Set B= ... reduced pronoun

SG		PL	
1SG	chn= ... =i	1EXCL	qw= ... =i
		1INCL	qw=
2SG	tz'=/tz=/k'= ... =i	2PL	chj= ... qi
3SG	tz'=/tz=/k'=	3PL	chj ... qa

The realization of B2/3SG is null if either of two conditions are met: i) it occurs before consonants, shown in (33), or ii) it follows the imperfective aspect and precedes a vowel, shown in (34).

(33) Null B2/3SG: before consonants

- a. Ma \emptyset b'et txin.
 PROX B2/3SG walk CLF:girl
 'She walked.'
- b. O \emptyset yol-n=i.
 PFV B2/3SG talk-AP=DISAGR
 'You talked.'

(34) Null B2/3SG: imperfective aspect conditioned and before vowels

- N= \emptyset =aq'n-an=i.
 IPFV=B2/3SG=work-AP=DISAGR
 'You are working.'

In addition to the null allomorph, the B2/3SG morpheme has several overt allomorphs in prevocalic position. The general prevocalic B2/3SG is tz' shown in (35). For a few irregular verbs, B2/3SG is the non-ejective $tz=$, shown in (36). In the potential aspect, the prevocalic B2/3SG marker is k' , shown in (37). In the distal aspect, the overt Set B markers tz' and $tz=$ fuse with the distal aspect marker $x=$, shown in (38). In these cases, the resulting form is the fricative [s]: retaining the fricative of the aspect marker and the alveolar place of the Set B marker. See §2.4.1.2 on distal aspect marking for more on this pattern.

(35) Default tz' B2/3SG: before vowels and word initially

- a. Ma tz' =o'=i.
 PROX B2/3SG=cry=DISAGR
 'You cried.'
- b. O tz' =el=i t-i'j.
 PFV B2/3SG=DIR:out=DISAGR A2/3SG-RN:THEME
 'You were wrong.'

- (36) Lexically conditioned $tz = B2/3SG$: before vowels and word initially
- a. Ma $tz = ul = i$.
 PROX B2/3SG = arrive.here = DISAGR
 ‘You arrived here.’
- b. Ma $tz = iky'$ $jb'al$.
 PROX B2/3SG = pass rain
 ‘The rain has passed.’
- (37) Potential aspect-conditioned $k' = B2/3SG$: before vowels
- a. $K' = o' - l = i$.
 B2/3SG = cry-POT = DISAGR
 ‘You will cry.’
- b. $K' = a - l$ $meltz'j q'a$ $nchi'j$.
 B2/3SG = DIR: return-POT return CLF: boy tomorrow
 ‘He will return tomorrow.’
- (38) Distal fusion allomorph $s = B2/3SG$: before vowels
Saq'nani.
 $x = tz' = aq'n - an = i$.
 DIST = B2/3SG = work-AP = DISAGR
 ‘You worked (earlier today).’

2.3.1.3 Reduced subject/possessor pronouns

Set B agreement as a whole, like Set A agreement, only makes a two-way person distinction, differentiating only first and non-first person. However, with the addition of the reduced subject/possessor pronouns, a four way person distinction is made: inclusive, exclusive, second, third. The full reduced subject/possessor pronoun paradigm is given in Table 2.12. The disagreement enclitic pronoun $=i$ is realized as a vowel $<i>/[i]$ after consonants, shown in (39), and becomes a glide $<y>/[j]$ after vowels, shown in (40).

Table 2.12: Reduced subject/possessor pronouns

	SG		PL
1SG	$=i/=y$	1EXCL	$=i/=y$
		1INCL	
2SG	$=i/=y$	2PL	$(q)=i/=y$
3SG		3PL	qa

- (39) $n-witz = i$
 A1SG-face = DISAGR
 ‘my face/ in front of me’

- (40) $n-ja = y$
 A1SG-house = DISAGR
 ‘my house’

For second person plural, the enclitic pronoun *=i* is optionally augmented with *q*, marking plural in the context of second person, shown in (41-a). This optionality between *=i* and *qi* is only found in Set A contexts. In Set B contexts, the 2/3PL Set B marker *chi* is homophonous with the 1SG Set B marker *chi* in which the [n] is dropped from *chin*. Since the reduced subject/possessor pronouns for 1SG is also *=i*, the sentence in (41-b) with *=i* is interpreted with a first person singular subject: ‘I walked.’ Thus, only *qi* is acceptable for the intended meaning ‘Y’all walked.’ This pattern is discussed more in Chapter 4.

- (41) a. Ky-aj $\boxed{\checkmark=i}$ / $\boxed{\checkmark q=i}$.
 A2/3PL-want =DISAGR / 2PL=DISAGR
 ‘Y’all want it’
- b. Ma chi b’et $\boxed{\#i}$ / $\boxed{\checkmark q=i}$.
 PROX B2/3PL walk =DISAGR / 2PL=DISAGR
 ‘Y’all walked.’
 with *=i*: ‘I walked’

For third person plural, *qa* is the generic plural marker in the language, appearing in plural noun phrases, shown in (42)–(44).

- | | | |
|---------------------------------------|--|-----------------------------------|
| (42) qa xjal
PL person
‘people’ | (43) qa q’a’sj
PL chair
‘chairs’ | (44) qa tze
PL tree
‘trees’ |
|---------------------------------------|--|-----------------------------------|

The status of *qi* and *qa* as independent words or enclitics is not clear; I follow orthographic conventions by writing them as separate from the words they follow. Both *qi* and *qa* pattern with *=i*, as discussed in Chapter 4, and I refer to the three morphemes *=i/qi/qa* as reduced subject/possessor pronouns.

In summary, Set A and Set B inflect verbs and nouns for subjects and possessors, and the two paradigms only make a first/non-first person distinction and a singular/plural number distinction. The reduced subject/possessor pronouns combine with Set A/B inflection resulting in a four way person distinction: inclusive, exclusive, second, and third. While Set A/B marking appear in pre-verbal/nominal positions, reduced subject/possessor pronouns follow the nouns/verbs they inflect. In Chapter 3, I provide an analysis of transitive object agreement (and lack of agreement) and in Chapter 4, I provide an analysis of the reduced subject/possessor pronouns, concluding that they are true pronouns in subject/possessor position.

2.3.2 The noun phrase

This section provides an overview of the ordering patterns and characteristics of elements in the NP, followed by §2.3.2.2 on possession and §2.3.4 on both adnominal and adverbial demonstratives.

The word classes that can appear in the noun phrase in Mam include determiners, numerals, quantifiers, plural marking, classifiers, nouns (inflected with possessive agreement indicated by AGR-noun in Table 2.13), possessors, adjectives, and demonstratives. An example with a determiner, numeral, classifier, noun, adjective, and demonstrative is given in (45).

Table 2.13: Order of elements in the NP

DET	NUM/QUANT	measure	PL	CLF	AGR-noun	POSS	ADJ	DEM
-----	-----------	---------	----	-----	----------	------	-----	-----

- (45) a kab' jil wiḥ saq jken
 DET two CLF cat white DEM
 'these two white cats'

Starting with at the left edge of the NP, the determiner *a* appears before focused NPs, shown in (46-a), and sometimes transitive object NPs, shown in (46-b), which, for some speakers has a focus interpretation on the object and for others, does not. This marker seems to have a determiner-like quality, perhaps definiteness, or even focus, though the semantics of *a* are unclear at present. Additionally, the element *lu* appears preminally when nominals are preverbal, shown in (47); like *a*, a clear understanding of this morpheme requires more research, though it seems to be related to the post-nominal demonstrative *jlū*, discussed in §2.3.4.

- (46) a. [A qa xjal jan] ma chj=u'l.
 [DET PL person DEM] PROX B2/3PL=arrive.here
 'Those people_{FOC} came.'
- b. Ma w-il=i a q'a Geovany.
 PROX A1SG-see=DISAGR DET CLF:boy Geovany
 'I saw Geovany.'
- (47) Lu Alex n=yo-n w-i=y.
 DET Alex IPFV=wait-AP A1SG-RN:DAT=DISAGR
 'Alex was waiting for me.'

Numerals, quantifiers, measure phrases, and plural marking all must precede the noun. Numerals and plural marking may not be used together, illustrated in (48). Mam also has measure words which specify amounts or units of something that is being counted; these can be part-whole relations or aggregate measures, illustrated in (49). In addition to being the indefinite article, the numeral *jun* 'one' is used for the existential quantifier, while *kab'* 'two' is used to mean 'some' or 'a few.' The quantifier *nim* can be used to mean 'very,' 'many,' or 'a lot'; *tkyaqil* is the universal quantifier 'all' or 'every.' The quantifiers are illustrated in (50).

- (48) Numerals and plurals
- a. kab' xuj
two woman
'two women'
- b. qa xuj
PL woman
'women'
- c. *kab' qa xuj
two PL woman
- (49) Measure phrases
- a. jun piḥ pastel matij
one piece cake big
'one big piece of cake'
- b. ox k'loj xjal
three type person
'three types/classes of people'
- (50) Quantifiers
- a. jun u'j
one book
'a book'
- b. kab' u'j
two book
'a few books' or 'two books'
- c. nim u'j
many book
'many books'
- d. tkyaqil u'j
all book
'all books'

Adjectives must follow the noun, shown for colors in (51) and size adjectives in (52). The only examples of pre-nominal adjectives in SJA Mam are in proper nouns such as place names or plant names in (53) or when the adjective is functioning as the initial nonverbal predicate, as in (54).

- (51) a. jun lo-b'j cha'x
one fruit-UNPOSS green
'a green/unripe fruit'
- b. *jun cha'x lo-b'j
one green fruit
- (52) a. jun eky' matij
one chicken big
'a big chicken'
- b. *jun matij eky'
one big chicken
- (53) Adj-N proper names
- a. Saq Tx'otx'
white earth
'Zaculeu (Mam temples)'⁷
- b. Saq tx'yan
white dog
'Phytolacca Americana (a type of plant)'⁸

⁷Zaculeu is the name given to the Mam temples in Huehuetenango that are called *Saq Tx'otx'* in Mam.

⁸The plant "saqtx'ayan" is identified as "planta de filotaca" (phytolacca plant) by Pérez Alonzo (2007, 229), which is also known as American pokeweed.

- (54) **Matij** eky'.
 big chicken
 'The chicken is big.'

Other categories in the noun phrase include classifiers, discussed in §2.3.2.1, possessors and possessive morphology, discussed in §2.3.2.2, as well as demonstratives, discussed in §2.3.4.

2.3.2.1 Classifiers

SJA Mam has an extensive set of noun classifiers. I identify three types of classifiers in SJA Mam: i) classifiers that are homophonous with common nouns, ii) classifiers that are not homophonous with common nouns and iii) classifiers derived from food hypernyms. All three types of classifiers appear before nouns (or names if applicable), and they can function as anaphors. First, the classifiers homophonous with common nouns are given in Table 2.14.

Table 2.14: Classifiers homophonous with common nouns

Classifier	Noun
jil	animal
txin	girl
q'a	boy
xuj	woman
xin	man
tij	old man
b'ixtij	old woman

The classifiers in Table 2.14 typically appear before proper names but can appear with other nouns as well, shown for the classifier *txin* 'girl' in (55). Classifiers are not obligatory, and it is an interesting question for future research what motivates the use of a classifier. For example, Carrillo Godínez states that she uses the classifiers *jil* 'animal' and *txin* 'girl' when there is a degree of closeness or trust with the animal or girl being described.

- (55) a. Ma tz=ul **txin** Lucrecia.
 PROX B2/3SG=arrive.here CLF:girl Lucrecia
 'Lucrecia arrived.'
- b. Ma tz=ul **txin** ajxnaq'tzal.
 PROX B2/3SG=arrive.here CLF:girl teacher
 'The teacher arrived.'

In addition to the seven classifiers that are homophonous with common nouns, SJA Mam has several classifiers that are not homophonous with common nouns nor common adjectives.⁹ Table

⁹I do not make the claim that this, nor Table 2.14, are exhaustive inventories of classifiers in SJA Mam.

2.15 lists four of such classifiers with a range of meanings. A preliminary set of descriptions for each classifier are given in Table 2.15.

Table 2.15: Classifiers not derived from common nouns

Classifier	Meaning
ne	small, sweet, innocent
nimal	large, powerful, dangerous
ma ¹⁰	definite
(ch)tal	small, baby

Like those in Table 2.14, the classifiers in Table 2.15 can combine with proper names or nouns, shown in (56). Interestingly, more than one classifiers can appear in one noun phrase, shown in (57), though it is unknown whether all classifiers can appear in combination with another classifier.

- (56) a. Ma tz=ul ne Chibito.
 PROX B2/3SG=arrive.here CLF Chibito
 ‘Chibito arrived.’
- b. Ma tz=ul ne xku’l.
 PROX B2/3SG=arrive.here CLF baby
 ‘The baby arrived.’
- (57) a. A nimal xuj axjnaq’tzal n=yol-an ky-witz xjal
 DET CLF CLF teacher IPFV=talk-AP A2/3PL-RN:front person
 ‘The teacher is talking in front of people.’
- b. qa ne chtal q-k’wal
 PL CLF CLF A1PL-child
 ‘our children’

The last type of classifiers are food classifiers. Food classifiers are distinct from the other types of classifiers in that they are possessed, a construction that has been called “genitive classifiers” (England, 2017, 508). These classifiers are derived from the hypernyms for food and accompany any specific food item that is mentioned. The classifier itself takes a Set A possessive marker in this structure, shown in (58).

- (58) a. n-wa=y pan
 A1SG-food=DISAGR bread
 ‘my bread’

¹⁰England (1983b, 158) analyzes this classifier as being derived from *matij* ‘big’, though this is not clearly the case in SJA Mam.

- b. q-lo' tlasan
A1PL-food peach
'our peach'

In SJA Mam there are five food classifier/hypernym terms, shown in Table 2.16, which provides examples of the foods that are associated with each hypernym. These hypernym roots take the unpossessive suffix *-b'j* when not possessed.¹¹ Additionally, England (1980) argues that these classes of foods are defined with respect to meal time, sweetness, and texture; her analysis of each category is given in the far right column for each hypernym.

Table 2.16: Food hypernym classifiers

Hypernym	Food	England 1980 analysis
wab'j	tortillas, bread	necessary food in a meal, corn
chib'j	meat, vegetables	food that accompanies corn in a meal
lob'j	fruit, sweets	sweet food not eaten at a meal
kxub'j	chips, crunchy foods	crunchy food not eaten at a meal
k'ab'j	drinks, porridge	all liquids in meals and between meals

In addition to their use as food classifiers, the hypernym roots can be possessed independently, shown in (59).

- (59) a. n-wa=y
A1SG-food=DISAGR
'my food/tortillas'
- b. q-lo'
A1PL-food
'our fruit/banana'

A key characteristic of all of the SJA Mam classifiers is their use in anaphoric contexts. As an example of their anaphoric use, in a typical narration, a person is introduced as '[CLF] Name' and then referred to as [CLF] after the first mention. The examples in (60) constitute the first three lines from a story told by Carrillo Godínez. These three lines are followed by 11 instances of *q'a* used anaphorically to refer to *Geovany*. The full story is provided in Appendix C §C.2.2.

- (60) a. Xle' wen taj t-jaw we' q'a Geovany,
morning early when A2/3SG-DIR:up stop CLF:boy Geovany
'Early this morning when Geovany woke up,'

¹¹The roots of each hypernym (the forms without the *b'j* unpossessive suffix) can function as verbal roots, meaning different types of eating and drinking depending on the contents of the food or drink.

- b. n=Ø-xi' q'a aq'na-l.
 IPFV=B2/3SG=DIR:go CLF:boy work-NF
 'and he went to work.'
- c. Taj t-pon q'a,
 when A2/3SG-arrive.there CLF:boy
 'When he arrived,'

These data are surprising given the claim by England (1983b, 55) that, "There are no independent pronouns in Mam. In general, deletion of a noun phrase can be accomplished without substituting a pro-form for the deleted noun..." While there are examples in texts of third person singular arguments that have been dropped without the use of a classifier, like in (61) for the null argument introduced by *t-xol* 'between', a more detailed investigation into the distribution of null and classifier pronouns.

- (61) t-u'n t-b'ant q-a'wa-n, t-u'n t-b'ant q-b'et
 A2/3SG-RN:PURP A2/3SG-be.able A1PL-plant-DS A2/3SG-RN:PURP A2/3SG-be.able A1PL-walk
 t-xol,
 A2/3SG-RN:between
 'so that we can plant, so that we can walk between them (the plants).'

As mentioned above, each type of classifier listed in Tables 2.14, 2.15, and 2.16 can be used in anaphoric contexts. Appendix C includes four stories which illustrate the anaphoric use of the classifiers *q'a* 'boy,' *jil*, 'animal,' *ne* 'small, innocent,' and the 1SG possessed food classifier *nlo'y* 'my fruit.'

2.3.2.2 Possession

The basic morphosyntactic strategy for possession is the use of Set A prefixes referencing the possessor attaching to the possessed noun. Both reduced subject/possessor pronouns and lexical possessors follow possessed nouns, shown in (62). A full possessive paradigm for the noun *wix* is given in Table 2.17, repeated from §2.3.1.

- (62) a. n-wiḵ=i
 A1SG-cat=DISAGR
 'my cat'
- b. t-wiḵ Cristina
 A2/3SG-cat Cristina
 'Cristina's cat'

Table 2.17: Possessive noun inflection for *wiḥ* ‘cat’

	SG		PL
1SG	n-wiḥ=i	1EXCL	q-wiḥ=i
		1INCL	q-wiḥ
2SG	t-wiḥ=i	2PL	ky-wiḥ=i
3SG	t-wiḥ	3PL	ky-wiḥ qa

Perhaps an equally common strategy for possession is the inclusion of the relational noun *e* before the noun. Relational nouns are a word class in Mayan languages that are formally possessed nouns that assign roles to their possessor such as dative, patient, malefactive, benefactive, and more; relational nouns are discussed in §2.3.3. In possessive constructions with *e*, both the relational noun *e* and the head noun take Set A inflection, but only the relational noun is followed by a reduced subject/possessor pronoun. With lexical possessors, only the relational noun *e* is followed by the possessor, shown in (64).

- (63) a. n-ximtz=i
A1SG-thought=DISAGR
‘my thought’
- b. w-i=y n-ximtz
A1SG-RN:POSS=DISAGR A1SG-thought
‘my thought’
- (64) a. t-ximtz Gloria
A2/3SG-thought Gloria
‘Gloria’s thought’
- b. t-e Gloria t-ximtz
A2/3SG-RN:POSS Gloria A2/3SG-thought
‘Gloria’s thought’

The possessive relational noun has other grammatical functions such as dative and benefactive when introducing peripheral arguments in the clause. The root is the vowel [e], as seen for 1PL inclusive and 3rd person in Table 2.18. Unique to San Juan Atitán Mam, the root [e] raises to [i] when the disagreement enclitic pronoun =y is present, a pattern found for 1SG, 1plexcl, 2SG, and 2PL.

Table 2.18: Possessive relational noun *e*

	SG	PL
1EXCL	w-i=y	q-i=y
1INCL		q-e
2	t-i=y	ky-i=y
3	t-e	ky-e qa

Both of these strategies (with and without the possessive relational noun) are used in ‘have’ constructions, which are achieved by combining the existential predicate *at* with a possessed noun.

- (65) a. At jun n-wiḥ=i.
EXIST one A1SG-cat=DISAGR
‘I have a cat.’
- b. At jun w-i=y n-wiḥ.
EXIST one A1SG-RN:POSS=DISAGR A1SG-cat
‘I have a cat.’

Mam has several noun classes distinguished with respect to how the stems change or do not change when possessed. Below are examples of nouns in each of the noun classes identified for Mam by England (2017, 505), following Polian (2017).

- (66) *Ordinary nouns*: no change under possession
- | | |
|--|---|
| a. ja
house
‘house’ | c. tzeb’tz
smile
‘smile’ |
| b. n-ja=y
A1SG-house=DISAGR
‘my house’ | d. n-tzeb’tz=i
A1SG-smile=DISAGR
‘my smile’ |
- (67) *Vowel-changing nouns*: a vowel in the root is lengthened and/or its glottal quality is changed when possessed.
- | | |
|---|--|
| a. q’a’sj [qʌʌsχ]
chair
‘chair’ | c. lo-b’j [loβχ]
fruit-UNPOSS
‘fruit’ |
| b. n-q’as=i [nqʌasi]
A1SG-house=DISAGR
‘my chair’ | d. n-lo’y [nloqi]
A1SG-fruit=DISAGR
‘my fruit’ |

(68) *Inalienable nouns*: These nouns add a suffix (-b'j, -j) when not possessed. Nouns in this class are parts of the body, family relations, clothing, and food classes.

- | | |
|---|---|
| a. mam-b'j
father-UNPOSS
'father' | e. am-j
skirt-UNPOSS
'skirt' |
| b. n-man=i
A1SG-father=DISAGR
'my father' | f. w-am=i
A1SG-skirt=DISAGR
'my skirt' |
| c. q'ab'-j
arm-UNPOSS
'arm' | g. wa-b'j
tortilla-UNPOSS
'tortilla/food' |
| d. n-q'ab'=i
A1SG-arm=DISAGR
'my arm' | h. n-wa=y
A1SG-tortilla=DISAGR
'my tortilla/food' |

(69) *Nouns that add the suffix -(e)l when possessed*:

- | | |
|---|--|
| a. b'aq
bone
'bone' | c. chik'
blood
'blood' |
| b. n-b'aql=i
A1SG-bone=DISAGR
'my bone' | d. n-chk'el=i
A1SG-blood=DISAGR
'my blood' |

(70) *Always possessed*: These nouns always appear in their possessed form and mostly include parts of plants.

- | | |
|---|--|
| a. t-xaq
A2/3SG-leaf
'(its) leaf' | b. t-lok'
A2/3SG-root
'(its) root' |
|---|--|

(71) *Never possessed*: Some nouns can never be possessed. These tend to be nature related and can typically occur with a preceding possessed kinship term.

- | | |
|---|--|
| a. *q-xjaw
A1PL-moon
intended: our moon | b. q-ya xjaw
A1PL-grandmother moon
'our grandmother moon' |
|---|--|

(72) *Suppletive*: These nouns change roots completely when possessed.¹²

- | | | | |
|----|------------------------------|----|--|
| a. | eky'
chicken
'chicken' | b. | w-aln=i
A1SG-chicken=DISAGR
'my chicken' |
|----|------------------------------|----|--|

In addition to these patterns identified in England (2017), some noun roots in SJA Mam undergo metathesis when possessed. In SJA Mam, we find examples of CCV → CVC metathesis, illustrated in (73).¹³ These examples of metathesis seem to be motivated by an avoidance of CCC sequences.

(73) *Metathesis*: Some noun roots undergo CCV → CVC metathesis when possessed.

- | | | | |
|----|--|----|-----------------------------------|
| a. | klo-b'j
huipil-UNPOSS
'huipil' ¹⁴ | c. | tnam
town
'town' |
| b. | n-kol=i
A1SG-huipil=DISAGR
'my huipil' | d. | q-tanm
A1PL-town
'our town' |

2.3.3 Relational nouns

Relational nouns are a unique class of words in Mayan languages. They often take on prepositional meanings and they function syntactically as nouns which are possessed by their complement. The structure of a relational noun phrase is the same as that of a possessed noun phrase, illustrated with the comparison in Table 2.19, which is taken from England (2017, 514) with slight adjustments. The complement of the relational noun is parallel to the possessor in a possessed noun phrase.

¹²England (2017, 506) describes this class as containing “one or two nouns” and gives one example using the cognate forms in (72) in Ixtahuacán Mam.

¹³England (1983b, 50) lists examples of vowel metathesis in some possessed roots, but never CV > VC examples.

¹⁴A richly embroidered textile worn by Mayan women in Mexico and Central America.

Table 2.19: Possessed NPs and Relational NPs (England, 2017, 514)

Possessed noun phrase		Relational noun phrase	
t-ja	xu'j	t-uj	ja
A2/3SG-house	woman	A2/3SG-RN:in	house
Set A-possessed N	possessor	Set A-relational N	complement
'the woman's house'		'in the house'	

Relational nouns are always possessed, and in Table 2.20 they are represented in their 2/3SG possessive form. Many of the relational nouns are derived from parts of the human body and are used to describe spatial relations on non-human objects in the world. For example, *twitz* 'in front of' is derived from *twitz* 'face'; *twi'* 'on; above' is derived from *wib'j* 'head'; *t-txa'n* 'at the edge of' is derived from *txamb'j* 'nose'; it is possible that *tuj* 'in' is derived from *k'u'j* 'stomach.'

Table 2.20: Relational Nouns

Locatives		Gramatical functions	
t-witz	in front of	t-u'n	agent; causative; instrument; purpose clause;
t-uj	in		reason clause
t-xel	instead of	t-i'j	patient; malefactive; theme
t-xol	between	t-uk'(l)	instrument, comitative
t-txlaj	beside	t-e	possessive; dative; benefactive; patient
t-ib'j	over	t-ib'	reflexive/reciprocal
t-wi'	on; above	t-witz	comparative
t-ja'	below		
t-xe	under; at the base of		
t-txa'n	at the edge of		
t-b'utx'	at the corner of		
t-tzi	at the entrance of		
t-tzal t-i'j	behind ¹⁵		

Example (74-a) shows a locative relational noun, (74-b) shows *tu'n* introducing an agent, (74-c) shows a thematic relation, and (74-d) shows a relational noun introducing a reason clause.

- (74) a. Tijil at t-txlaj=i?
 What EXIST A2/3SG-RN:beside=DISAGR
 'What is beside you?'

¹⁵The meaning of 'behind' is special in that it requires the combination of two relational nouns: *t-tzal* 'it's back,' and *t-i'j* 'of it.'

- b. At t-ipumal aq'unt n=b'ant ky-u'n=i.
 EXIST A1SG-strength work IPFV=do A2/3PL-RN:AGT=DISAGR
 'There is strength in the work that you do.' *lit.* '...in the work that is done by you'
- c. Ma ∅ kub' n-tz'ib'-n=i t-i'j sb'ub'il.
 PROX B2/3SG DIR:down A1SG-write-SUF=DISAGR A2/3SG-RN:about discrimination
 'I wrote it about discrimination.'
- d. N=chin tzalj=i t-u'n ma tz=a' jb'al.
 IPFV-B1SG happy=DISAGR A2/3SG-RN:REAS PROX B2/3SG=start rain
 'I'm happy because it started to rain.'

Dative and oblique arguments are introduced by relational nouns, shown in (75) and (76), respectively. Relational nouns also introduce the agent in a passive construction, the patient in an antipassive construction, and reflexive objects, all of which are discussed in §2.5.4 on Voice.

- (75) N=∅-xi n-q'ama-'n=i jun tijil t-e Elissa.
 IPFV=B2/3SG=DIR:go A1SG-tell-DS=DISAGR one what A2/3SG-RN:DAT Elissa
 'I was telling Elissa something.'
- (76) ... il=xix t-i'j t-u'n ky-yol-an t-uk'l jun
 ... must=EMPH A2/3SG-RN:about A2/3SG-RN:PURP A2/3PL-speak-AP A2/3SG-RN:COM one
 klo-l xjal t-e imigracion
 save-NF person A2/3SG-RN:PAT immigration
 '... they must speak with an immigration lawyer ...'

The use of relational nouns, which agree with their arguments, for all peripheral arguments means that virtually all arguments in the clause are indexed by some agreement, whether through verbal agreement or relational noun agreement. For SJA Mam, the exception to this robust agreement is that direct objects are typically not referenced on the verb, constituting the only case of an argument which is not cross-referenced anywhere in the clause. This pattern is discussed further in §2.5.2.

2.3.4 Demonstratives

SJA Mam has an extensive set of both adnominal and adverbial demonstratives. A preliminary look into these demonstratives reveals a possibility that they encode visibility in their meanings, a phenomenon of many Indigenous languages of the Americas, most notably Salish languages (Gillon, 2009).¹⁶ Within Mayan, Hanks (1990) claims that Yucatec Maya has a demonstrative that encodes that the referent is visible.

¹⁶I direct the reader to recent work on Ticuna which convincingly argues for a visibility requirement in the demonstrative system, with discussions about what this means for the typology of demonstratives (Skilton, 2021; Skilton and Peeters, 2021).

In this section, I describe the adnominal and adverbial demonstratives in SJA Mam to provide documentation of this system, and to highlight examples that suggest something like visibility is encoded in the meanings of certain demonstratives.

A caveat is needed before illustrating the demonstrative meanings and visibility requirements. I did not conduct a thorough and controlled study of these nominal demonstratives and thus this description constitutes a small sample of data from which more research will undoubtedly result in a clearer understanding of these demonstratives. This description is not based on a detailed questionnaire such as Wilkins's 1999 Demonstrative Questionnaire or a text analysis, but instead from elicitation and language learning, and the analysis presented here on visibility is heavily influenced by the explanations and intuitions of Carrillo Godínez.

2.3.4.1 Adnominal demonstratives

Table 2.21 lists the five adnominal demonstratives in SJA Mam. Adnominal demonstrative follow the nouns they modify, illustrated in (77).

Table 2.21: Adnominal demonstratives

Demonstrative	Meaning	Visibility
jlu	extremely proximate to speaker	
jken	proximate to speaker	
jan	proximate to addressee	must be visible
jkyix	not proximate to speaker or addressee	
jke'e	far from both speaker and addressee	

- (77) a. At n-gan=i t-i'j u'j **jlu**.
 EXIST A1SG-desire=DISAGR A2/3SG-RN:THEME book DEM
 'I like this book.'
- b. N=chin wa-n=i pan **jken**.
 IPFV=B1SG eat-AP=DISAGR bread DEM
 'I am eating this bread.'
- c. W-aj=i tz'i-b'il **jan**.
 A1SG-want=DISAGR pen-NML DEM
 'I want that pen.'
- d. At t-kol=i t-wi' wat-b'il **jkix**.
 EXIST A2/3SG-huipil=DISAGR A2/3SG-RN:on bed-NML DEM
 'Your huipil is on that bed.'
- e. Matij witz **jke'e**.
 big mountain DEM
 'That mountain is big.'

In describing the difference between *jlu* and *jken*, both meaning proximate to the speaker, Carrillo Godínez describes *a jlu* as referring to something a bit closer to oneself. Additionally, the demonstratives *jkyix* and *jke'e* make reference to objects far from both the speaker and the addressee. Carrillo Godínez describes *jkyix* as ‘not that far away,’ while *jke'e* references ‘that one way over there.’

The meaning of *jan*, apart from the other adnominal demonstratives, seems to carry a visibility requirement of its referent. Evidence that *jan*, when used as an adnominal demonstrative, has a visibility requirement comes from preliminary data and speaker intuition from Carrillo Godínez. To illustrate that what *jan* is referring to must be visible to the speaker, the two configurations below involve two people and an item and they reveal that the use of *jan* is only felicitous if the referent is visible to the person speaking.

- (78) *Context 1:* Person A and Person B are sitting at a table facing each other. Person B is holding in front of them an item that Person A is unfamiliar with, but can see. Person A can ask,

Tijil **jan** t-witz=i?
 what DEM A2/3SG-face=DISAGR
 ‘What is that in front of you?’

- (79) *Context 2:* Person A and Person B are sitting at a table facing each other. Person B is holding an item behind their back that Person A cannot see. Person A must ask,

- a. Tijil **tzyu-'n** t-u'n=i?
 what grab-DS A2/3SG-RN:AGT=DISAGR
 ‘What are you grabbing?’

Person A cannot ask,

- b. #Tijil **jan** t-tzal t-i'j=i?
 what DEM A2/3SG-back A2/3SG-RN:PAT=DISAGR
 ‘What is that behind you?’

For Carrillo Godínez, the reason why *jan* is not acceptable in the context in (79) is because the item is not visible to Person A. For the other adnominal demonstratives, there does not seem to be such a restriction to either visible or invisible referents. More research into this hypothesis is needed to confirm these intuitions.

2.3.4.2 Adverbial demonstratives

The set of adverbial demonstratives is somewhat less extensive than that of the adnominal demonstratives in that there is only one demonstrative meaning ‘proximate to speaker.’ Like the adnominal demonstratives, though, one adverbial demonstrative shows evidence of a visibility requirement. Surprisingly, though *jan* is present in both paradigms, it does not seem to encode visibility when used adverbially, though more investigation is needed to confirm this claim. The full set of adverbial demonstratives is given in Table 2.22.

Table 2.22: Adverbial demonstratives

Demonstrative	Meaning	Visibility
tzluw	proximate to speaker	
jan	proximate to addressee	
tzix	far from both speaker and addressee	must be visible
max	general (combines with all demonstratives)	

Adverbial demonstratives typically appear after the verb and main arguments of the clause, shown in (80), though they can appear in initial position in some contexts, shown in (81).

- (80) a. Naj qin=i **tzluw**.
 live B1SG=DISAGR DEM
 ‘I live here.’
- b. At nim xjal **jan**.
 EXIST many people DEM
 ‘There are many people there.’
- c. Qo k=b’et-l t-ku’=x **tzix**.
 B1PL POT=walk-NF A2/3SG-DIR:down=DIR:go DEM
 ‘We will walk down there.’
- (81) a. Ti’ ta’ q’ij **jan**?
 how be day DEM
 ‘How’s the weather there?’
- b. **Tzluw**, at nim cho’w.
 DEM EXIST very cold
 ‘Here it’s very cold.’

The demonstrative *tzix* seems to have a visibility requirement. Compare the contexts in (82) and (83): *tzix* is only possible in (83) in which the speaker can see the referent.

- (82) *Context 1*: Person A wants to reference a hotel in a nearby neighborhood. She’s far away and cannot see it. She can refer to that location as,

max t-uj hotel
 there A2/3SG-RN:in hotel
 ‘there in the hotel’

Speaker comment: “I cannot use *tzix* because it is not in my sight”

- (83) Context 2: Speaker is downtown near a hotel and is trying to signal to another person where the hotel is. She can point and say,

max tzix
DEM DEM
'right there'

Speaker comment: "I can say *tzix* because I am seeing it and signaling."

The demonstrative *max* is used in both contexts, and does not seem to reference visibility. *Max* must combine with either an adverbial demonstrative, a direction word (explained below), or a relational noun phrase. *Max* can combine with all of the adverbial demonstratives, shown in (84), suggesting that it is not specified with relation to the distance from the speaker and/or addressee.

- (84) a. N=chn=aq'na-n=i **max** tzluw
IPFV=B1SG=work-AP=DISAGR DEM DEM
'I work here.'
- b. N=∅=aq'na-n txin **max** jan
IPFV=B2/3SG=work-AP CLF:girl DEM DEM
'She works there (by you).'
- c. N=∅=aq'na-n q'a **max** tzix
IPFV=B2/3SG=work-AP CLF:boy DEM DEM
'He works over there.'

Max also frequently combines with direction words, which are words derived from directionals that point out places. For example, the direction word *jawn* roughly means "up there" or the place that is up the mountain from where one is speaking, and it is derived from the directional *jaw*, meaning to ascend. (85) illustrates *max* combining with each of the four direction words.¹⁷

- (85) a. Naj qin=i **max** jawn.
live 1SG=DISAGR DEM up
'I live up the mountain from here.'
- b. Naj qin=i **max** kub'an.
live 1SG=DISAGR DEM down
'I live down the mountain from here.'
- c. Naj qin=i **max** okan.
live 1SG=DISAGR DEM east
'I live east of here.'

¹⁷While these direction words are sometime referred to as "cardinal directions," they are more accurately reference the "up, down, out, in" directions centered on a mountain– I direct the reader to Méndez (2023) for a deeper discussion of the meanings of these direction words.

- d. Naj qin=i **max** elan.
 live 1SG=DISAGR DEM west
 ‘I live west of here.’

Lastly, *max* can combine with relational noun phrases indicating locations such as *tuj* ‘in’ and *twi* ‘on top of.’ Additionally, *max* can appear with both adverbial demonstratives and relational noun phrases simultaneously. These examples are given in (86).

- (86) a. N=chn=aq’na-n=i **max** t-uj tnam.
 IPFV=B1SG=work-AP=DISAGR DEM A2/3SG-RN:in town
 ‘I work down town.’
- b. Chin k=xel=i **max** t-wi’ Q’u’
 B1SG POT-go.POT=DISAGR DEM A2/3SG-RN:on Q’u’
 ‘I am going to the top of Q’u’ mountain.’
- c. N=chn=aq’na-n=i **max** tzluw t-uj tnam.
 IPFV=B1SG=work-AP=DISAGR DEM DEM A2/3SG-RN:in town
 ‘I work here down town.’

Both the adnominal and adverbial demonstratives in SJA Mam are intriguing and signal a possible instance of visibility encoding in demonstratives in the language, which is an exciting area of future research.

2.4 Verbal complex

The baseline word order throughout Mam varieties is VSO. The “verb” in this schema corresponds to a verbal complex which contains negation, aspect, directionals, inflection, verb roots, and suffixes. The word order and these categories are illustrated in (87).

Table 2.23: SJA Mam verbal complex

NEG	ASPECT	ABS	DIR	ERG	ROOT	SUFFIX
-----	--------	-----	-----	-----	------	--------

- (87) [Nti’ ma tz’=ok ky-ke’y-an] qa xjal jun ja.
 [NEG PROX B2/3SG=DIR:in A2/3PL-see-DS] PL person one house
 ‘The people did not see a house.’

§2.4.1 focuses on aspectual marking, showing the semantic aspectual distinctions as well as describing their morpho-phonological properties. §2.4.2 describes the suffixes, directionals, and imperatives. §2.4.3 describes nonverbal predicates constructions, which diverge in structure from the verbal complex in Table 2.23. Negation is discussed in §2.5.5 in the broader discussion of simple clause structure. Ergative and absolutive (Set A and Set B) inflection is touched on in §2.3.1; the unique pattern of object inflection is discussed in §2.5.2.

2.4.1 Aspect

Some scholars of Mayan linguistics have argued or assumed that Mayan languages only express aspect and lack formal tense distinctions (Kaufman, 1990; Bohnermeyer, 2009). England (2007) argues for Mam that tense is inferred from aspect and mood marking. In this section I describe the main aspect markers in SJA Mam based on preliminary data and speakers' intuition. The five main aspectual distinctions are given in Table 2.24.¹⁸

Table 2.24: SJA Mam Aspect markers

aspect	morpheme
perfective	o
proximate	ma
distal	x=
imperfective	n=
potential	k=

2.4.1.1 Perfective

San Juan Atitán Mam has one perfective aspect marker, *o*, which is used to reference the completion of an action before the day of utterance. In some descriptions of Mam, this morpheme is described as “completive” (England, 1983a; Pérez and Jiménez, 1997; England, 2007; Pérez Vail, 2014). In addition to this overt perfective marker, shown in (88-a), verbal clauses which lack aspect morphology are also interpreted as perfective, shown in (88-b).

(88) Intransitive perfective

- a. O chin ta-n=i.
 PFV B1SG sleep-AP=DISAGR
 ‘I slept.’
- b. Ta-n qin=i.
 sleep-AP B1SG=DISAGR
 ‘I slept.’

There is a clear syntactic difference between the perfective *o* and the aspectless clauses in SJA Mam. With the overt perfective *o*, the intransitive subject is introduced with a Set B marker following the aspect morpheme, shown in (88-a). With the aspectless clauses that are interpreted as perfective, the intransitive subject must be introduced with an independent pronoun following the verb, shown in (88-b).

¹⁸For most of the aspect markers, I adopt England's 2017 analysis and glossing conventions. The only exception is the distal *x=*, which England argues is the dependent clause proximate marker in Ixtahuacán Mam, but in SJA Mam it is used in matrix clauses and has a meaning distinct from the proximate marker *ma*.

The distinct subject marking for the null perfective is only present for intransitive clauses. Transitive clauses for both the *o* and the null perfective maintain expected person/number inflection on the verb, illustrated in (89), though the null B2/3SG object could be a confounding factor. More research is needed to understand aspectless transitive clauses better.

(89) Transitive perfective

- a. O \emptyset tzaj n-q'ama-'n=i.
 PFV B2/3SG DIR:come A1SG-say-DS=DISAGR
 'I said it.'
- b. \emptyset tzaj n-q'ama-'n=i.
 B2/3SG DIR:come A1SG-say-DS=DISAGR
 'I said it.'

England (2017) analyzes the cognate aspect markers in Ixtahuacán Mam as being associated with different “clause types:” *o* is the perfective in independent clauses, and \emptyset is the perfective in dependent clauses. The independent/dependent distinction aligns with matrix/embedded clauses, but it also aligns with temporal adverbs: temporal adverbs are not compatible with independent/matrix aspect while dependent aspect requires temporal adverbs. England (1983b, 192) observes that, “If the time adverbs occur at the end of the sentence they require *dependent* aspect markers...” (emphasis mine).

The association between null “dependent” aspect and temporal adverbs seems to be present in SJA Mam, shown in (90) and (91).

(90) *O* perfective

- O chi=x aj=i San Marcos (?ew).
 PFV B1SG=DIR:go return=DISAGR San Marcos yesterday
 'I went to San Marcos (yesterday).'

(91) Null perfective

- B'et qin=i (?ew).
 walk 1SG=DISAGR yesterday
 'I walked yesterday.'

Although the data in (90) and (91) suggest an “independent/dependent” clause split like that found in Ixtahuacán Mam, the verbal inflectional difference between the two types of aspectual clauses in (88-a) and (88-b) is unique to SJA Mam. In Ixtahuacán Mam and Cajolá Mam, the null perfective¹⁹ requires Set B markers to lose their initial consonant, shown in (92) and (93) for the first person singular Set B marker which is *chin* in both varieties: in the null perfective aspect, it is realized as *in*.²⁰

¹⁹The null perfective in Ixtahuacán Mam is the dependent clause perfective marker (England, 2017, 504) while the null perfective in Cajolá Mam is called analyzed as the remote completive (perfective) maker (Pérez Vail, 2014, 62).

²⁰In Ixtahuacán Mam, speakers interpret the use of the reduced Set B marker as indicating a ‘when’ clause, and thus, the ‘when’ morpheme can be null (England, 1989, 301).

- (92) Ixtahuacán Mam
 Ø-in b'eet=a...
 PFV.DEP-B1SG walk=1SG
 'When I walked...' (England, 2007, 122)
- (93) Cajolá Mam
 Ø-in eel=w=e' konsejaal.
 PFV.REM=B1SG go.out=A1SG=1SG councilor
 'I left as a councilor (I was a councilor).' (Pérez Vail, 2014, 32)

2.4.1.2 Proximate and distal

Proximate *ma* and distal *x=* aspect markers are used to describe events that took place within the same day as the point of reference, which is almost always the utterance time. These morphemes were originally called “recent past” tense by (England, 1983b), and “recent completive” by (Pérez and Jiménez, 1997, 155-156), though England (2007) argues that the reference point need not be the moment of speaking, making it truly an aspectual morpheme and not a tense morpheme.

While both proximate *ma* and distal *x=* make reference to events within the same day as the reference point, the difference lies in *how* proximate the described event is. Carrillo Godínez describes distal *x=* clauses as *un poco más antes* “a little earlier.” To illustrate what she means, she provides a story containing all the things she did that day. Carrillo Godínez begins by using the distal *x=*, illustrated in (94) and (95), followed by ten clauses all using *x=*. At a midpoint in her story, she switches to the proximate *ma* and finishes the story with *ma*, illustrated in (96) and (97). Carrillo Godínez comments that *x=* is for earlier today but not for the most recent events, where as *ma* is used for events that happened any time today, but especially those that happened the most recently.

- (94) *Āin jaw we'y.*
 x=chin jaw we'=y.
 DIST=B1SG DIR:up stop=DISAGR
 'I woke up.'
- (95) *Sok nxb'alni.*
 x=tz'=ok n-xb'al-n=i.
 DIST=B2/3SG=DIR:in A1SG-dress-DS=DISAGR
 'I got dressed.'
- (96) Ma chn=u'l=i n-ja=y b'ix ...
 PROX B1SG=arrive.here=DISAGR A1SG-house=DISAGR and ...
 'I arrived at home and...'
- (97) Ma chin b'aj wa-n=i.
 PROX B1SG DIR:COMPL eat-AP=DISAGR
 'I ate.'

In addition to past interpretations, proximate *ma* is used with verbs of motion if the motion just began or will begin very soon. It is for this reason that England (2007) analyzes *ma* as proximate aspect instead of recent past tense.

- (98) Ma chi=x=i t-uj tnam.
 PROX B1SG=GO=DISAGR A2/3SG-RN:in town
 ‘I’m going to town.’ (right now or very soon)

In order to understand the relationship between aspectual marking and following material, we need to consider the morpho-phonology of the distal marker *x=*. As mentioned in §2.3.1, this morpheme fuses with following affricates *ch*, *tz*, and *tz’*. This is illustrated in (99) and (100), in which a the distal *x=* /s/ is followed by a Set B marker with an initial affricate: *ch* /tʃ/ becomes *ḡ* [ʃ] and *tz* /ts/ becomes *s* [s]. The orthography tracks the surface pronunciation of these forms, and is given in the first line of the following examples.²¹

- (99) *ḡnuli*.
x=chn=u’l=i.
 DIST=B1SG=arrive.here=DISAGR
 ‘I arrived (here) (earlier today).’
- (100) *Suli*.
x=tz=ul=i.
 DIST=B2/3SG=arrive.here=DISAGR
 ‘You arrived (here) (earlier today).’

This process of fusion is not limited to affricates in Set B markers: any following affricate fuses with the distal *x=*, even if a null morpheme (e.g. the 2/3SG Set B morpheme) intervenes. This is illustrated in (101), in which the distal *x=* is phonologically adjacent to the directional *tzaj*, resulting in the fusion between the distal *x=* [s] and the initial affricate *tz* [ts].

- (101) *Saj nq’ama’ni*.
x=∅-tzaj n-q’ama-’n=i.
 DIST=B2/3SG=DIR:come A1SG-say-DS=DISAGR
 ‘I said it.’

When the distal aspect fricative *x=* fuses with the ejective affricate *tz’* and the plain affricate *tz=*, the resulting initial consonant is *s* in both cases. This eliminates the contrast between underlying *tz* and *tz’* in the initial consonant position. However, in SJA Mam, the glottal quality of the ejective *tz’* in these contexts is retained by glottalizing the following vowel, maintaining the contrast between the ejective and plain affricates. The pattern of glottalizing the following vowel results in a creaky quality of the vowel. This is illustrated for *x=tz’* sequences in (102) and (103).

²¹In Lapierre et al. 2019, my colleagues and I analyze this process of fusion as subsegmental deletion of the initial [t] stop portion of the affricates.

$x=tz' \rightarrow s \dots'$

(102) *Sa'j meltz'ji.*

$x=tz'=aj$ $meltz'j=i.$
 DIST=B2/3SG=DIR:return return=DISAGR
 'You returned.'

(103) *Se'l tniky'i.*

$x=tz'=el$ $t-niky'=i.$
 DIST=B2/3SG=DIR:out A2/3SG-understand=DISAGR
 'You understood.'

When the distal $x=$ precedes the plain affricate tz , the following vowel is not glottalized, as illustrated in (104) and (105).

$x=tz \rightarrow s$

(104) *Saj nlaq'o'ni.*

$x=\emptyset-tzaj$ $n-laq'o-'n=i.$
 DIST=B2/3SG=DIR:come A1SG-buy-DS=DISAGR
 'I bought (it).'

(105) *Siky' tuj nximtzi.*

$x=tz=iky'$ $t-uj$ $n-ximtz=i.$
 DIST=B2/3SG=pass A2/3SG-RN:in A1SG-thought=DISAGR
 'I forgot.'

Lastly, as noted above, England (2017) describes both $x=$ and *ma* as proximate markers, with $x=$ used for dependent clauses, such as those headed by various words for 'when,' while *ma* is used in matrix clauses. This split is not found in SJA Mam, as illustrated in (106), in which both $x=$ and *ma* can appear in *taj* 'when' clauses.

(106) *Taj x̄in poni, nqwa'i xnaq'tzal.*

Taj $x=chin$ $pon=i,$ $n=qw=a'=i$ $xnaq'tz-al.$
 when DIST=B1SG arrive.there=DISAGR IPFV=B1PL=start=DISAGR practice-NF
 'When I got there, we started to practice.'

(107) Taj *ma* $chin$ $pon=i,$ $n=qw=a'=i$ $xnaq'tz-al.$
 when PROX B1SG arrive.there=DISAGR IPFV=B1PL=start=DISAGR practice-NF
 'When I got there, we started to practice.'

2.4.1.3 Imperfective

The imperfective aspect marker, $n=$ is used to describe an ongoing action which can be interpreted as present progressive (108-a), past progressive (108-b), or habitual (108-c). This aspect is referred to as "incompletive" by some scholars (Pérez Vail, 2014, 56).

- (108) a. N=qo yol-an ja'l jken.
 IPFV=B1PL talk-AP now DEM
 'We are talking right now.'
- b. Ew, n=chin yol-n=i taj t-pon Geovany.
 yesterday IPFV=B1SG talk-AP=DISAGR when A2/3SG-arrive.there Geovany
 'Yesterday, I was talking when Geovany arrived.'
- c. N=chin chmo-n=i tkyaqil q'ij.
 IPFV=B1SG weave-AP=DISAGR every day
 'I weave every day.'

The imperfective has an interesting restriction with transitive syntax: it cannot be used for the present progressive meaning, shown in (109-a). The verb must be antipassivized in order to be interpreted as present progressive with the imperfective marker (109-b).

- (109) a. #N=tzaj n-laq'o-'n=i pan.
 IPFV=DIR:come A1SG-buy-DS=DISAGR bread
 intended: 'I am buying bread (right now).'
- b. N=chin laq'o-n=i pan.
 IPFV=B1SG buy-AP=DISAGR bread
 'I am buying bread (right now).'

The imperfective *n=* can however combine with transitive syntax when used in past progressive contexts, shown in (110), and habitual contexts, shown in (111).

- (110) N=xi' n-q'ama-'n=i jun tijil te Elissa taj t-el tz'aq laq.
 IPFV=DIR:go A1SG-tell-DS=DISAGR one what to Elissa when A1SG-DIR:out fall plate
 'I was telling Elissa something when the plate fell.'
- (111) N=tzaj n-laq'o-'n=i pan.
 IPFV=DIR:come A1SG-buy-DS=DISAGR bread
 'I buy bread (every day).'

The imperfective *n=* can combine with the proximate *ma* resulting in an immediately recent past, or to have 'just' done something, illustrated in (112-a). For Carrillo Godínez, in these constructions, the proximate marker ends in a velar nasal *maŋ* <man>, and this word can occur on its own, shown in (112-b) and (112-c), which, along with (112-a), are part of a conversational sequence. This pattern is likely from a reanalysis of the imperfective *n=*, and in real time speech, only one nasal sound can be heard between the proximate aspect and the Set B marker.

- (112) a. Man n=chj=u'l qa.
 PROX IPFV=B2/3PL=arrive.here PL
 'They just arrived.'

- b. Man ja'l jken?
 PROX NOW DEM
 'They did just now?'
- c. Man!
 PROX!
 'Yes!'

Lastly, the imperfective is used in narrative structures as the primary aspect marking, used to describe clearly non-imperfective events. England (2009) explains this use of the imperfective by articulating that it is the narrative itself that is ongoing: "What is in process is the narrative itself. The use of the incompletive [imperfective] in most of a narrative (of any kind) indicates that the narration is developing little by little and is still progressing." (England, 2009, 218).

2.4.1.4 Potential

The potential aspect is used to describe most future events. England (2007) analyzes this aspect as potential aspect instead of future tense primarily based on the use of proximate *ma* for immediate future contexts. The potential aspect is indicated in SJA Mam with a proclitic *k=* as well as the mood suffix *-l*.²² Both *k=* and *-l* appear on the highest verbal element in the clause: either the main verb (113-a), which could be a directional (113-b), or the directional which precedes the main verb (113-c). The suffix *-l* may attach to the end of a verb root, as in (113-a), or replace the final consonant, shown for the directional *tzaj* in (113-c).

- (113) a. Chin k=b'et-l=i.
 B1SG POT=walk-POT=DISAGR
 'I will walk.'
- b. Qo k=x'e'-l=i.
 B1PL POT=go-POT=DISAGR
 'We (excl.) will go.'
- c. K=tza-l t-q'o-'n Mintz q-i=y.
 POT=DIR:come-POT A2/3SG-give-DS Mintz A1PL-RN:DAT=DISAGR
 'Mintz will give (it) to us.'

The *k=* potential marker appears after Set B markers, unlike other aspect morphemes which appear before Set B markers. However, the potential proclitic *k=* is likely derived from the initial potential aspect marker *ok* described for Ixtahuacán Mam in England (1983b, 2007, 2017) and Cajolá Mam in Pérez Vail (2014), but not found in SJA Mam. In the varieties of Mam where it is found, *ok* appears in initial position, though is mostly optional.

²²I analyze *-l* as a potential suffix, though the homophonous nonfinite suffix *-l* may be related to the potential suffix, if not the same morpheme altogether.

- (114) Cajolá Mam
 (Ok) k-b'eet-il.
 POT B3SG-walk-POT
 'He/she will walk.' (Pérez Vail, 2014, 29-30)

Notice that the 2/3SG Set B marker in the example above is *k-*. Pérez Vail (2014) proposes that the final consonant of the potential *ok* was reanalyzed as a grammatical person marker (*k-* for 2/3SG Set B), explaining why it can co-occur with the potential *ok*. This likely arose from examples like (115) below, in which the *k=* seems to take the slot of the 2/3SG marker.

- (115) Ixtahuacán Mam
 Tqal-tzan k=∅=t-aq'-al-a q-ee-ky'
 what-well POT=B3SG-A2SG-give-POT=2SG A1PL-RN:DAT-1PL.EXCL
 'What will you give us?' (England, 2007, 129)

The data from SJA Mam suggest that *k=* was re-analyzed back to a potential aspect marker, as it can occur with all person/number combinations; it is shown with a 2/3SG Set B marker in (116). As a consequence, its position remains pre-verbal, now constituting the only aspectual marker in the language occupying the slot between the Set B marker and the following verbal element.

- (116) Chi k=ta-l qa k'wal.
 B2/3PL POT=sleep-POT PL child
 'The children will sleep.'

Finally, *k=* becomes *k'='* before vowels. This pattern is observed for the person marker *k-/k'-'* in Cajolá Mam as well, which Pérez Vail (2014, 30-31) attributes to the glottal stop which is pronounced as the onset of vowel initial verbs. In SJA Mam, there is optionality for vowel initial verbs. Recall that Set B markers have a pre-vocalic allomorph which attaches directly to the verb. When speakers use the pre-vocalic Set B markers, no *k'='* is used. If a speaker does use *k'='*, the pre-consonantal Set B marker is used. This variation applies within and across speakers.

- (117) a. Qw=a'-l=i.
 B1PL=return-POT=DISAGR
 'We (excl.) will return.'
- b. Qo k'=a-l=i.
 B1PL POT=return-POT=DISAGR
 'We (excl.) will return.'

Some verbs never appear in the potential—even if the event is in the future. Verbs that never appear in the potential include *pon* 'arrive there' and *ul* 'arrive here.' These constructions simply do not have an initial aspect marker or mood suffix.

- (118) a. *Chin k=po-l=i.
 B1SG POT=arrive.there-POT=DISAGR
 Intended: ‘I will arrive there.’
- b. Chin pon=i.
 B1SG arrive.there=DISAGR
 ‘I will arrive there.’

Interestingly, potential clauses cannot be negated. The negator for imperative and future verbs is *me’n*, and it cannot combine with potential aspect morphology, shown in (119-a). Instead, verbs appear without aspect marking with typical verbal inflection, shown in (119-b).

- (119) a. *Me’n chin k=xé’-l=i.
 NEG.V B1SG POT=DIR:go-POT=DISAGR
 Intended meaning: ‘I will not go.’
- b. Me’n chi=x=i.
 NEG.V B1SG=DIR:go=DISAGR
 ‘I will not go.’

2.4.2 Verbs

2.4.2.1 Suffixes

Verb roots take a range of suffixes depending on the syntactic context they appear in. Most intransitive verbs appear with the antipassive suffix, *-(a)n*, illustrated in (120). The antipassive is discussed further with respect to its place assimilation in 2.2.3.1 and further phonological and syntactic properties in 2.5.4.1.

- (120) Ma chin q’o-n=i jun xnaq’tz-b’l.
 PROX B1SG give-AP=DISAGR one lesson-NML
 ‘I gave a lesson (I taught a class).’

Most transitive clauses include a directional before the verb and the verb root appears with what England (1983b) calls the ‘directional suffix’: *-(a)’n*, which is similar in form to the antipassive suffix but adds a glottal stop, resulting in a creaky vowel, shown in (121). Transitive clauses without directionals do not have directional suffixes, shown in (122).

- (121) Ma ∅ tzaj t-q’o-’n=i jun tijil w-i=y.
 PROX B2/3SG DIR:come A2/3SG-give-DS=DISAGR one what A1SG-RN:DAT=DISAGR
 ‘You gave me something.’
- (122) Ma w-il=i q’a Christian.
 PROX A1SG-see=DISAGR CLF:boy Christian
 ‘I saw Christian.’

Other suffixes that verbs can take in SJA Mam include the nonfinite *-(a)l*, and the potential *-(a)l*, shown in (123).

- (123) a. N=∅=xi' q'a aq'n-al.
 IPFV=B2/3SG=DIR:go CLF:boy work-NF
 'He went to work.'
 b. Chin k=ta-l=i.
 B1SG POT-sleep-POT=DISAGR
 'I will sleep.'

2.4.2.2 Directionals

Mam has an extensive set of directionals, which are a class of verbs derived from intransitive verbs of motion. Directionals can combine with transitive or intransitive verbs, shown in (124). Table 2.25 lists the twelve basic directionals.

- (124) a. Ma chin b'aj wa-n=i.
 PROX B1SG DIR:COMPL eat-AP=DISAGR
 'I finished eating.'
 b. Ma ∅ kub' n-tz'ib'-n=i kab' n-yol=i.
 PROX B2/3SG DIR:down A1SG-write-DS=DISAGR two A1SG-word= DISAGR
 'I wrote (down) a few words.'

Table 2.25: Basic directionals

Directional	Meaning
xi'	go, away from speaker
tzaj	come, towards speaker
ul	arrive here
pon	arrive there
jaw	up; to the north
kub'	down; to the south
el	out; to the west
ok	in; to the east
kyaj	remain
aj	return
iky'	pass
b'aj	complete

When verbs combine with directionals, the result is only a single event, though the overall meaning of the VP is determined by the combination of the verb and directional. Sometimes the

meaning that the directional adds is transparent, like in (125), where *tolj* ‘fall’ combined with *kub* ‘down’ meaning ‘fall down,’ or *el* ‘out,’ meaning ‘fall out.’

- (125) a. Ma chin **kub** tolj=i.
 PROX B1SG DIR:down fall=DISAGR
 ‘I fell down.’
- b. Ma chn=**el** tolj=i.
 PROX B1SG=DIR:out fall=DISAGR
 ‘I fell out.’

However, sometimes the meaning that the directional adds is not transparent. In (126), the verb *b’yol* means ‘to hit’ when it combines with *ok* ‘in,’ and means ‘to kill’ when it combines with *kub* ‘down.’ Additionally, the default directional used with *ke’yl* ‘to see/watch/look at’ is *ok* ‘in,’ shown in (127). These meanings are not as directly compositional as those in (125).

- (126) a. Ma tz’=**ok** t-b’yo’n q’a jun xin.
 PROX B2/3SG=DIR:in A2/3SG-hit-DS CLF:boy one man
 ‘He hit a man.’
- b. O ∅ **kub** t-b’yo-’n jun xo’j qa ne xiky.
 PFV B2/3SG DIR:down A2/3SG-hit-DS one wolf PL CLF rabbit.
 ‘A wolf killed the bunnies.’
- (127) Ma tz’=**ok** q-ke’y-n=i a=y.
 PROX B2/3SG=DIR:in A1PL-see=DISAGR DET=DISAGR
 ‘We saw you.’

Directionals have different syntactic restrictions for transitive and intransitive verbs. Many intransitive verbs have the option to combine with directionals, but are not required to. This is shown for the verbs *tzalj* ‘be happy’ which can combine with *jaw* ‘up’ meaning ‘to be excited and *chyo*l ‘to eat (meat/beans)’ which can combine with *b’aj* ‘complete’ meaning ‘to finish eating.’

- (128) a. N=qo tzalj.
 IPFV=B1PL be.happy
 ‘We are happy.’
- b. N=qo **jaw** tzalj.
 IPFV=B1PL DIR:up be.happy
 ‘We are excited.’
- (129) a. Ma chin chyo-n=i.
 PROX B1SG eat.meat-AP=DISAGR
 ‘I ate.’

- b. Ma chin b'aj chyo-n=i.
 PROX B1SG DIR:COMPL eat.meat-AP=DISAGR
 'I finished eating.'

Unlike the optionality found for intransitive verbs, the large majority of transitive clauses obligatorily contain a directional. For example, omitting the directional in the transitive clauses in (130) is ungrammatical. However, transitive verbs can be antipassivized, in which case they drop the directional, shown in (131). When a verb is antipassivized, the subject inflection is Set B and the verb takes the antipassive suffix.

- (130) a. Ma ∅ *(tzaj) q-i-n lan.
 PROX B2/3SG DIR:come A1PL-bring-DS wool.thread
 'We brought the wool thread.'
- b. Ma ∅ *(jaw) q-xk'lo'x-an.
 PROX B2/3SG DIR:up A1PL-wrap-DS
 'We wrapped it.'
- (131) a. Ma qo q'i-n lan.
 PROX B1PL bring-AP wool.thread
 'We brought wool thread.'
- b. Ma qo xk'lo'x-an.
 PROX B1PL wrap-AP
 'We wrapped.'

Contrary to the pattern for most transitive verbs, there are a handful of transitive verbs that are unable to combine with directionals, listed in (132), and illustrated in (133).

(132) Verbs without directionals

tzqin	know
aj	want
ach	like
ky'i	not like/want
il	see

- (133) a. N-tzqin=i.
 A1SG-know=DISAGR
 'I know.'
- b. W-aj=i jun n-lo'=y mansan.
 A1SG-want=DISAGR one A1SG-fruit=DISAGR apple
 'I want an apple.'

- c. W-ach=i pan.
A1SG-like=DISAGR bread
'I like bread.'
- d. N-ky'i=y sb'u-b'il.
A1SG-not.want=DISAGR discrimination-NML
'I do not want discrimination.'

While the semantics of these verbs may contribute to their inability to take directionals, transitive *il* 'to see' never takes a directional while transitive *key'l* 'to see, watch, look at' must take a directional, shown in (134).

- (134) a. Ma w-il=i a=y.
PROX A1SG-see=DISAGR DET=DISAGR
'I saw you.'
- b. Ma tz'=ok n-ke'y-n=i a=y.
PROX B2/3SG=DIR:in A1SG-see-DS=DISAGR DET=DISAGR
'I saw you.'

With the 12 basic directionals in Table 2.25, many more are derived by combining two together, resulting in both directionals being phonologically reduced, shown in Table 2.26. The DIR1 column contains the four directionals for spatial orientation, mostly anchored to a mountain, *jaw*, *kub'*, *el*, *ok* 'up, down, west, east.' These directionals can each combine with *xi'* 'go' *tzaj* 'come' *ul* 'arrive here' and *pon* 'arrive there,' creating the resulting compound directionals in the DIR3 column. In each case the spatial directional is ordered first.

On the phonological nature of compound directionals, *tzaj* reduces to *tz* and *xi'* reduces to *x*, and both *ul* and *pon* lose their vowel. Throughout the paradigm of directional combinations, *jaw* either remains in full or can be reduced to *ja*; *kub'* often loses the implosive *b'* but retains the glottalization as creaky voice on the vowel (though it is reduced to *kb'* in *kb'ul*); *el* reduces to *e*; *ok* remains in full or reduces to *o* in the case of *opn*.

Table 2.26: Compound directionals

DIR1		DIR2		DIR3	Meaning
jaw	+	xi'	=	jawx	go up
kub'	+	xi'	=	ku'x	go down
el	+	xi'	=	ex	go out
ok	+	xi'	=	okx	go in
jaw	+	tzaj	=	jawtz	come up
kub'	+	tzaj	=	ku'tz	come down
el	+	tzaj	=	etz	come out
ok	+	tzaj	=	oktz	come in
jaw	+	ul	=	jawl	arrive up here
kub'	+	ul	=	kb'ul	arrive down here
el	+	ul	=	el	arrive out/west here
ok	+	ul	=	okl	arrive in/east here
jaw	+	pon	=	japn	arrive up there
kub'	+	pon	=	ku'pn	arrive down there
el	+	pon	=	epn	arrive out/west there
ok	+	pon	=	opn	arrive in/east there

When two directionals combine to create a compound directional, the result is one directional word with a complex directional meaning. Compound directionals can occur as main verbs, shown in (135).

- (135) Ma tz'=e=pn=i.
 PROX A2/3SG-DIR:out=DIR:arrive.there=DISAGR
 'You arrived out west.'

Syntactically, compound directionals function as one word. This is evident by their presence in combination with both intransitive and transitive verbs, illustrated in (136). In the syntactic position of *jaw=x* and *ku'=x*, only one directional word is grammatical, shown by the ungrammaticality of two directional words in the same position in (137).

- (136) Compound directionals
- a. Ma ∅ jaw=x aj=i.
 PROX B2/3SG DIR:up=DIR:go return=DISAGR
 'You went up (and came back).'
- b. Ma ∅ ku'=x t-a'wa-'n=i jun tze.
 PROX B2/3SG DIR:down=DIR:go A2/3SG-plant-DS=DISAGR one tree
 'You planted a tree.'

(137) Ungrammatical: two directionals

- a. *Ma ∅ jaw ok aj=i.
 PROX B2/3SG DIR:up DIR:in return=DISAGR
 Intended meaning: ‘You went up inside (and came back).’
- b. *Ma ∅ kub’ b’aj t-a’wa-’n=i jun tze.
 PROX B2/3SG DIR:down DIR:COMPL A2/3SG-plant-DS=DISAGR one tree
 Intended meaning: ‘You finished planting a tree.’

Interestingly, compound directionals can be split by the potential suffix, shown in (138). Section 2.7.2 shows that this order is not exactly rigid, though it may suggest that both the potential ‘suffix’ and second directional in compound directionals are enclitics.

(138) Chin k=jaw-l=x=i.
 B1SG POT=DIR:up-POT=DIR:go=DISAGR
 ‘I will go up.’

In addition, reduced directionals, like the ones found in the second part of compound directionals, appear as enclitics on imperatives. Transitive imperatives almost always occur with a reduced directional. (139) illustrates this with *q’on* ‘give,’ with three different directional enclitics.

- (139) a. q’o-n=tz=i!
 give-IMP=DIR:come=DISAGR
 ‘give it (towards me)!’ (from *tzaj* ‘come’)
- b. q’o-n=x=i!
 give-IMP=DIR:go=DISAGR
 ‘give it (away from me)!’ (from *xi* ‘go’)
- c. q’o-n=k=i!
 give-IMP=DIR:down=DISAGR
 ‘put it down!’ (from *kub* ‘down’)

2.4.2.3 Imperatives

Imperatives are formed with verb roots and for some verbs imperative suffixes and directional enclitics. Transitive imperatives require the *-n* imperative suffix and a reduced directional enclitic, shown in (140).²³ For these singular imperatives, the disagreement enclitic =*i* is used to indicate that the imperative is directed at ‘you (sg).’ The Set A 2/3SG prefix *t-* is present only on transitive imperatives with vowel initial verb roots, shown in (141).

²³(England, 2017, 504) describes the transitive imperative suffix for Ixtahuacán Mam as *-m* with no directionals, but in SJA Mam it seems that directionals accompany all transitive imperatives.

- b. $tz'o'i$
 B2/3SG=cry=DISAGR
 'cry!'

(144) Intransitive imperatives: plural

- a. $nej\ q=i$
 wait 2PL=DISAGR
 'y'all wait!'
- b. $chj=o' \quad q=i$
 B2/3PL=cry 2PL=DISAGR
 'y'all cry!'

Interestingly, directionals do not pattern with other intransitive verbs in imperative contexts. Directionals—regardless of phonological shape—always take Set A inflection in imperative contexts, for both singular and plural imperatives. For singular directional imperatives, the 2/3SG prefix *t-* is used, shown in (145). Plural directional imperatives take the Set A 2/3PL prefix *ky-* in imperative contexts, shown in (146). For singulars, the disagreement enclitic pronoun *=i* marks the 2SG addressee, and for plurals, the pronoun *q=i* marks the 2PL addressee.

(145) Directional imperatives: singular

- a. $t-xi'y$
 A2/3SG-DIR:go=DISAGR
 'Go!'
- b. $t-ku'=tz=i$
 A2/3SG-DIR:down=DIR:come=DISAGR
 'Come down!'
- c. $t-jaw=x=i$
 A2/3SG-DIR:up=DIR:go=DISAGR
 'Go up!'
- d. $t-ok=tz=i$
 A2/3SG-DIR:in=DIR:come=DISAGR
 'Come in!'

(146) Directional imperatives: plural

- a. $ky-xi' \quad q=i$
 A2/3PL-DIR:go 2PL=DISAGR
 'Y'all go!'
- b. $ky-ku'=tz \quad q=i$
 A2/3PL-DIR:down=DIR:come 2PL=DISAGR
 'Y'all come down!'

- c. ky-jaw=x q=i
 A2/3PL-DIR:up=DIR:go 2PL=DISAGR
 ‘Y’all go up!’
- d. ky-ok=tz q=i
 A2/3PL-DIR:in=DIR:come 2PL=DISAGR
 ‘Y’all come in!’

2.4.3 Nonverbal predicates

Nonverbal predicates are very common in Mam; they are constructed with an initial predicate which is followed by the subject, shown in (147). These constructions are non-verbal in that they do not take aspect marking, directionals, or any verbal inflection.

- (147) a. Ajxnaq’tzal Lucrecia.
 teacher Lucrecia
 ‘Lucrecia is a teacher.’
- b. Ajxnaq’tzal qin=i.
 teacher 1SG=DISAGR
 ‘I am a teacher.’

In place of inflection, if the subject is pronominal, the pronoun occurs in subject position. The initial predicate in non-verbal predicate constructions can be a determiner (148-a), existential (148-b), negation marker (148-c), adjective (148-d), or noun (148-e).

- (148) a. A qin=i
 DET 1SG=DISAGR
 ‘It’s me.’
- b. At q=i.
 EXIST 2PL=DISAGR
 ‘Y’all are here.’
- c. Ma’al qa.
 NEG.LOC PL
 ‘They are not here.’
- d. Matij qo.
 big 1PL
 ‘We (incl) are tall.’
- e. B’och=i!
 pig=DISAGR
 ‘You are a pig!’

The full paradigm of nonverbal subject marking is given in Table 2.27. The paradigm of subject marking is distinct from Set B morphology, repeated in 2.28, contrary to the analysis in England (2017, 512) which describes this inflection as suffixed Set B markers with some modifications.²⁴ The pattern is illustrated below with the existential non-verbal predicate *at*.

Table 2.27: Nonverbal predicate subject pronouns with *at* EXIST

	SG	PL
1EXCL	at qin=i	at qo'=y
1INCL		at qo
2	at= i	at q=i
3	at	at qa

Table 2.28: Set B markers

	SG	PL
1EXCL	chin	qo
1INCL		qo
2	∅/tz'=	chi
3	∅/tz'=	chi

As mentioned in Section 2.4.1.1, intransitive verbs which lack aspect markers (and thus interpreted as perfective) treat subjects like the subject of a nonverbal predicate: in both the null perfective and non-verbal predicate clauses, neither aspect nor Set B marking are present, the verb is in initial position, and the subject is indicated with an independent pronoun. This is illustrated for the nonverbal predicate in (149-a), and the null perfective clause in (149-b).

- (149) a. Xjal **qin=i**.
 person 1SG=DISAGR
 'I am a person.'
- b. Xi aj **qin=i** Twi' Q'u.'
 DIR:go return 1SG=DISAGR Twi' Q'u'
 'I went to Twi' Q'u.'

The similarity between nonverbal predicates and the null perfective clauses with respect to subject marking, specifically the absence of verbal inflection and the presence of post-predicate full pronouns, suggests that 'null perfective' clauses truly lack aspect and inflectional projections in the clause, as opposed to possessing phonologically null morphemes.

2.5 Simple clause structure

2.5.1 Word order

As we have seen, the baseline word order for transitive clauses in Mam is VSO where V includes verbal person marking, directionals, and aspect marking, shown in (150-a). For ditransitives, the direct objects must precede indirect objects (which are introduced with relational nouns), shown in (150-b).

²⁴A full argument against pronouns being Set B markers is given in Chapter 4.

- (150) a. [O tz'=el t-laq'o-'n]_V Xwan_S tx'otx'o.
 [PFV B2/3SG=DIR:out A2/3SG-buy-DS] Xwan land
 'Xwan bought land.'
- b. [O ∅=tzaj t-q'o-'n]_V Xwan_S u'j_{DO} w-i=y_{IO}.
 [PFV B2/3SG=DIR:come A2/3SG-give-DS] Xwan book A1SG-RN:DAT=DISAGR
 'Xwan gave me a book.'

For intransitive constructions, the basic order is VS, shown in (151-a), and for nonverbal predicate constructions the predicate precedes the subject, shown in (151-b) in which the noun *q'anil* 'doctor' is the predicate.

- (151) a. [O tz=ul]_V Xwan_S.
 [PFV B2/3SG=arrive.here] Xwan
 'Xwan arrived here.'
- b. [Q'anil]_{PRED} Xwan_S
 [doctor] Xwan
 'Xwan is a doctor.'

Beyond these baseline verb-initial orders, non-verb-initial orders are quite common and are derived through fronting of an element of the clause through *wh*- questions, relative clauses, focus, and topicalization. Section 2.7 details each of these constructions in more depth. Additionally, reflexive constructions require VOS word order, discussed in depth in §2.5.4.3.

2.5.2 Transitive objects

In addition to verb initial word orders, Mayan languages are known for their robust morphological ergativity and for many Mayan languages, syntactic ergativity. Nouns are not case-marked, but S and O arguments (intransitive subjects and transitive objects, respectively) trigger a different set of verbal person/number marking than A arguments (transitive subjects). The SJA Mam pattern represents a departure from traditional Mayan morphological ergativity: in basic sentences, S, A, and O are all marked differently. Such a pattern is more in line with a tripartite analysis. This section provides the basic pattern of marking for transitive objects in SJA Mam, revealing that they are marked distinctly from transitive and intransitive subjects.

In SJA Mam, as discussed in §2.3.1, intransitive subjects and transitive subjects are cross-referenced with Set B (absolutive) and Set A (ergative) marking, respectively, as well as with reduced subject/possessor pronouns.

- (152) Intransitive subject: Set B
 Ma **chn**=u'l=i.
 PROX B1SG=arrive.here=DISAGR
 'I arrived.'

(153) Transitive subject: Set A

Ma ∅ kub' n-tz'ib'-n=i.
 PROX B2/3SG DIR:down A1SG-write-DS=DISAGR
 'I wrote it down.'

Unexpectedly, transitive objects in SJA Mam do not typically trigger Set B marking in the verbal complex. Instead, person/number marking is indicated with the same set of independent pronouns used for non-verbal predicate subjects, discussed in 2.4.3. As illustrated in (154), the Set B slot in the verbal complex is not *empty*, but instead takes the 2/3SG form, which in this case is the overt allomorph *tz'*.

(154) Transitive object: independent pronouns

Ma tz'=ok ky-ke'y-an qa qin=i.
 PROX B2/3SG=DIR:in A2/3PL-see-DS PL 1SG=DISAGR
 'They saw me.'

This pattern holds across the entire paradigm, as illustrated in (155), which provides the full paradigm of objects for the clause in (154). Notice that in each case the Set B marker is constant: the 2/3SG *tz'* is used. For this reason, I refer to this morpheme as the default Set B marker. The pronouns occur in canonical object position.

(155) They saw...

me	Ma tz'ok kyke'yan qa qini.
you	Ma tz'ok kyke'yan qa ay.
her	Ma tz'ok kyke'yan qa txin.
us (excl)	Ma tz'ok kyke'yan qa qo'y.
us (incl)	Ma tz'ok kyke'yan qa qo.
you (pl)	Ma tz'ok kyke'yan qa qi.
them (pl)	Ma tz'ok kyke'yan qa qa.

While the structure in (155) represents the forms offered in elicitation, many speakers accept the expected agreeing Set B construction when prompted, illustrated in (156). While some speakers report no difference between the two constructions, others feel as if the agreeing Set B construction in (156) is more formal and would be used in a speech or when talking to a highly respected person or elder.

(156) Transitive object: Set B

Ma chn=ok t-ke'y-an Glendy.
 PROX B1SG-DIR:in A2/3SG-see-DS Glendy
 'Glendy saw me.'

(157) Transitive object: Default Set B

Ma tz'=ok t-ke'y-an Glendy qin=i.
 PROX B2/3SG-DIR:in A2/3SG-see-DS Glendy 1SG=DISAGR
 'Glendy saw me.'

In Chapter 3, I propose that the default Set B construction constitutes a tripartite pattern of morphological case marking in SJA Mam, and I offer a syntactic analysis for why the Set B marker is present and what blocks agreement with the object.

The pattern in (155) is not described for many other varieties of Mam in much of the documented literature in the twentieth century. However, recent work by Myers et al. (2023) shows that the lack of Set B for objects is also found in the grammar of a heritage Mam speaker who is also from the Seleguá dialect region. Additionally, Elkins and Brown (2023) show that Todos Santos Mam also shows the same tripartite case pattern.

2.5.3 (The lack of) subject/object hierarchy effects

Finally, several varieties of Mam exhibit a restriction in transitive clauses whereby the object cannot outrank the subject according to a person or animacy hierarchy. Pérez Vail (2014) argues that the pattern in Cajolá Mam constitutes an inverse system in which third person agents acting on local person objects must be articulated using a formally inverse construction such as the passive or the antipassive. In SJA Mam, no strict person or animacy hierarchy exists.

The following examples illustrate the basic person restriction in Cajolá Mam. (158-a) shows that a 3SG subject cannot act on a 1SG object in a transitive clause. (158-b) shows the repair: the 1SG argument is the subject of the passivized verb and the 3SG agent is introduced as a peripheral argument with the agentive relational noun.

(158) Cajolá Mam

- a. *Ma Ø=kub' k-tzyu-'n=a.
 PROX B2SG=DIR A3PL-grab-DS=2SG
 Intended meaning: 'They grabbed you.'
- b. Ma Ø=kub' tzyu-'n=a k-u'n
 PROX B2SG=DIR grab-DS=2SG A3PL-RN:by
 'You were grabbed by them.'

(Pérez Vail, 2014, 257)

Additionally, England (1983b) shows that in Ixtahuacán Mam, clauses in which the object would take the enclitic =a (used for 1SG, 2SG, 1PL excl, 2pl) and the subject *would not* (1PL incl, 3sg/pl) and are generally ungrammatical, shown in (159), in which a 3SG subject (no =a) cannot act on a 1SG object (=a).

(159) Ixtahuacán Mam

- a. Ma chin ok t-tzeeq'a-n=a.
 PROX B1SG DIR:in A2SG-hit-DS=1SG/2SG
 *‘He hit me.’
 ‘You hit me.’
- b. ?Ma chin ok t-tzeeq'a-n.
 PROX B1SG DIR:in A3SG-hit-DS
 Int: ‘He hit me.’

(England, 1983b, 62)

In [Scott \(2020b\)](#), I provide a syntactic analysis of why the direct constructions are ungrammatical in the varieties described above. In contrast to those varieties, however, SJA Mam does not exhibit the pattern described above; 3rd person agents acting on local person patients can be indicated as the active subject of a transitive clause, shown in (160).

- (160) Ma t-il q'a qin=i.
 PROX A2/3SG-see CLF:boy 1SG=DISAGR
 ‘He saw me.’

With respect to both England’s and my own analyses, the reason for the lack of the restriction in SJA Mam might be connected to the fact that objects do not compete with subjects for the enclitic slot. In Ixtahuacá Mam, the enclitic slot on the verb can reference the subject, object, or both ([England, 1983b](#)). In SJA Mam, the same slot is occupied by reduced subject/possessor pronoun slot and only ever references the subject in verbal clauses.

Other Mam varieties and other Mayan languages additionally show a subject/object restriction with respect to animacy, definiteness, and other factors ([Aissen, 1997](#); [Pérez Vail, 2014](#)). For example, in Cajolá Mam, an animal agent cannot act on a human patient, shown in (161-a). Instead, the verb must be passivized, as in (161-b), or antipassivized (161-c).

(161) Cajolá Mam

- a. *Ma tz'=ok t-tooki-'n waakx k'waal.
 PROX B2/3SG=DIR A3SG-attack-DS cow child
 Intended meaning: ‘The cow attacked the child.’
- b. Ma tz'=ok tooki-'n k'wal t-u'n waakx.
 PROX B2/3SG=DIR A3SG-attack-DS child A3SG-RN:AGT cow
 ‘The child was attacked by the cow.’
- c. Ma Ø=tooki-n waakx t-e k'waal.
 PROX B2/3SG=attack-AP cow A3SG-RN child
 ‘The cow attacked the child.’

(Pérez Vail, 2014, 180-181)

In SJA Mam, no such strict restriction exists. While the passive is used naturally when an animal acts on a human (meaning that it is offered first in elicitation), shown in (162-a), the active transitive clause is just as accepted, shown in (162-b). Carrillo Godínez gives the examples

in (162) and concludes that they have the same meaning.

- (162) a. O ∅ kub' k'wal t-u'n wakx.
 PFV B2/3SG DIR:down child A2/3SG-RN:AGT cow
 'The child was attacked by the cow.'
- b. O ∅ kub' t-b'yo-'n wakx k'wal.
 PFV B2/3SG DIR:down A2/3SG-hit cow child
 'The cow attacked the child.'

2.5.4 Voice

Mam has several valency changing operations, including the antipassive and several passives, though it does not have a verbal applicative marker like those found in some other Mayan languages (see [Mora-Marín 2003](#) for an overview of the Mayan applicative) nor a productive causative marker ([England, 1983b](#), 103). In this section I will illustrate the antipassive, several of the passive morphemes, and reflexive constructions.

2.5.4.1 Antipassive

Starting with the antipassive construction, the suffix *-(a)n* attaches to the verb root, the subject is indicated with Set B morphology, and the object is typically introduced with the relational noun *e*. In (163-a), the verb *b'yol* 'to hit' is in a transitive clause: the subject is inflected on the verb with Set A morphology, and the object *ay* 'you' is in its direct object form. In (163-b), the verb has been antipassivized: the subject is inflected on the verb with Set B morphology and the object is introduced in a relational noun phrase.

- (163) a. N=∅=o'k n-b'yo-'n=i a=y ew.
 IPFV=B2/3SG=DIR:in A1SG-hit-DS=DISAGR DET=DISAGR(2SG) yesterday
 'I was hitting you yesterday.'
- b. N=chin b'yo-n=i t-i=y ew.
 IPFV=B1SG hit-AP=DISAGR A2/3SG-RN:PAT=DISAGR yesterday
 'I was hitting you yesterday.'

The antipassive suffix consists of only a nasal if it is preceded by a vowel (164-a) or it is followed by the enclitic (164-b), in all other cases it is *an* (164-c). The nasal in this suffix is undefined for place, meaning that it is the velar [ŋ] at the end of words (when the suffix is *-an*) and [n] before the [i] enclitic.

- (164) a. Tijil qa sqach ma chi b'aj scha-n q=i t-i'j?
 what PL game PROX 2/3PL DIR:COMPL play-AP 2PL=DISAGR 2/3SG-RN:PAT
 'What games did you all play?'

- b. B'an ch'in chin yol-n=i t-uj qyol Mam.
 can a.little B1SG speak-AP=DISAGR A2/3SG-RN:in A1PL-language Mam
 'I can speak Mam a little.'
- c. ... qa xjal b'an chi yol-an t-uj kab' yol.
 ... PL person can B2/3PL speak-AP A2/3SG-RN:in two language
 '... people who speak two languages.'

Not all objects must be demoted to a relational noun phrase in antipassive constructions. One use of the antipassive that is common in Mayan languages is object incorporation, among other functions (Dayley, 1983). In these cases, the object appears without a relational noun, shown in (165).

- (165) N=chin k'a-n=i kape.
 IPFV=B1SG drink-AP=DISAGR coffee
 'I am drinking coffee.'

This ability to incorporate the object seems optional in some cases. Compare (166-a) and (163-b): the object can optionally be incorporated in this sentence, though the full capacity of optional incorporation is not clear.

- (166) a. N=chin b'yo-n=i t-i=y ew.
 IPFV=B1SG hit-AP=DISAGR A2/3SG-RN:PAT=DISAGR yesterday
 'I was hitting you yesterday.'
- b. N=chin b'yo-n=i a=y ew.
 IPFV=B1SG hit-AP=DISAGR DET=DISAGR(2SG) yesterday
 'I was hitting you yesterday.'

The antipassive never appears on directionals, nor a few intransitive verbs such as *b'et* 'walk' and *meltz'j* 'return,' shown in (167). However, the antipassive is present in almost all intransitive clauses with verbs that are not verbs of motion. For example, many intransitive verbs, both unaccusative ('be sad') and unergative ('dance,' 'sing') must appear with the antipassive suffix, illustrated in (168).

- (167) a. Ma chi=x=i t-uj tnam.
 PROX B1SG=go=DISAGR A2/3SG-RN:in town
 'I'm going downtown.'
- b. O qo b'et=i.
 PFV B1PL walk=DISAGR
 'We (excl) walked.'
- c. Ma chn=aj meltz'j=i.
 PROX B1SG=DIR:return return=DISAGR
 'I returned.'

- (168) a. N=chin b'is-n=i.
IPFV=B1SG be.sad-AP=DISAGR
'I am sad.'
- b. N=qo b'ix-an.
IPFV=B1PL dance-AP
'We (incl) are dancing.'
- c. N=chin b'itz-n=i.
IPFV=B1SG sing-AP
'I am singing.'

One explanation for this use of the antipassive is that these roots were derived from nouns. England (1988) notes the lexical use of the antipassive in Mam and specifically that it is used to derive intransitive verbs from nouns. In SJA Mam this is a plausible explanation for at least (168-c), as *b'itz* is the form of the noun 'song.'

Lastly, the antipassive is used in constructions in which the agent in a transitive clause has been extracted to the left periphery, a construction that has been come to be known in the Mayanist literature as agent focus. In SJA Mam in (169), the antipassive *-(a)n* suffix co-occurs with the suffix *ta*, which only appears on verbs in agent focus constructions. Section 2.7.1 is dedicated to the syntax of agent extraction, and I leave further discussion to that section.

- (169) A'l ma tz'=ok b'yo-n-ta t-e Glendy?
who PROX B2/3SG=DIR:in hit-AP-AF A2/3SG-RN:PAT Glendy
'Who hit Glendy?'

2.5.4.2 Passive

England (2017, 521) notes the existence of "five or more" difference passive suffixes in Ixtahuacán Mam, most of which are associated with specific syntactic or semantic restrictions. Several of these passives are found in SJA Mam as well. First, we have the null and the *-et/-Vt* passives, which function as what England (2017, 521) calls "general syntactic passives." These two passives are used in SJA Mam, shown in (170) and (171). In these clauses, the patient is the sole argument indicated on the verb and shows Set B marking, and agents can optionally be introduced by the agentive relational noun *t-u'n*, shown in (171-b).

- (170) *-et* passive
Aka chi kl-et qa ...
can B2/3PL save-PASS PL ...
'They can be saved...'

(171) Null passive

- a. At maj nti' n=∅=o'k q'ama-'n yol ken.
 EXIST instance NEG.EXIST IPFV=B2/3SG=DIR:in say-DS word DEM
 'Sometimes these words are not said.'
- b. O ∅ kub' k'wal (t-u'n wakx).
 PFV B2/3SG DIR:down child A2/3SG-RN:AGT COW
 'The child was attacked (by the cow).'

England (1983b, 112) also notes the *-j* passive suffix, which “derives a lexical passive from transitive stems with the implication that the agent has lost control of the action,” which is shown for SJA Mam in (172).

(172) *-j* passive

- a. Ma ∅ kub' qes-j n-q'ab'=i.
 PROX B2/3SG DIR:down cut-PASS A2/3SG-hand=DISAGR
 'My hand was cut.'
- b. O chn=ul itz'-j t-uj Xjan Xwan.
 PFV B1SG=DIR:arrive.here alive-PASS A2/3SG-RN:in San Juan
 'I was born in San Juan Atitán.'

For more information on the distribution and meanings of each passive, I direct the reader to England (1988, 534-537).

2.5.4.3 Reflexives

Reflexive clauses can be transitive (173) or intransitive (174). In reflexive clauses, the subject is inflected on the verb with Set A or Set B agreement, and the reflexive object, the reflexive/reciprocal relational noun *-ib'*, is inflected with Set A (possessive) marking agreeing with the subject. In these clauses, VOS word order is required. Reflexive constructions are the only instance of VOS word order in SJA Mam.

(173) Transitive reflexive

- O t-il t-ib' Liy.
 PFV A2/3SG-see A2/3SG-self Liy
 'Liy saw herself.'

(174) Intransitive reflexive

- N=chi xqin-an ky-ib' qa xjal.
 IPFV=B2/3PL exercise-AP A1SG-RN:RR PL person
 'The people are exercising.'

Reflexive VOS syntax is used not only with the object *ib'* 'self', but with all body parts, a phenomenon called 'extended reflexives' in the Mayan literature (Aissen, 1999). For example, in

(175), VOS order is required in order to obtain the interpretation in which Xwan is the possessor of *tq'ab* 'hand.' VSO order, shown in (175-b), results in obligatory non-co-reference between the agent and the possessor of the object.

(175) Extended reflexive

- a. O *tz'=ok* *t-jato-'n* *t-q'ab'* **Xwan**.
 CPL B2/3SG-DIR A2/3SG-hit-DS A2/3SG-hand **Xwan**.
 'Xwan hit his own hand.'
- b. O *tz'=ok* *t-jato-'n* **Xwan** *t-q'ab'*.
 CPL B2/3SG-DIR A2/3SG-hit-DS **Xwan** A2/3SG-hand.
 'Xwan_i hit his_{j/*i} hand.'

Extended reflexives (VOS syntax without the relational noun *-ib'* 'self') are not used with alienable possessed nouns.²⁵ VSO order is required with objects like *txemb'il* 'machete.'

- (176) O *tz'=ok* *t-jato-'n* **Xwan** *t-tx'emb'il*.
 CPL B2/3SG-DIR A2/3SG-hit-DS **Xwan** A2/3SG-machete.
 'Xwan_i hit his_{i/j} machete.'

Attempting to put the lexical subject after the possessed object for clauses like (176)—an attempt at VOS 'extended reflexive' word order—forces a VSO interpretation in which the subject is a null *pro* and the object is the possessed noun phrase [*t-tx'emb'il Xwan*] 'Xwan's machete,' shown in (177). The relationship between the subject and Xwan is necessarily non-coreferential in these case (i.e. the subject pronoun cannot refer to Xwan).

- (177) O *tz'=ok* *t-jato-'n* *pro* [*t-tx'emb'il* **Xwan**].
 CPL B2/3SG-DIR A2/3SG-hit-DS 3SG [A2/3SG-machete **Xwan**]
 'He/she hit Xwan's machete.'

Reflexive constructions reveal interesting generalizations about the reduced subject pronouns which usually follow the verb, shown in (178). In reflexive constructions, the reduced pronouns cannot appear in their normal post-verbal position in reflexive constructions and instead follows the reflexive object.

(178) Reduced subject/possessor pronouns =*i/q=i/qa*

- a. N=chn=ew-an *w-ib'=i*.
 IPFV=B1SG-hide-AP A1SG-RN:RR=DISAGR
 'I am exercising.'
- b. N=chj=ew-an *ky-ib'* **q=i**.
 IPFV=B2/3PL-hide-AP A2/3PL-RN:RR 2PL=DISAGR
 'Y'all are exercising.'

²⁵Extended reflexives are used for body parts, and possibly other inalienable nouns like kinship terms, and is an interesting area for future research.

- c. N=chj=ew-an ky-ib' qa.
 IPFV=B2/3PL-hide-AP A2/3PL-RN:RR PL
 'They are exercising.'

In Chapter 4 §4.2, I discuss the implications for the reduced subject/possessor pronoun pattern illustrated above, namely that their position following the reflexive object is evidence that they constitute subject pronouns as opposed to agreement morphemes.

2.5.5 Negation

Mam has an extensive set of negation markers, an interesting area of variation across varieties of Mam. For the most part, negative marking takes the initial position in the clause and replaces aspectual marking, except in the case of *nti'*, which comes before aspectual marking. Table 2.29 lists the main negation markers in SJA Mam and what category they negate. The top half of the table consists of the negators that have been documented for Ixtahuacán Mam in England (2017, 525), while the bottom half consists of negators not found in England (2017, 525).²⁶

Table 2.29: Negation

Category of negation	San Juan Atitán
Statives and NPs in focus	nya
Locative	mi-a'l/ma-a'l
Pure existential	{ nti'
Verbs: not future/imperative	
Verbs: future, imperative	me'n
Not yet	na'nx
Can't: not able	nlay
Can't: no knowledge	mib'an
Can't: very hard	mi'x

The biggest difference compared to other varieties that SJA Mam shows in the top half of the table is the split between *mi-al/ma-al* and *nti'*. England (2017) describes *mi'aal* as the existential used for people and *nti'* is used for non-people. However, in SJA *mi-al/ma-al* is used for an negative existential of anything–people or non-people–with the interpretation that the element exists, it is just not present.

- (179) a. Nya tx'yan.
 NEG.NP dog
 'It's not a dog.'

²⁶The only exception to this is *nlay*, for which *mlay* is listed as the negator for verbs in the future of Ostuncalco Mam in England (2017, 525).

- b. **Mi-al** tx'yan.
 NEG.LOC dog
 'The dog is not here.' (but there is a dog somewhere)
- c. **Nti'** tx'yan.
 NEG.EXIST dog
 'There is no dog. / There are no dogs.'

Nti' is also used to negate verbs in non-future and non-imperative contexts which includes perfective, proximate, illustrated in (180). *Nti'* appears in initial position before the aspect marker. In complementary distribution with *nti'* is *me'n*, which is used for verbs in the future (181-a) and the imperative (182). Note that when *me'n* is used with verbs in the future, the potential aspect is not used, shown in (181-b) and discussed more in §2.4.1.4.

- (180) a. **Nti'** o chin wa-n=i.
 NEG.EXIST PFV B1SG eat-AP=DISAGR
 'I didn't eat.'
- b. **Nti'** ma chin scha-n=i.
 NEG.EXIST PROX B1SG play-AP=DISAGR
 'I didn't play.'
- (181) a. **Me'n** chin wa-n=i.
 NEG.V B1SG eat-AP=DISAGR
 'I will not eat.'
- b. ***Me'n** chin k=wa-l=i.
 NEG.V B1SG POT=eat-POT=DISAGR
 Intended: 'I will not eat'
- (182) **Me'n** tzaj t-chi t-i'j=i.
 NEG.V DIR:come A2/3SG-fear A2/3SG-RN:about=DISAGR
 'Don't be afraid.'

In addition to the negation marking in the top half of the table, SJA Mam has several other negative forms, all of which are sentential negators occupying initial position. Of them, *na'nx* is the only one that requires super-extended ergativity; super-extended ergativity requires all verbal inflection to be Set A (discussed more in depth in §2.7.1). This can be seen in (183), in which the intransitive subject of *wan* 'eat' is inflected with Set B in matrix clauses, but Set A in *na'nx* clauses. The rest of the negators act as initial adverbs that replace aspectual marking but retain normal person marking.

- (183) a. **Ma** chin wa-n=i.
 PROX B1SG eat-AP=DISAGR
 'I ate.'

- b. **Na'nx** n-wa-n=i.
 NEG.yet A1SG-eat-AP=DISAGR
 'I haven't eaten yet.'
- (184) **Nlay** chin poni t-uj xnaq'tzb'il ja'l.
 NEG.able B1SG arrive.there=DISAGR A2/3SG-RN:in class today
 'I cannot make it to class today.'
- (185) **Mib'an** chin xuk-n=i.
 NEG.know B1SG embroider-AP=DISAGR
 'I cannot embroider (I never learned).'
- (186) **Mi'x** tz'=el n-niky'=i.
 NEG.hard B2/3SG=DIR:out A1SG-understand=DISAGR
 'It's hard for me to understand.'

2.6 Embedded clauses

2.6.1 Scale of finiteness

The syntax of Mam embedded and subordinated clauses is an area of grammar that shows deviation from main clauses in aspectual marking and person marking. [England \(2013b, 2017\)](#) describes types of embedded clauses in Mam on a scale or continuum of finiteness. On one end are fully finite embedded clauses which display main clause aspect marking and typical person marking. On the other end are fully nonfinite clauses which lack any aspect or person marking. In the middle are two types of clauses: i) those that lack aspect marking but maintain matrix person marking and ii) those that lack aspect marking and extend the use of Set A marking to all arguments of the verb, a pattern England calls 'super-extended ergative': the manifestation of split ergativity in Mam. England describes another type of clause along this spectrum, clauses with dependent aspect marking, though these are largely absent in SJA Mam. The only possible exception is discussed in §2.4.1.1 on aspectless perfective clauses. As discussed in Section 2.4.1, the dependent aspect markings are used in matrix clauses as well and have taken on slightly new meanings.

This section provides an overview of the scale of finiteness in SJA Mam, starting with fully finite embedded clauses and ending with fully nonfinite clauses.

2.6.2 Finite complements

Finite embedded clauses appear in conditional *qa* 'if' clauses, shown in the first clause in (187), and some relative clauses, shown in the bracketed relative clause in (188). In both cases, the embedded clauses show typical matrix aspectual morphology and typical person agreement for verbal arguments, indicating that they are fully finite.

- (187) **Qa** ma ∅ tzaj t-q'o-'n=i u'j jken w-i=y,
 if PROX B2/3SG DIR:come A2/3SG-give-DS=DISAGR book this A1SG-RN:DAT=DISAGR
 k=x'e'l n-q'o-'n=i t-pwaq=i.
 POT=go.POT A1SGgive-DS=DISAGR A2/3SG-money=DISAGR
 'If you give me this book, I will give you your money.'
- (188) Ma ∅ til Lev aj k'wal [n=∅=kxun i'x̃].
 PROX B2/3SG A2/3SG-see Lev DEM boy [IPFV=B2/3SG=chew corn]
 'Lev saw the boy who was eating corn.'

Fully finite clauses can also appear with the subordinator *t-u'n*, the relational noun introducing reason clauses. Two types of clauses can be embedded under 'reason' *tu'n*: fully finite clauses—interpreted as past/present, shown in (189-a), or super-extended ergative clauses— which lack aspect and are interpreted as future, shown in (189-b). The next section, §2.6.3, gives an overview of the super-extended ergative pattern. What is important here is that *t-u'n* as a subordinator *can* take fully finite clauses, a pattern not yet described for a Mam variety.²⁷

- (189) a. Chjonte **t-u'n** ma ∅ tzaj t-txko-'n=i
 Thanks A2/3SG-RN:REAS PROX B2/3SG DIR:come A2/3SG-invite-DS=DISAGR
 qin=i.
 1SG=DISAGR
 'Thanks for inviting me.'
- b. Chjonte **t-u'n** t-tzaj t-txko-'n=i qin=i.
 Thanks A2/3SG-RN:REAS A2/3SG-DIR:come A2/3SG-invite-DS=DISAGR 1SG=DISAGR
 'Thanks because you will invite me.' (odd)
 # 'Thanks for inviting me.'

In addition to the fully finite subordinate clauses, we find clauses that lack aspectual marking but retain typical person marking. We find these clauses after *aj* 'want,' shown in (190) and *ky'i* 'not want' when no subordinator is used, shown in (191).

- (190) a. Q-aj=i [qo yol-an].
 A1PL-want=DISAGR [B1PL speak-AP]
 'We (excl) want to talk.'
- b. W-aj=i [tz'=ok n-ke'y-n=i a=y].
 A1SG-want=DISAGR [B2/3SG=DIR:in A1G-see-DS=DISAGR DET=DISAGR]
 'I want to see you.'
- (191) a. N-ky'i=y [chin yol-an].
 A1SG-not.want=DISAGR [B1SG speak-AP]
 'I don't want to talk.'

²⁷While *t-u'n* includes the Set A 2/3SG prefix, it does not agree with any arguments inside the clause; its invariant 2/3SG prefix maybe agreeing with features of the clause as a whole, or be the realization of default features.

- b. T-ky'i q'a [tz'=ok t-ke'y-an qin=i].
 A2/3SG-not.want CLF:boy [B2/3SG=DIR:in A2/3SG-see-DS 1SG=DISAGR]
 'He doesn't want to see me.'

These clauses are curious because it is typically assumed that Set B is created via Infl, which is also responsible for aspect (Coon et al., 2014). The pattern above suggests that whatever is responsible for aspectual marking is distinct from that which creates Set B marking.

2.6.3 Split ergativity

It has been claimed that all Mayan languages exhibit a non-ergative alignment pattern in one or more corners of the grammar (Coon, 2013; Zavala-Maldonado, 2017); the stronger claim has also been made that this holds for all languages where ergative alignment is the most common case marking system (Moravcsik, 1978). In other words, all ergative languages exhibit split ergativity. Across Mayan languages, splits are triggered by aspect, clause type, features of the subject, or features of the verb. In each case, the most common pattern for the split is that the Set A marking, usually reserved for transitive subjects only, is used for intransitive subjects as well. Dixon (1979, 78), Dixon (1994, 63) calls this "extended ergativity," and it results in a nominative/accusative alignment.

In Mam, the split in ergativity is triggered by clause type: dependent clauses of various types do not show ergative/absolutive alignment. England (1983b,a, 1988, 1989, 2007, 2013a,b, 2017) has extensively shown that the alignment in dependent clauses in Mam is not accusative; while Set A has indeed 'extended' to intransitive subjects, it is also extended to transitive objects. In this way, Mam exhibits a 'neutral' pattern in these clauses, since all arguments receive the same marking in these contexts. England (2017) calls this pattern 'super-extended ergative' and it persists in several Mam dialects as well as other Mamean languages: Cajolá Mam (Pérez Vail, 2014, 27), Teko (Pérez Vail, 2007), and Awakatek (England, 1983b; Larsen, 1981). This pattern is found in SJA Mam, shown in the following examples. Subordinators that trigger super-extended ergativity include *tu'n*, the relational noun for reason and purpose clauses, and *taj*, used in 'when' clauses in the past.

The example in (192-a) shows an intransitive subject in a complement *tu'n* clause: instead of the Set B markers used in matrix clauses, the subject is inflected on the verb with Set A. Similarly, (192-b) shows an intransitive subject in a *taj* 'when' clause inflected with Set A.

(192) Intransitive super-extended ergative

- a. W-aj=i t-u'n n-ta-n.
 A1SG-want=DISAGR A2/3SG-RN:COMP A1SG-sleep-AP
 'I want to sleep.'
- b. Taj t-pon q'a, wa-n q'a.
 when A2/3SG-arrive.there CLF:boy eat-AP CLF:boy
 'When he got there, he ate.'

Super-extended ergative transitive clauses inflect both the subject and the object with Set A. When the clause has a directional, the object Set A prefix appears on the directional and the subject Set A prefix appears on the verb. This is illustrated in (193-a) with the subordinator *tu'n* and in (193-b) with *taj* 'when.' For the transitive verb *il* 'see,' directionals are obligatorily absent; in these clauses, the object Set A prefix stacks directly on the subject Set A prefix, shown in (194).

(193) Transitive with directional super-extended ergative

- a. ... **t-u'n** **t-ok** **q-q'o-'n** **t-ipumal** **q-yol**
 ... A2/3SG-RN:PURP A2/3SG-DIR:in A1PL-give-DS A2/3SG-strength A1PL-language
 Mam
 Mam
 '... to keep our Mam language alive.' *lit.* 'so that we give importance/strength to our Mam language'
- b. ... **taj** **t-tzaj** **q-laq'o-n=i** **pan.**
 ... when A2/3SG-DIR:come A1PL-hit-DS=DISAGR bread
 '... when we cut the bread.'

(194) Transitive without directional super-extended ergative

- ... **taj** **t-w-il=i** **a=y** ...
 ... when A2/3SG-A1SG-see DET=DISAGR ...
 '... when I saw you'

In Ixtahuacán Mam, the Set A marker referencing the object can show full agreement with the object, illustrated in (195) for the first person singular object marked by the Set A *n-* on the directional (England, 1989, 292). However, in SJA Mam, agreeing Set A markers are not possible for objects in super-extended ergative contexts, shown in (196-a). Only the default 2/3SG Set A marker, *t-*, is acceptable, regardless of the features of the object, shown in (196-b).

(195) Ixtahuacán Mam

- O chin ooq'a [aj **n-kub'** t-tzeeq'a-n=a]
 ASP B1SG cry=1SG [when A1SG-DIR:down A2SG-hit-DS=2SG/1SG]
 'I cried when you hit me.' (England, 1983a, 14)

(196) SJA Mam: Only default Set A allowed in super-extended ergative clause

- a. *Taj w-ok t-ke'y-n=i ...
 when A1SG-DIR:in A2/3SG-see-DS=DISAGR ...
 intended: 'When you saw me ...'
- b. Taj t-ok t-ke'y-n=i qin=i ...
 when A2/3SG-DIR:in A2/3SG-see-DS=DISAGR 1SG=DISAGR ...
 When you saw me...

The use of the 2/3SG 'default' Set A marking for the object in super-extended ergative clauses parallels the 2/3SG default Set B marking in main clauses discussed in §2.5.2. In matrix transi-

tive clauses, the Set B morpheme most commonly appears as the default 2/3SG form while the pronominal object is expressed with an independent pronoun in object position, repeated below in (197-b). Recall, though, that in matrix clauses, the default Set B form alternates with the agreeing Set B form, repeated below in (197-a). This optionality is not found with object Set A markers in super-extended ergative clauses, illustrated in (196).

(197) SJA Mam: Default or Agreeing Set B allowed in matrix clause

- a. Ma **chn**=ok t-ke'y-an Mintz.
 PROX B1SG-DIR:in A2/3SG-see-DS Mintz
 'Mintz saw me.'
- b. Ma **tz'**=ok t-ke'y-an Mintz **qin=i**.
 PROX B2/3SG-DIR:in A2/3SG-see-DS Mintz 1SG=DISAGR
 'Mintz saw me.'

Several syntactic contexts require super-extended ergativity. A few include: purpose clauses headed by *tu'n*, shown in (193-a) above, and *tu'n* complement clauses, shown in (198). As mentioned in §2.6.2, with *tu'n* reason clauses, the use of super-extended ergativity is interpreted as a future event, shown in (199).

(198) Complement *tu'n*

- a. W-aj=i t-xi n-q'ama-'n=i ky-i-y
 A1SG-want=DISAGR A2/3SG-DIR:go A1SG-say-DS=DISAGR A2/3PL-RN:DAT=DISAGR
t-u'n t-kub' q-nimsa-'n q-anq'ib'il.
 A2/3SG-RN:COMP A2/3SG-DIR:down A1PL-celebratet=DS A1PL-culture
 'I want to tell you that we can celebrate our culture.'
- b. W-aj=i **t-u'n** t-tan=i.
 A1SG-want=DISAGR A2/3SG-RN:COMP A2/3SG-sleep=DISAGR
 'I want you to sleep.'

(199) Reason *tu'n* clauses: future interpretation

- N=chin tzalj=i **t-u'n** t-a' jb'al.
 IPFV=B1SG happy=DISAGR A2/3SG-RN:REAS A2/3SG-start rain
 'I'm happy because it will rain.'
 # 'I'm happy because it has started raining.'

Other clauses that trigger super-extended ergative are past when those headed by *taj*, shown in (193) and (194) above, future when clauses headed by *aj*, shown in (200), and various clause initial adverbial elements, shown in (201).

(200) Future *aj* ‘when’

Aj t-e=tz n-laq'o-'n=i n-xab'=i b'i'x
 when A2/3SG-DIR:out=DIR:come A1SG-buy-DS=DISAGR A1SG-shoe immediately
 k'=ok-al n-qan=i.
 POT=DIR:in-POT A1SG-foot=DISAGR
 ‘When I buy my shoes I will put them on right away.’

(201) Initial adverbs

- a. Ch'ix t-ok ky-b'yo-'n qa txin.
 almost A1SG-DIR:in A2/3PL-hit-DS PL girl
 ‘They are about to hit the girl.’
- b. Ni'm t-ok n-xb'al-n=i.
 right.now A2/3SG-DIR:in A1SG-dress-DS=DISAGR
 ‘I’m getting dressed right now.’
- c. Na'nx t-jaw n-xk'lo'x-n=i .
 not.yet A2/3SG-DIR:up A1SG-wrap-DS=DISAGR
 ‘I haven’t yet wrapped (thread).’

Variation within the broader Mamean branch of languages exists with respect to whether the extended ergative pattern appears for all verbs in dependent contexts (Mam) or just verbs when they appear with preceding directionals (Awakatek) (England, 1983a, 17). This variation leads England to argue that the Mam system developed from a system like that of Awakatek: the use of super-extended ergative in non-directional contexts is an innovation. The variation between Mam and Awakatek requires a closer look at the patterns of split ergativity in clauses in Mam with and without directionals.

2.6.4 Nonfinite clauses

On the far end of the finiteness scale are truly nonfinite clauses. These clauses lack any aspectual marking, directionals, or any Set A/B morphology on the verb. Nonfinite verbs take the *-(a)l* suffix and direct objects must be introduced by a relational noun, shown in (202). The pattern is found throughout all Mam varieties (England, 1989, 292).

- (202) a. Ma chj=e'x xjal [laq'o-l (t-e)].
 PROX B2/3PL=go person [buy-NF A2/3SG-RN:PAT]
 ‘The people went to buy (it).’
- b. Ma chi-x=i [aq'n-al].
 PROX B1SG=go=DISAGR [work-NF]
 ‘I’m going to work.’

Nonfinite clauses appear embedded under verbs of motion, shown for the verb *xi* ‘go’ above, and for the verb *pon* ‘arrive there’ in (203-a). Additionally, verb *a* ‘start’ takes nonfinite complements, shown in (203-b).

- (203) a. O chin pon=i [aq'n-al t-uj t-ja-xnaq'tz-b'il].
 PFV B1SG arrive.there=DISAGR [work-NF A2/3SG-RN:in A2/3SG-house-learn-NML]
 ‘I arrived to work at the school.’
- b. Taj x=pon Geovanni, n=qw=a'i [yo-l].
 when DIST=arrive.there Geovanni, IPFV=B1PL=start=DISAGR [speak-NF]
 ‘When Geovanni arrived, we started to talk.’

2.7 Complex clauses

2.7.1 Syntactic ergativity

2.7.1.1 Overview

A question that many scholars have asked about languages like Mam which are morphologically ergative is whether they are deeply structurally ergative. One of the best candidates for a syntactic reflex of ergativity is the inability to extract ergative arguments. I follow Aissen (2017b) in referring to this restriction as the ergative extraction constraint (EEC). It has been documented that this constraint is active in Mam, and is used for extraction of the ergative subject for focus, *wh*- questions, and relativization (see England 2017 and references within).

In Mam, the antipassive construction must be used to extract the ergative subject; this involves the absence of ergative (Set A) agreement and instead absolutive (Set B) agreement for the extracted subject, the use of the antipassive suffix, and the demotion of the object via the use of a relational noun. There is a high degree of dialectal variation in Mam with respect to the verb agreement and the morphosyntax of demotion of the object. In this section I describe the pattern for SJA Mam as it relates to the broader patterns in Mam, showing that while SJA Mam mostly patterns similarly to other varieties, it displays the unique ability to *not* demote patients in agent focus antipassive constructions.

The Ixtahuacán Mam examples (204) and (205) show that intransitive subjects and transitive objects can extract freely. The (a) examples provide a non-extraction context, while each (b) example shows extraction of the intransitive subject in (204) and the transitive object in (205). These are focus contexts, which require the focused argument to appear preverbally with the focus demonstrative *aa*.

San Ildefonso Ixtahuacán Mam

(204) ✓ Intransitive subject extraction

- a. Ma chi b'eet xiinaq.
 PROX B3PL walk men
 'The men walked.'

(England, 2017, 516)

- b. Aa xiinaq ma chi b'eet.
 DEM men PROX B3PL walk men
 'It was the men who walked'

(England, 2017, 517)

(205) ✓ Transitive object extraction

- a. Ma chi kub' ky-tzyu-'n xiinaq cheej.
 PROX B3PL DIR A3PL-grab-DS men horse
 'The men grabbed the horses.'

(England, 2017, 517)

- b. Aa cheej ma chi kub' ky-tzyu-'n xiinaq.
 DEM horse PROX B3PL DIR A3PL-grab-DS men
 'It was the horses that the men grabbed.'

(England, 2017, 517)

Unlike the arguments in (204) and (205), transitive subjects cannot extract from the transitive clause for focus, as shown in (206). In order to express the meaning intended in (206), the antipassive construction is used. In (207), the verb *tzyuu* 'grab' is intransitive, as indicated by the antipassive suffix and the lack of ergative agreement. In (207), *xiinaq* 'men' is the sole argument of the antipassive verb, and controls the *chi* the Set B (absolutive) agreement on the verb. The patient of the verb, *cheej* 'horse,' is now the oblique object, and must be introduced with the relational noun *i'j*.

San Ildefonso Ixtahuacán Mam

(206) * Transitive subject extraction

- *Aa xiinaq ma chi kub' ky-tzyu-'n chej.
 DEM men PROX B3PL DIR A3PL-grab-DS horse
 Intended: 'It was the men who grabbed the horses.'

(England, 2017, 517)

(207) ✓ Antipassive to extract transitive subject

- Aa xiinaq ma chi tzyuu-n ky-i'j chej.
 DEM men PROX B3PL grab-AP A3PL-RN:PAT horse
 'It was the men who grabbed the horses.'

(England, 2017, 517)

In SJA Mam, we similarly find that extracting the ergative argument is ungrammatical. Focusing the transitive subject with typical transitive marking (Set A agreement, directional suffix) in (208) is ungrammatical. Instead, a non-ergative clause is used, shown in (209), which lacks Set A agreement and utilizes the antipassive suffix instead of the directional suffix. In SJA Mam, a suffix *-t(a)* is also used in these constructions.

(208) * Transitive subject extraction

*A qa k'wal o tz'=ok t-b'yo-'n a jil chej
 DET PL child PFV B2/3SG=DIR:in A2/3SG-hit-DS DET CLF:animal horse
 Intended: 'Those children_{FOC} hit the horse.'

(209) ✓ Antipassive(+) to extract transitive subject

A qa k'wal o tz'=ok b'yo-n-t a jil chej
 DET PL child PFV B2/3SG=DIR:in hit-AP-AF DET CLF:animal horse
 'Those children_{FOC} hit the horse.'

In the following sections, we will see how SJA Mam compares to other Mam varieties with respect to various characteristics of these constructions, namely, verb agreement, the status of the object, and the ability of reflexives to bypass this restriction.

2.7.1.2 Verb agreement

In the antipassive constructions used for extracting ergative subjects, called the agentive antipassive, following [Smith-Stark \(1978\)](#), the verb only ever maximally agrees with one argument and indexes it with Set B morphology. In Mam, there are two patterns of agreement: i) the verb agrees with the extracted agent or ii) the verb displays default 2/3SG agreement regardless of features of the subject or object. Ixtahuacán Mam exemplifies the first pattern and Tacaná Mam exemplifies the second. We find examples in both SJA Mam and Todos Santos Mam of both agreement patterns.

In Ixtahuacán Mam, the verb always agrees with the agent, repeated below in (210). In Tacaná Mam, shown in (211), the verb is always inflected with the 'default' 2/3SG Set B marker, regardless of the features of the agent or patient.

Ixtahuacán Mam: agreement with subject

(210) Aa xiinaq ma chi tzyuu-n ky-i'j chej.
 DEM men PROX B3PL grab-AP A3PL-RN:PAT horse
 'It was the men who grabbed the horses. (England, 2017, 517)

Tacaná Mam: default agreement²⁸

(211) Aa'e' ma' tz'=ok b'ujuu-n=t-e q-ee.
 they PROX B3SG-DIR hit-AP=A3SG-RN:PAT A1PL-RN:PAT
 'It was they who hit us.' (Munson 1984 cited in England (2017, 523)

In SJA Mam agent focus constructions, there is an alternation between default B2/3SG subject marking and agreeing subject marking, realizing both of the patterns in Ixtahuacán Mam and Tacaná Mam. This is shown in (212) in which the first person singular transitive subject has been extracted. In (212-a), the verb agrees with the extracted subject, whereas in (212-b), the verb is inflected with default features. Both patterns of agreement are also possible in Todos Santos

²⁸The doubled relational noun in this example is discussed in §2.7.1.3

Mam (Canger, 1969). In (213-a), the verb agrees with the extracted agent while in (213-b), the verb shows default 2/3SG agreement.

San Juan Atitán Mam: optional agreement²⁹

- (212) a. A qini ma **chn**=o'k b'yo-n-ta t-e Lucrecia.
 DET 1SG PROX **B1SG**=DIR:in hit-AP-AF A2/3SG-RN:PAT Lucrecia
 'I_{FOC} hit Lucrecia.'
- b. A qini ma **tz'**=ok b'yo-n-ta t-e Lucrecia.
 DET 1SG PROX **B2/3SG**=DIR:in hit-AP-AF A2/3SG-RN:PAT Lucrecia
 'I_{FOC} hit Lucrecia.'

Todos Santos Mam: optional agreement

- (213) a. Na'yan ma **chi**-kub' b'yo-on t-e.
 1SG ASP **B3PL**-DIR hit-AP A3SG-RN:PAT
 'I_{FOC} killed him.' (Canger, 1969, 130)
- b. Na'yan e ∅-kub' b'yo-on t-e n-man.
 1SG ASP **B3SG**-DIR hit-AP A3SG-RN:PAT A1PL-father
 'I_{FOC} hit my father.' (Canger, 1969, 111)

2.7.1.3 Status of the object and agent focus morphology

Agentive antipassive constructions in Mam varieties vary in two additional ways: i) whether or not an additional suffix appears after the antipassive suffix, and ii) whether and how the patient is demoted. First, SJA Mam agentive antipassive constructions feature the suffix *-ta* (reduced to *-t* for some speakers). This suffix is obligatory and only found in constructions in which the ergative subject has been extracted, shown for the *wh*- question in (214-a), a focus construction, in (214-b), and a relative clause in (214-c).

SJA Mam: *-ta*

- (214) a. A'l ma **tz'**=ok b'yo-n*(-**ta**) w-i=y?
 who PROX B2/3SG=DIR:in hit-AP-AF A1SG-RN:PAT=DISAGR
 'Who hit me?'
- b. A Jse ma **tz'**=ok b'yo-n*(-**ta**) t-i-y.
 DET Jse PROX B2/3SG=DIR:in hit-AP-AF A2/3SG-RN:PAT=DISAGR
 'Jose_{FOC} hit you.'

²⁹The *-ta* AF 'agent focus' morpheme in these examples is discussed in §2.7.1.3.

- c. Aj xjal ma tz'=ok b'yo-n*(-ta) w-i=y
 DET person PROX B2/3SG=DIR:in hit-AP-AF A1SG-RN:PAT=DISAGR
 tz=ul.
 B2/3SG=arrive.here
 'The person who hit me will come.'

A similar suffix is found in Tacaná Mam, whereby the relational noun *e* demoting the patient is doubled, shown in (215). In this example, the second relational noun agrees with the demoted patient while the first relational noun takes default 2/3SG inflection *t-*. The relational noun with default agreement is attached to the verb.

Tacaná Mam

- (215) Aa'e' ma' tz'=ok b'ujuu-n=t-e q-ee.
 they PROX B3SG-DIR hit-AP=A3SG-RN:PAT A1PL-RN:PAT
 'It was they who hit us.' Munson (1984) cited in England (2017)

The form *-ta* in SJA Mam is not clearly related to a relational noun (there is no relational noun *a*), though it is possible that the form is somehow related to the *=t-e* form in Tacaná Mam. I analyze the *-ta* in SJA Mam as the agent focus marker– found in other Mayan languages that restrict extraction of agents (Smith-Stark 1978 a.o. – see Chapter 3 §3.4.1)– because it is only ever used in agent focus constructions, never in matrix antipassives.

England (1983b) mentions a suffix which is added to verbs to focus any direct argument of the verb in-situ which could be related to the *-ta* found in SJA Mam.³⁰ The suffix itself, *-a*, is preceded by a Set A morpheme agreeing with the focused argument, resulting in *-ta* for 2/3SG arguments. It is worth further investigating the connection between this focus suffix and the *-ta* in SJA Mam.³¹

- (216) Ixtahuacán Mam in-situ focus
- a. Ma Ø-tzaj n-tzyu-'n-wa.
 PROX1 B3SG-DIR A1SG-grab-DS-A1SG.EMPH
 'I grabbed it.' England (1983b, 166)
- b. Ma Ø-tzaj t-tzyu-'n-ta xiinaq ch'it.
 PROX1 B3SG-DIR A3SG-grab-DS-A3SG.EMPH man bird
 'The man grabbed the bird.' England (1983b, 166)

³⁰Thanks to Willie Myers for pointing this out to me.

³¹The relation of this suffix to the invariant *-ta* in SJA Mam agent focus constructions could be that SJA Mam extended this suffix to ex-situ extraction contexts in order to strengthen the uniqueness of agent extraction. Agent extraction antipassive constructions might have needed strengthening due to subtle phonetic difference between the non-extraction context directional suffix *-'n* and the antipassive suffix *-n*. If a formal focus feature is involved with *wh*- questions, focus and relativization, *-ta* could also be a reanalysis of morphological realization of that feature.

What is clear is that the *-ta* found in SJA Mam is not cognate to any agent focus or antipassive morphemes in other Mayan languages, which all involve some combination between a vowel, *-w*, and *-n* (Smith-Stark, 1978).

With respect to the status of the patient, Mam varieties vary with respect to whether and how objects are demoted in agentive antipassive constructions. In SJA Mam, Tacaná Mam, and Todos Santos Mam, objects are demoted using the ‘patient’ relational noun *e*, shown in the examples in §2.7.1.2. In Ixtahuacán Mam, the relational noun *-i’j*, also used for patients, is used to demote objects (207).

In each of the examples we have seen so far, objects are obligatorily demoted. For some speakers of SJA Mam, however, objects are not obligatorily demoted. In (217), the patient, *tx’yan* ‘dog,’ is optionally introduced by the relational noun *e*.

San Juan Atitán Mam

- (217) A’l ma tz’=ok b’yo-n-ta (t-e) tx’yan?
 who PROX B2/3SG=DIR:in hit-AP-AF (A2/3SG-RN:PAT) dog
 ‘Who hit the dog?’

While the ability to drop the relational noun in (217) seems to be consistent across speakers, pronominal objects show variation. For SJA Mam speaker Carrillo Godínez, pronominal objects must be introduced by a relational noun in agent focus constructions, shown in (218). For another SJA Mam speaker, Sales, local person objects appear as non-demoted pronouns, shown in (219).

San Juan Atitán Mam, Carrillo Godínez

- (218) a. A txin Tessa ma tz’=ok b’yo-n-ta w-i=y.
 DET CLF:girl Tessa PROX B2/3SG=DIR:in hit-AP-AF A1SG-RN:PAT=DISAGR
 ‘Tessa_{FOC} hit me.’
- b. ??A txin Tessa ma tz’=ok b’yo-n-ta qin.
 DET CLF:girl Tessa PROX B2/3SG=DIR:in hit-AP-AF 1SG
 ‘Tessa_{FOC} hit me.’

San Juan Atitán Mam, Sales

- (219) a. A t-txu q’a o tz’=ok b’yo-n-t qin=i.
 DET A2/3SG-mother boy PFV B2/3SG=DIR:in hit-AP-AF 1SG=DISAGR
 ‘The boy’s mother_{FOC} hit me.’
- b. A qa xjal ma tz’=ok b’yo-n-t a qo.
 DET PL person PROX B2/3SG=DIR:in hit-AP-AF DET 1PL
 ‘Those people_{FOC} hit us.’

2.7.1.4 Reflexives and the EEC

Lastly, a well known context for extraction which does not require special antipassive or agent focus syntax and morphology in Mayan languages is with reflexives (and extended reflexives) (Craig, 1977; Mondloch, 1981; Ordóñez, 1995; Aissen, 1999, 2017b; Pascual, 2007; Coon and Henderson, 2011; Hou, 2013; Velleman, 2014; Coon et al., 2014, 2021; Royer, 2022). This holds true in SJA Mam as well: extraction of the reflexive subject does not require the antipassive/agent focus *-t(a)* construction. For *wh-* questions, the antipassive/agent focus *-t(a)* seems to be optional (with normal extraction favored) while with focus, the antipassive/agent focus *-t(a)* is ungrammatical.

(220) Reflexive *wh-* question

- a. A'l ma tz'=ok=x t-ke'y-an t-ib'?
- who PROX B2/3SG=DIR:in=DIR:go A2/3SG-see-DS A2/3SG-RN:RR
'Who saw themselves?'
- b. A'l ma tz'=ok=x key-an-ta tib'?
- who PROX B2/3SG=DIR:in=DIR:go see-AP-AF A2/3SG-RN:RR
'Who saw themselves?'

(221) Reflexive focus

- a. A Rebeca ma tz'=ok t-ke'y-an t-ib'.
- DET Rebeca PROX B2/3SG=DIR:in A2/3SG-see-DS A2/3SG-RN:RR
'Rebeca_{FOC} saw herself'
- b. *A Rebeca ma tz'=ok key-an-ta tib'?
- DET Rebeca PROX B2/3SG=DIR:in see-AP-AF A2/3SG-RN:RR
Intended: 'Rebeca_{FOC} saw herself'

2.7.2 Polar questions

In SJA Mam, polar questions are formed with the second position enclitic *=m* which attaches to roughly the first word (to be further refined). In Scott (2019), I conclude that the placement (linearization) instructions for the polar question clitic must reference whether its potential host is a clitic or not, specifically that it *cannot* attach to clitics. This requirement for *=m* suggests that clitics are different in crucial ways from other morphemes in the grammar. Since then, more data have revealed that the *=m* enclitic can in fact attach to other clitics, and its ordering instructions are even more complex than the description in Scott (2019) would suggest. In this section I describe the placement of the polar question enclitic *=m* in a multitude of syntactic and phonological contexts, though I leave for future research a new analysis for its linearization.

First, the polar question enclitic is free to attach to different parts of speech. In (222) are a few examples of various monomorphemic word types in initial position to which the enclitic attaches. Additionally, the unit that it attaches to can be multimorphemic, illustrated in (223).

(222) Monomorphemic initial words

a. Determiner

A=**m** qini o t-il jun ch'it?

DET=Q 1SG PFV 2/3SGA-see one bird

'Did I see a bird?'

b. Aspect

Ma=**m** t-il Xuan a Liy?

PROX=Q 2/3SGA-see Xuan DET Liy

'Did Xuan see Liy?'

c. Negation

Nti'=**m** ma w-il=i a q'a Eric?

NEG=Q PROX 1SGA-see=PERS DET CLF:boy Eric

'Didn't I see Eric?'

d. Locative predicate

At=**m** q'a?

LOC=Q boy

'Is he here?'

(223) Multimorphemic initial words

a. Ky-kapl=**m** q=i naj t-uj Txe Qotx'?

A2/3PL-both=Q 2PL=DISAGR live A2/3SG-RN:in Txe Qotx'

'Do you both live in Txe Qotx?'

b. Tz=ul=**m** q'a q'i-l w-i=y?

B2/3SG=arrive.here=Q CLF:boy bring-NF A1SG-RN=DISAGR

'Will he come get me?'

Though the =*m* enclitic can attach to many types of words, it exhibits two interesting restrictions. The first is that it cannot attach directly to overt Set B markers. This is evident in the potential and distal aspects. Because the potential *k=* is a verbal proclitic, the Set B marker is in initial position. Likewise for the distal *x=*, which cliticizes to or fuses with Set B markers, Set B markers are in initial position. In both potential and distal aspects, the =*m* enclitic must skip the Set B marker and attach to the highest verbal element. This suggests either a lexical restriction against attaching to Set B markers or a linearization algorithm that must skip Set B markers.

Potential

- (224) a. Qo k'=a-l=**m**?
 B1PL POT=return-POT=Q
 'Will we (incl) return?'
- b. *Qo=**m** k'=a-l?
 B1PL=Q POT=return-POT
 Intended: 'Will we (incl) return?'

Distal

- (225) *xin jawxm aji?*
 x=chin jaw=x=**m** aj=i?
 DIST=B1SG DIR:up=DIR:go=Q return=DISAGR
 'Did I return?'
- (226) **xim jawx aji?*
 *x=chin=**m** jaw=x aj=i?
 DIST=B1SG=Q DIR:up=DIR:go return=DISAGR
 Intended: 'Did I return?'
- (227) a. x=qo jaw=x=**m** aj?
 DIST=B1PL DIR:up=DIR:go=Q return
 'Did we (incl) return?'
- b. *x=qo=**m** jaw=x aj?
 DIST=B1SG=Q DIR:up=DIR:go return
 Intended: 'Did we (incl) return?'

The data above in the distal aspect, specifically, show that if the initial aspect marker is a prefix, the =*m* enclitic takes the Set B + verb combination as the initial constituent to which it attaches. However, it is not the case that all prefixal aspect markers force =*m* to appear post verbally. The proclitic imperfective marker *n=* typically does not result in the enclitic =*m* attaching to the verb. Instead, =*m* attaches to *tzu* which is inserted in initial position, shown in (228). Speakers report that *tzu* has no meaning here or in other contexts suggesting that it is simply phonological material to support the enclitic—a generalization we can call “*tzu*-support.” Alternatively, *tzu* may constitute a relic of a historical imperfective morpheme, explaining why it can only be used with the imperfective *n=*.

- (228) Tzu=**m** n=∅=kxu-n q'a i'x̃?
tzu=Q IPFV=B2/3SG=chew-AP boy corn
 'Is the boy chewing corn?'

The polar question enclitic interestingly is not always final in the word in which it appears. The =*m* appears in penultimate position if the initial word has the enclitic =*i*, which is used to

mark certain person number combinations and appears in conjunction with either Set A or Set B marking or on independent pronouns.

- (229) a. T-aj=**m**=ni jun lo'b'j?
 A2/3SG-want=Q=DISAGR one banana
 'Do you want a banana?'
 b. Siky=**m**=ni?
 tired=Q=DISAGR
 'Are you tired?'
 c. B'et=**m**=ni ew?
 walk=q=disagr yesterday
 'Did you walk yesterday?'

This mid-word linearization even happens when the =*m* enclitic breaks up the 2SG pronoun *ay*, which is made up a determiner *a* and the enclitic *y*, illustrated in (230).

- (230) a. A=y o tz=ul.
 DET=DISAGR PFV A2/3SG-arrive.here
 'You_{FOC} arrived here.'
 b. A=**m**=ni o t-il jun ch'it?
 DET=Q=DISAGR PFV A2/3SG-see one bird
 'Did YOU see a bird?'

The addition of *n* between the polar clitic =*m* and the enclitic =*i* seems not to be connected to the polar question clitic, but rather the enclitic. It seems as though when the enclitic =*i* attaches to any [m], many speakers add in a velar nasal sound between them, as if it is a repair for an illicit [mi#] sequence. Not all speakers add the [n], and some speakers use pronunciations with and without the [n].

- (231) w-an**m**=ni
 A1SG-heart=DISAGR
 'my heart'

As noted in Scott 2019, the placement of the =*m* as a second position enclitic does not count focused constituents as the first elements, but instead attaches to the first word inside of the focused constituent. In (232), the relational noun phrase *te t-txu* 'to his mother' is focused and appears in initial position before the aspect marker. This suggests that the linearization calculation is not sensitive to the first major constituent in the sentence, or linearizing =*m* after the first head in the clausal spine.³²

³²In Scott (2019), I show that this is evidence for a Local Dislocation analysis and against a Lowering analysis in the Distributed Morphology framework articulated in Embick and Noyer (2001).

- (232) [T-e =m t-txu] o txi t-q'o-'n Noah jun ne
 [A2/3SG-RN:DAT =Q A2/3SG-mother] PFV DIR:go A2/3SG-give-DS Noah one CLF:small
 tal tx'yan?
 baby dog
 'Did Noah give a puppy [to his mother]_{FOC} ?'

Data suggesting that =m can in fact attach to clitics comes from the fact that is is ordered after the adverbial enclitic =x meaning 'still,' shown in (233), and the directional enclitic =x, derived from xi' 'go,' shown in (234). In the latter case, when the -l of the potential aspect (the non-finite suffix/enclitic) is present as well, it can appear before or after but never between the strictly ordered =x=m sequence.

=x 'still'

- (233) a. At=x=m wat t-i'j=i?
 EXIST=still=Q sleepiness A2/3SG-RN=DISAGR
 'Are you still sleepy?'
 b. Kuk=x=m t-e=x t-q'ij=i?
 still=still=Q A2/3SG=DIR:out=DIR:go A2/3SG-day=DISAGR
 'How's your day going?' lit. 'Is your day still going?'
 c. Yab'=x=m=ni?
 sick=still=Q=DISAGR
 'Are you still sick?'

=x 'go'

- (234) a. K=jaw=x=m-l=i?
 POT=ascend=GO=Q-POT=DISAGR
 'Will you go up?'
 b. K=jaw-l=x=m=ni?
 POT=ascend-POT=GO=Q=DISAGR
 'Will you go up?'

Lastly, this second position =m enclitic is distinct but very plausibly related to the -pa interrogative marker in Ixtahuacán Mam (England, 1983b) as well as the =ma interrogative clitic in Tojolob'al (Curiel Ramírez del Prado, 2017).

- (235) Ixtahuacán Mam
 At-∅-pa aatz'an?
 LOC.PRED-B3SG-INT salt
 'Is there salt?'

(England, 1983b, 196)

(236) Tojolab'al

Wan=ma x-a-sak'-a wa-sat-ex ja=la-k'e'-y-ex way-el=i?
 IPFV=Q IPFV=A2-clean-ss A2-face/eye-2PL DET=IPFV.SAP-rise-EP-2PL sleep-NF=TOP
 'Do you guys wash your faces after waking up?' (Curiel Ramírez del Prado, 2017, 571)

2.7.3 Wh- questions

Content questions in Mam are formed with question words in initial position. Table 2.30 gives the set of *wh*- words in SJA Mam. Notice that the word for *when* is different in the future and non-future; this mirrors the fact that the embedded *when* has two different forms as well: *taj* for the future and *aj* for the non-future.

Table 2.30: *wh*- words

Directional	Meaning
a'l	who
alkye	which
tijil(al)	what
jatum	where
jtoj	when (future)
jto	when (non-future)
niky'	when (what time)
niky' pon	how much
jte'	how many
ti'	how
ti' qu'n	why

As illustrated in Section 2.7.1.3, forming a *wh*- question on the transitive subject results in a distinct structure which includes the verbal suffix *-ta* in SJA Mam. On the contrary, questioning the intransitive subject and the transitive object does not require any special syntax or morphology, shown in (237).

- (237) a. A'l ma tz=ul?
 who PROX B2/3SG=arrive.here
 'Who arrived here?'
 b. Tijil ma ∅ kub' t-tz'ib'-n=i?
 what PROX B2/3SG DIR:down A2/3SG-write-DS=DISAGR
 'What did you write down?'

There are two strategies for forming a *wh*- question on peripheral arguments introduced by relational nouns. The first strategy involves pied-piping with inversion (PPI) first noticed by Smith-Stark (1988) for Mesoamerican languages. In this strategy, the entire relational noun phrase is

fronted, but the order of the relational noun and argument is inverted. Where we would expect the order [RN *wh-*], it is ungrammatical, shown in (238-c). Instead, we see the order [*wh-* RN], illustrated in (238-b) with a comitative oblique object. An important aspect of this pattern is that the relational nouns lack any person marking. In this cases, adding Set A prefixes is ungrammatical.

- (238) a. Ma tz=ul=i [t-uk'l Rebeca].
 PROX B2/3SG=arrive.here=DISAGR [A2/3SG-RN:COM Rebeca]
 'You went with Rebeca.'
- b. [A'l (*t-)uk'l] ma tz=ul=i?
 [who A2/3SG-RN:COM] PROX B2/3SG=arrive.here=DISAGR
 'With whom did you arrive here?'
- c. *[(T-)uk'l a'l] ma tz=ul=i?
 [A2/3SG-RN:COM who] PROX B2/3SG=arrive.here=DISAGR
 Intended meaning: 'With whom did you arrive here?'

The lack of agreement on the relational nouns in these constructions is particularly peculiar because there does not seem to be any context in any other Mayan language in which the relational noun is able to stand alone without agreement. These constructions in Mam constitute a very interesting area of future research.

The other strategy for making simple *wh-* questions with relational nouns is to front the *wh-* element and strand the relational noun. These constructions crucially differ from the ones which front the relational noun in that the agreement is obligatory on the relational noun, illustrated in (239).

- (239) A'l ma ∅ txi t-q'ama-'n=i jun tijil *(t)-e?
 who PROX B2/3SG DIR:go A2/3SG-say-DS=DISAGR one what A2/3SG-RN:DAT
 'Who did you say something to?'

Turning now to long distance *wh-* extraction, we see that it is possible in SJA Mam to extract a *wh-* element from a lower clause, illustrated below with the verb *aj* 'want.' Intransitive subjects and transitive objects are extracted using normal syntax, shown in (240-a) and (240-b), respectively. Extracting the transitive subject requires the agent focus *-t(a)* suffix just as it does in non-embedded clauses, shown in (240-c).

- (240) a. A'l t-aj=i t-u'n t-ta-n?
 who A2/3SG-want=DISAGR A2/3SG-RN:PURP A2/3SG-sleep-AP
 'Who do you want to sleep?'
- b. A'l t-aj=i t-u'n t-ok n-ke'y-n=i?
 who A2/3SG-want=DISAGR A2/3SG-RN:PURP A2/3SG-DIR:in A1SG-see-DS=DISAGR
 'Who do you want me to see?'

- c. A'l t-aj=i t-u'n t-ok key-n-ta
 who A2/3SG-want=DISAGR A2/3SG-RN:PURP A2/3SG-DIR:in see-AP-AF
 w-i=y?
 A2/3SG-RN:PAT=DISAGR
 'Who do you want to see see?'

2.7.4 Focus

Focusing an element consists of fronting that element to initial position with the determiner *a*. This is true for NPs, R-expressions, and pronouns. When focusing a pronoun which has the enclitic =*i*, the enclitic appears on the focused pronoun only, it does not appear on the verb, illustrated in (241-b).

- (241) a. [A q'a] n=∅-wa-n.
 [DET CLF:boy] IPFV=B2/3SG=eat-AP
 'That boy_{FOC} is eating.'
- b. [A qin=i] n=chin wa-n.
 [DET 1SG=DISAGR] IPFV=B1SG eat-AP
 'I_{FOC} was eating.'
- c. [A qin=i] ma t-il=i.
 [DET 1SG=DISAGR] PROX A2/3SG-see=DISAGR
 'You saw me_{FOC}.'

Like *wh*- questions, and as discussed in Section 2.7.1, the syntax of this focus extraction is asymmetrical: while intransitive subjects and transitive objects extract freely, illustrated above, transitive subjects require distinct morphology and syntax.

- (242) O tz'=ok ky-b'yo-'n qa k'wal a jil chej.
 PFV B2/3SG=DIR:in A2/3PL-hit-DS PL child DET CLF:animal horse
 'The children hit the horse.' (no focus)
- (243) [A qa k'wal] o tz'=ok b'yo-n-t a jil chej
 [DET PL child] PFV B2/3SG=DIR:in hit-AP-AF DET CLF:animal horse
 'Those children_{FOC} hit the horse.'

Another way to focus the subject is by adding an agreeing relational noun *e* immediately after the verb, constituting a type of in-situ focus.³³ In these constructions, the subject is indexed via agreement on the verb and the relational noun which also agrees with the subject appears immediately after the verb. This same focus construction is discussed for Ixtahuacán Mam in England (1983b). This pattern holds throughout the entire person and number paradigm: the agreeing "focus" relational noun always follows the verb, in this case, *ten*, 'to be in a place.'

³³This relational noun is usually used for dative and possessor arguments. See Table 2.18 for illustration of this relational noun in possessive contexts.

(244) Baseline

- a. O=m ∅ ten=i t-uj q'oj?
 PFV=Q B2/3SG stay=DISAGR A2/3SG-RN:in fight
 'Were you there for the armed internal conflict? (no focus)'

(245) Subject focus

- a. O=m ∅ ten t-i=y t-uj q'oj?
 PFV=Q B2/3SG stay A2/3SG-RN.FOC=DISAGR A2/3SG-RN:in fight
 'Were you_{FOC} there for the armed internal conflict? (subject focus)'

Table 2.31: In-situ intransitive subject focus

Subject	Focused subject
1SG	Om chin ten wiy tuj q'oj?
2SG	Om ∅ ten tiy tuj q'oj?
3SG	Om ∅ ten te tuj q'oj?
1PL EXCL	Om qo ten qiy tuj q'oj?
1PL INCL	Om qo ten qe tuj q'oj?
2PL	Om chi ten kyiy tuj q'oj?
3PL	Om chi ten kye qa tuj q'oj?

This strategy for subject focus applies to both absolutive and ergative subjects, indexing the verb with Set B and Set A markers, respectively. In (246), the subject of the transitive verb *il* 'to see' is indicated in subject position with the relational noun; the object in these examples is null and implied to be third person singular, though if it were overt it would follow the focused relational noun.

(246) O=m q-il q-i=y?

- PFV=Q A1PL-see A1PL-RN.FOC=DISAGR
 'Did we (excl)_{FOC} see it?'

Table 2.32: In-situ transitive subject focus

Subject	Focused subject
1SG	Om wil wiy ?
2SG	Om til tiy ?
3SG	Om til te ?
1PL EXCL	Om qil qiy ?
1PL INCL	Om qil qe ?
2PL	Om kyil kyiy ?
3PL	Om kyil kye qa ?

The strategy described above for in-situ focus using the relational noun *e* is not available for objects, shown in (247), which attempts object focus using *e* in a polar question. In-situ object focus using *e* outside of polar questions is also impossible, shown in (248-b). Instead, some speakers can in-situ focus transitive objects with the addition of the determiner *a*, shown in (248-c). For other speakers, the determiner does not require focus. In-situ object focus, and in particular the semantics of *a* are an interesting area of future research.

(247) *O=m t-il=i t-e q'a Geovany?
 PFV=Q A2/3SG-see=DISAGR A2/3SG-RN.FOC CLF:boy Geovany
 Intended: 'Did you see Geovany_{FOC}?'

(248) a. A'l ma t-il=i?
 who PROX A2/3SG-see=DISAGR
 'Who did you see?'

b. *Ma w-il=i t-e q'a Geovany
 PROX A1SG-see=DISAGR A2/3SG-RN.FOC CLF:boy Geovany
 Intended: 'I saw Geovany_{FOC}.'

c. Ma w-il=i a q'a Geovany
 PROX A1SG-see=DISAGR DET CLF:boy Geovany
 'I saw Geovany_{FOC}.'

2.7.5 Relative clauses

Relative clauses in SJA Mam are generally post-nominal and the relative demonstrative *aj* optionally appears before the head noun. *Aj* is also the relative subordinator and can optionally follow the head noun.

(249) Ma tz=ul [(aj) xjal (aj) n=chn=aq'n-an=i t-uk'l].
 PROX B2/3SG=arrive [DET person REL IPFV=B1SG=work-AP=DISAGR A2/3SG-RN:COM]
 'The person that I work with has arrived.'

Additionally, the entire relative clause itself can be in-situ, as in (249), or in the preverbal focus position, shown in (250). If the relative clause is focused, the options for the initial determiner are *a* (basic focused determiner) or *aj* (relative determiner).

(250) [A(j) xjal (aj) n=chn=aq'n-an=i t-uk'l] ma tz=ul.
 [DET person REL IPFV=B1SG=work-AP=DISAGR A2/3SG-RN:COM] PROX B2/3SG=arrive
 'The person that I work with has arrived.' (relative clause focus)

Relative clauses can also be right extraposed, appearing non-adjacent to the head noun, shown in (251). Notice also that the classifier *jil*, which appears before the head noun in the matrix clause, appears again in the extraposed relative clause.

- (251) O tz'=el t-tx'a-n jil tx'yan a Noah [aj jil o ∅
 PFV B2/3SG=DIR:out A2/3SG-bite-DS CLF dog DET Noah [DET CLF PFV B2/3SG
 b'aj chiyo-n].
 DIR:COMPL bark-AP]
 'The dog that barked bit Noah.' (Scott, 2018)

Relativization generally follows the same asymmetrical pattern with respect to ergative subjects as other extraction to the left periphery, such as *wh*- questions and focus. However, direct extraction of the ergative subject in relative clauses is not completely ungrammatical. The relative clause in (252-a) is somewhat acceptable, even though the ergative subject has been extracted and the verb is not antipassive or agent focus.

- (252) a. ?[Aj xjal ma tz'=ok t-b'yo-'n qin=i] tz=ul.
 [DET person PROX B2/3SG=DIR:in A2/3SG-hit-DS 1SG=DISAGR] B2/3SG=arrive.here
 'The person who hit me will come.'
 b. [Aj xjal ma tz'=ok b'yo-n-ta qin=i] tz=ul.
 [DET person PROX B2/3SG=DIR:in hit-AP-AF 1SG=DISAGR] B2/3SG=arrive.here
 'The person who hit me will come.'

As discussed in §2.7.1.3, when the agent is extracted, here as the relative clause head, we see examples of both non-demoted objects, like in (252-b), as well as demoted objects, like *Noah* in (253) which is introduced by the agreeing relational noun *t-e*.

- (253) N-tzqin-i [aj q'a o tz'=ok qes-an-t t-e Noah].
 A1SG-know-DISAGR [DET boy PFV B2/3SG cut-AP-AF A2/3SG-RN.PAT Noah]
 'I know the guy who cut Noah.' (Scott, 2018)

2.8 Chapter summary

This chapter has established the orthographic conventions and the phonemic inventory of SJA Mam, as well as phonological processes such as nasal assimilation and glottal consonant erosion, the latter of which contributes to surface glottal stops which contrast with underlying glottal stops which surface as creaky vowel quality.

While a look at noun classes, nominal possession, modifiers, classifiers, and relational nouns, and directionals has revealed SJA Mam to be a quite typical Mam variety, the possible visibility requirement in the demonstrative system is an exciting area for more research. SJA Mam is also different from previous descriptions of Mam in its aspectual system: in SJA Mam, the proximate dependent aspect morpheme *x=* has been adopted as matrix clause distal aspect marking.

We have also seen the basics of person/number inflection in Mam: Set A, Set B, and reduced subject/possessor pronouns, which include the disagreement enclitic. Set A is used for transitive subjects and possessors while Set B is used for intransitive subjects, and reduced subject/possessor pronouns are used for all subjects. While we may expect Set B to also inflect for transitive objects,

this is largely not the case in SJA Mam: transitive objects trigger default Set B inflection on the verb and are instead realized as full pronouns in object position. The full pronouns found in this position are also found as subjects of nonverbal predicates.

For a Mam variety, SJA Mam shows expected patterns with respect to its voice system, word order, and negation. However, the pattern of split ergativity is slightly different from previous descriptions of Mam: in some aspectless clauses, we do find the super-extended ergative pattern, though the ergative markers that extend to objects only appear as the default Set A form. Lastly, we saw that extraction is asymmetrical in SJA Mam: extraction of the ergative subject in *wh*-questions, focus, and relative clauses require the use of the antipassive construction plus the addition of the morpheme *-ta* which I analyze as agent focus.

Chapter 3

Object licensing and agreement: SJA Mam is a tripartite high-abs language

3.1 Introduction

In this chapter, I present a pattern of object marking in SJA Mam that is distinct from several previous descriptions of Mam (England, 1983a; Collins, 2005a; Pérez Vail, 2014). Throughout these descriptions, the authors conclude that Mam is a typical ergative Mayan language, marking transitive subjects with ergative verbal agreement morphemes (Set A) and marking intransitive subjects and, in particular, transitive objects with a different set of absolutive agreement morphemes (Set B), shown in the transitive example from Cajolá Mam in (1). In this chapter I present novel evidence from SJA Mam showing that the dominate pattern of marking transitive objects is not with agreeing Set B inflection on the verb, but instead default Set B inflection is used and overt pronouns appear in object position, shown in (2).

- (1) Cajolá Mam
 Ma **chin** kub' t-tzyu-'n=a.
 PROX **B1SG** DIR A2SG-grab-DS=2SG
 'You grabbed me.' (Pérez Vail, 2014, 139)
- (2) SJA Mam
 Ma **tz'**=ok ky-ke'y-an qa **qin**=i.
 PROX **B2/3SG**=DIR:in A2/3PL-see-DS PL **1SG**=DISAGR
 'They saw me.'

This pattern of object marking has also recently been described for Todos Santos Mam (Elkins and Brown, 2023) and a variety of Heritage Mam (Myers et al., 2023).

This divergence from expected Set B verbal agreement raises questions about both the syntax of objects in SJA Mam and how the default Set B inflection is derived. One major point of variation across Mayan languages is whether Set B is marked high- or low- in the verbal complex, and this difference correlates with syntactic properties of the object. Namely, high-abs(olutive) languages

mark Set B ‘high’ and objects are licensed by Infl, whereas low-abs(olutive) languages mark Set B ‘low’ and objects are licensed by *v*/Voice (Coon et al., 2014). In this chapter I provide evidence that although Set B is linearly high in SJA Mam, objects are in fact licensed low in the clause via Voice– a novel situation within Mayan languages. This conclusion positions SJA Mam as a morphologically high-abs Mayan language with low-abs syntax.

The two main sources of evidence for low licensing in SJA Mam are: i) the lack of fully agreeing Set B morphology for objects and ii) a unique type of matrix clause in Mam that prohibits high absolutive Set B marking for objects; in these matrix clauses, objects are nonetheless realized in the typical way, meaning that objects are licensed even in the absence of Set B morphology.

A further correlation found in Mayan is that high-abs languages strongly correlate with the inability to \bar{A} extract the ergative subject (Tada, 1993). A body of literature attributes the restriction on extracting ergative arguments to the inversion of objects over subjects (Campana, 1992; Ordóñez, 1995; Aldridge, 2004, 2008; Coon et al., 2014; Assmann et al., 2015; Coon et al., 2021). With various implementations, the idea throughout this work is that the high position of objects blocks ergative extraction of the subject.

From this, a third correlation emerges: high-abs languages are correlated with objects shifting above subjects. The data in SJA Mam show that even though it has low-abs syntax, objects nonetheless invert, causing an extraction asymmetry. SJA Mam constitutes a novel example of a Mayan language that consistently uses high Set B marking for intransitive subjects (indicating high licensing), no Set B marking for objects (indicating low licensing) and shows an extraction asymmetry. To analyze this novel pattern, I build on the analysis of case licensing in Coon et al. 2014, extending the typology to include a third option, ‘no-abs,’ which is also argued for recently in Myers et al. (2023).

I organize this chapter as follows. In §3.2, I present an overview of the theoretical background on the morphosyntax of Mayan languages, with special attention to the analysis of the source of absolutive marking in Coon et al. 2014. I highlight the connections drawn in that work between the linear position of absolutive (Set B) morphology, the licenser of transitive objects, and the height of the object, which can generally be divided into ‘high-abs’ and ‘low-abs’ languages. This sets the stage for the pattern in SJA Mam, in which some, but not all of these factors correlate.

In §3.3, I present the pattern of default object agreement in SJA Mam. While intransitive subjects trigger the fully agreeing Set B paradigm in the typical Set B slot of the verb, transitive objects do not. Instead, the Set B slot is filled with the default (2/3sg) marker in transitive clauses, while the object itself is realized as a full pronoun in object position.

In §3.4, I establish that objects invert with subjects in SJA Mam, a structural account which explains the presence of the Ergative Extraction Constraint (EEC; Aissen 2017b). Next, I provide an analysis for the default Set B paradigm on Infl, arguing that the restriction should be attributed to a probe on Infl which is unable to probe into transitive VoiceP. Next I provide evidence that objects are indeed licensed by Voice, providing a novel diagnostic from Infl-less matrix clauses in SJA Mam that retain the ability to license objects. Finally, §3.5 situates the analysis of SJA Mam within the typology of high-abs and low-abs languages in Mayan.

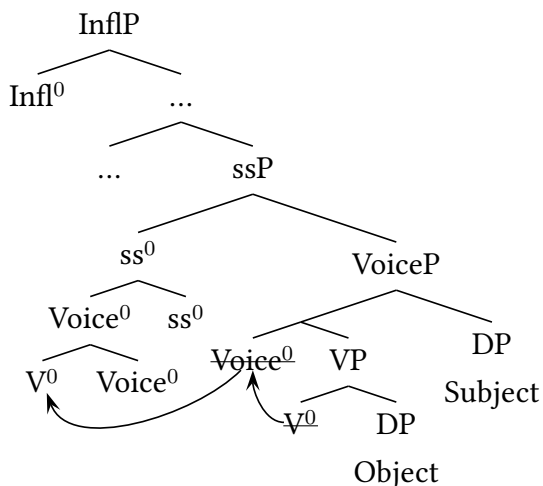
3.2 Theoretical background

It is important to establish the theoretical background on the topics discussed in this chapter in order to see clearly the new insights that the data from SJA Mam bring. I frame these discussions within the context of work on Mayan languages, and show that certain basic assumptions about grammatical alignment and agreement fail to hold neatly in SJA Mam. For example, Mayan languages are understood to be ergative, in the sense that the intransitive subjects (S) and transitive objects (O) receive the same (absolutive) agreement morphology, and the transitive subjects (A) receive distinct (ergative) agreement morphology. This basic alignment in the verbal agreement paradigm does not hold for SJA Mam. While transitive subjects are consistently indexed on the verb with ergative (Set A) morphology and intransitive subjects are indexed on the verb absolutive (Set B) morphology – both of which can be analyzed using current analyses of ergativity in Mayan – transitive objects are inflected distinctly and require an updated analysis. The resulting alignment is such that each argument, S, A, and O, are inflected distinctly. This gives SJA Mam a morphologically tripartite alignment system as opposed to an ergative one. Even more so, transitive objects are not marked with agreement on the verb at all, which is surprising given patterns of full object marking on verbs widely attested throughout Mayan languages. In this section, I discuss prominent theories of syntactic case assignment, morphological case, agreement, extraction, and object movement in Mayan languages, in order to understand how the patterns in SJA Mam are unique within Mayan and do not fit neatly into preexisting categories.

3.2.1 Basic clause structure

Basic word order in Mam is VSO. In their account of verb-initial word orders in Mayan, [Clemens and Coon \(2018\)](#) posit that verbs undergo movement to the edge of the verbal domain, to a head they label ss^0 for ‘status suffix’. While the label of this head is not crucial, labeling it the status suffix head captures the widespread use of verbal suffixes in Mayan that encode a combination of transitivity, clause type, aspect, mood, and derivational status ([Coon 2016](#), [Pye et al. 2017](#)). Mam does not have overt status suffixes in the same way other Mayan languages do;¹ I simply assume there is a head at the edge of the verbal domain to which the verb moves, and I label it ss^0 for simplicity and consistency with the literature. In addition, as discussed further below, I adopt the rightward specifier analysis of Mayan word order following [England \(1991\)](#), [Aissen \(1992\)](#), and [Little \(2020\)](#). Lastly, I adopt a bundled v /VoiceP ([Harley, 2017](#)), following [Clemens and Coon \(2018\)](#) and [Coon et al. \(2021, 274\)](#), and label it Voice.

¹[Pye et al. \(2017\)](#) list the verbal templates for 8 Mayan languages, and all except Mam utilize status suffixes. However, while [England](#) never mentions the category “status suffix” in her work on Ixtahuacán Mam and other varieties of Mam ([England 1983b](#), [England 2017](#)), she does mention the “directional suffix” -’*n* which appears at the end of the transitive verb stem in clauses with directionals, which could likely be situated on the ss^0 head. This head is labeled vP in [Coon et al. \(2014\)](#), though I adopt the more neutral label of ‘status suffix’ (ssP) from [Clemens and Coon \(2018\)](#), who point out that the exact label of this head is not crucial.

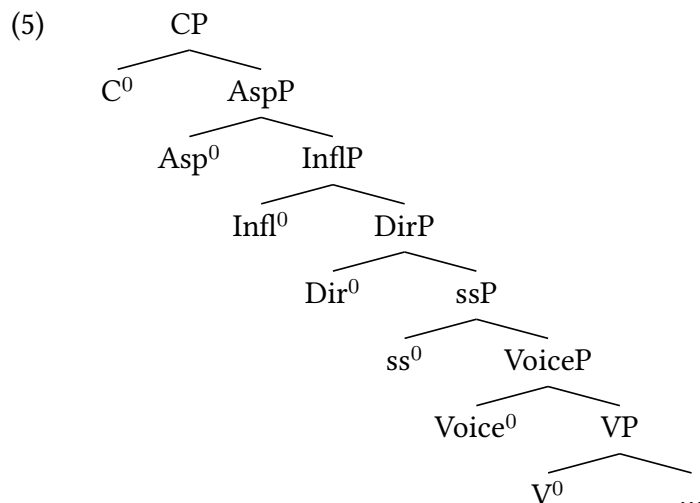
(3) Verb movement to ss^0 

Mayanist have attributed both tense/aspect morphology, as well as high absolutive (Set B) markers to InflP (Coon et al., 2014), accounting for the fact that high-absolutive marking is unavailable in non-finite clauses.² In SJA Mam, some clause types lack aspectual marking but nonetheless include high Set B marking (and therefore Infl). This is illustrated below with one type of clause embedded under *aj* ‘want’, shown in (4).

- (4) W-aj=i [(*ma/*o/*n=) chin ta-n=i].
 A1SG-want=DISAGR PROX/PFV/IPFV= B1SG sleep-AP=DISAGR
 ‘I want to sleep.’

The presence of Set B (Infl) without aspectual marking (Asp) suggests pulling apart AspP from InflP – in other words, separating the mechanisms responsible for aspect and high Set B morphology. I propose that in Mam, AspP is projected above InflP, where Asp is responsible for aspectual distinctions and morphology while Infl is responsible for agreement. Additionally, Mam is unique within Mayan languages with its extensive use of directional auxiliary verbs which are derived from transitive verbs of motion. Directionals can co-occur with transitive and intransitive verbs and appear after Set B morphemes, suggesting the presence of Dir(ectional)P below InflP. Lastly, focus, topic, *wh*-, and relativization constructions all involve overt \bar{A} movement to the left edge of the clause. I adopt the general label CP for simplicity, though see Aissen (1992) for an analysis of the articulated left periphery in Mayan languages. The clausal spine for SJA Mam is summarized in (5).

²It is assumed in these analyses that the value of Infl is the tense/aspect content, and the head also hosts an agreement probe which generates the Set B morpheme.



3.2.2 Set A (ergative)

Ergativity, as it refers to the alignment of verbal arguments within a language, can manifest morphologically as head marking via verbal agreement, or dependent marking via nominal morphology. Mayan languages famously realize ergative morphology through their robust system of verbal agreement. Ergative morphemes are realized with the paradigm referred to by Mayanists as “Set A.” Set A morphemes additionally appear on nouns and agree with possessors, equating ergative and genitive case. One striking aspect of Set A across Mayan is that despite the variation in the phonetic content of Set A morphemes, there is a consistent pattern in their position within the verbal complex: Set A morphemes consistently prefix to the verb root across Mayan languages (Coon, 2017). In SJA Mam, Set A marking follows the expected patterns, illustrated for ergative subjects in (6) and possessors in (7).

(6) SJA Mam: Set A with transitive subjects

a. Ma w-il=i a=y.
 PROX A1SG-see=DISAGR DET=DISAGR
 ‘I saw you.’

b. Ma t-il Mintz a=y.
 PROX A2/3SG-see **Mintz** DET=DISAGR
 ‘Mintz saw you.’

(7) SJA Mam: Set A with possessors

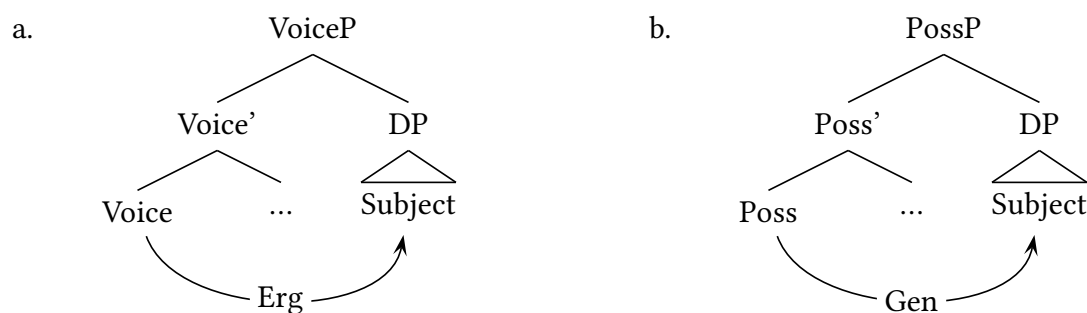
a. w-u’j=i
 A1SG-book=DISAGR
 ‘my book’

b. t-u’j Mintz
 A2/3SG-book **Mintz**
 ‘Mintz’s book’

Accounting for the syntax of Set A morphemes in Mayan is a part of a larger question of identifying where the locus of ergativity lies in the grammar. For this, I adopt the view that transitive subjects are assigned inherent ergative case in their base positions (Woolford, 1997, 2006; Laka, 2006; Legate, 2008; Aldridge, 2004). Building on this framework with respect to Mayan, Coon (2017) observes that the locus of ergative agreement (Set A) is extremely consistent across Mayan languages; she argues that ergative agreement and Case licensing in Mayan is derived through a Spec-Head Agreement relationship between transitive subjects and a low functional head, i.e. v^0 (see also Aissen 2010 for Tzotzil). In unifying possessor and ergative agreement (Set A), Coon proposes that the same Spec-Head relationship is responsible for possessor agreement in *n*Ps. She emphasizes the connection between nominal case licensing and agreement, in that the Set A marker is the morphological realization of the Agree operation which licenses the nominal. She draws evidence from both the syntax and the phonology of Ch'ol to argue that ergative case for transitive subjects is assigned by a different head than for intransitive subjects and transitive objects, rejecting the view in Woolford (2000) that all ergative agreement is underlyingly nominative-aligned agreement and that the appearance of ergative agreement is always the result of the interaction with particular morphological characteristics of a given language.

A note on word order is important at this point. As noted above, I adopt Little's 2020 rightward specifier analysis of word order in Mayan. Drawing on the special case assigning properties of v^0 /Voice⁰ and Poss⁰, Little proposes that heads that assign inherent Case are parameterized to have rightward specifiers. On the standard assumption that C does not assign case, this view accounts for why movement to the edge of the CP domain is to the left throughout Mayan, but subjects and possessors appear consistently to the right. Trees for Mayan languages will be represented throughout this dissertation with rightward specifiers like those in (8). The arrows in these trees show case assignment.

(8) Set A agreement



Throughout Mam varieties, ergative agreement (Set A) morphemes prefix to the verb and index transitive subjects, as well as prefix to nouns and index possessors. Recall from Chapter 2 that Set A morphemes in SJA Mam make a singular/plural number distinction and a first/non-first person distinction, resulting in four distinct cells of the Set A paradigm, repeated in Table 3.1. The only cell which shows variation is the first singular cell, which is *w-* prevocally and *n-* before consonants.

Table 3.1: SJA Mam Set A prefixes

	SG	PL
First person	n-/w-	q-
Second/third person	t-	ky-

In summary, Mam shows a typical use of Set A marking for a Mam languages. In §3.2.3, I discuss the literature and current understanding of the locus of absolutive agreement (Set B) across Mayan. Unlike Set A, Set B morphology varies between two positions within the verbal domain across Mayan languages. I focus on on the analysis in Coon et al. 2014, in which the two possible morphological positions of Set B markers correspond to two distinct mechanisms of case licensing for transitive objects.

3.2.3 Set B (high- and low- absolutive)

3.2.3.1 Set B placement

In contrast to the consistent position of ergative/possessive Set A agreement, Mayan languages mark absolutive agreement (Set B) in one of two places in the verbal domain: immediately after aspectual morphemes (high) or immediately after the verb stem (low), illustrated in Table 3.2. Coon et al. (2014) refer to the former as “high-abs” and the latter as “low-abs.” Bricker (1977) also discusses this basic division of Mayan languages and notes a geographical correlation: that high-abs languages are found predominantly in highland Guatemala, while low-abs languages are found in Mexico. Table 3.2 is updated from Coon et al. (2014) to include the category ‘DIR(ECTIONAL)’ which represents a prominent word class appearing in the verbal domain in Mam. See Chapter 2 §2.4.2.2. for more on directionals in SJA Mam.

Table 3.2: Maya high- vs. low-abs verbal complex

HIGH-ABS	ASPECT	ABS	(DIR.)	ERG	ROOT	(DERIV.)	SUFFIX	
LOW-ABS	ASPECT		(DIR.)	ERG	ROOT	(DERIV.)	SUFFIX	ABS

Most Mam varieties represented in the literature are clearly high-abs: both intransitive subjects and transitive objects trigger high Set B morphemes, shown for Ixtahuacán Mam in (9) and Cajolá Mam in (10).

(9) Ixtahuacán Mam

a. Ma **chin** b’et=a.

PROX **B1SG** walk=DISAGR
‘I walked.’

(England, 1983b, 175)

b. Ma **chin** ok t-tzeeq’an=a.

PROX **B1SG** DIR A2SG-hit=1SG/2SG
‘You hit me.’

(England, 1983b, 62)

(10) Cajolá Mam

- a. In **chin** b'eet=e'.
 INC **B1SG** walk1SG
 'I walk.'

(Pérez Vail, 2014, 65)

- b. Ma **chin** kub' t-tzyu-'n=a.
 PROX **B1SG** DIR A2SG-grab-DS=2SG
 'You grabbed me.'

(Pérez Vail, 2014, 139)

The pattern found in SJA Mam is not as obviously high-abs in that while the position of Set B morphemes is high, transitive objects are not typically indexed in the high Set B position. Intransitive subjects are marked with high Set B morphemes, shown in (11-a). However, the pattern in SJA Mam of central relevance to this chapter is that transitive objects, regardless of their person features, co-occur with the high 2/3SG (default) Set B morpheme on the verb and are themselves spelled out as pronouns in object position, shown in (11-b). While the form in (11-b) is that given by speakers, some speakers also accept the construction with agreeing Set B, shown in (11-c); this is described and analyzed more in depth in §3.3. Importantly, the novel default Set B pattern in (11-b) is the focus of this chapter.

(11) SJA Mam

- a. N=**chin** b'et=i.
 IPFV=**B1SG** walk=DISAGR
 'I am walking.'

- b. Ma **tz'**=ok ky-ke'y-an qa **qin=i**.
 PROX **B2/3SG**=DIR:in A2/3PL-see-DS PL **1SG**=DISAGR
 'They saw me.'

- c. Ma **chn**=ok ky-ke'y-an qa.
 PROX **B1SG**=DIR:in A2/3PL-see-DS PL
 'They saw me.'

Looking outside Mam to other high-abs and low-abs Mayan languages is important in order to compare SJA Mam to the expected patterns. Other high-abs Mayan languages include Q'anjob'al (shown in (12)), Akatek, Popti', Chuj, Q'eqchi', Uspantek, Poqomchi', Poqomam, K'ichee', Kaqchikel, Tz'utujil, Sakapultek, Sipakapense, and Awakatek.

(12) Q'anjob'al: high-abs

- a. Max-**ach** oq'-i.
 ASP-2ABS cry-ITV
 'You cried.'

(Coon et al., 2014, 190)

- b. Max-ach y-il-a'.
 ASP-1ABS 3ERG-see-TV
 'She saw you.' (Coon et al., 2014, 190)

Other low-abs Mayan languages include Ch'ol (shown in (13)), Chontal, Itzaj, Ixil, Lakantun, Mopan, Tseltal, Tojol-ab'al, and Yucatec (Coon et al., 2014, 191).

- (13) Ch'ol: low-abs
- a. Tyi uk'-i-yety.
 ASP cry-ITV-2ABS
 'You cried.' (Coon et al., 2014, 190)
- b. Tyi y-il-ä-yety.
 ASP 3ERG-see-TV-2ABS
 'She saw you.' (Coon et al., 2014, 190)

3.2.3.2 Object licensing and the EEC

Tada (1993) notices a correlation between the height of the Set B morpheme and the ability to \bar{A} extract the ergative subject. High-abs languages consistently restrict the ergative argument from extracting for focus, wh- questions, and relativization, whereas overwhelmingly, low-abs languages do not. I follow Aissen (2017b) in labeling this restriction the ergative extraction constraint (EEC). I illustrate this with the difference between Q'anjob'al (high-abs) and Ch'ol (low-abs). In Q'anjob'al, transitive objects can extract freely, but extraction of transitive subjects is impossible with typical transitive morphology, illustrated in (14). In Ch'ol, on the other hand, both arguments of transitive verbs can extract freely, resulting in ambiguity if both arguments have the same features, shown in (15).

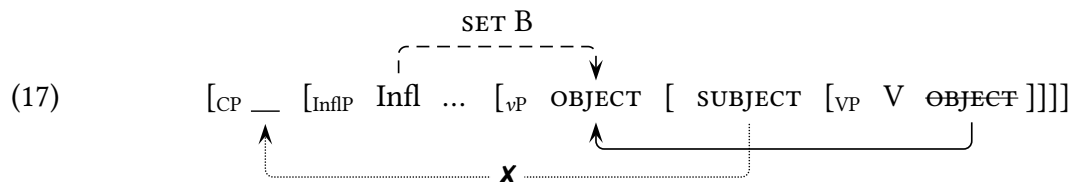
- (14) Q'anjob'al EEC
- a. Maktxel₁ max y-il[-a'] naq winaq ____₁?
 who ASP 3ERG-see-TV CLF man
 'Who did the man see?' (Coon et al., 2014, 192)
- b. *Maktxel₁ max-∅ y-il[-a'] ____₁ ix ix?
 who ASP-3ABS 3ERG-see-TV CLF woman
 intended: 'Who saw the woman?' (Coon et al., 2014, 193)
 (grammatical as: 'Who did the woman see?')
- (15) Ch'ol (no EEC)
- Maxki₁ tyi y-il-ä (____₁) jiñi wiñik (____₁)?
 who ASP 3ERG-see-TV DET man
 'Who saw the man?'/ 'Who did the man see?' (Coon et al., 2014, 193)

Since Tada's initial generalization, scholars have sought to understand why high-abs languages have an extraction asymmetry but low-abs languages do not. Coon et al. (2014) explain

this connection through the distinct mechanisms for case licensing transitive objects in high- vs. low-abs languages, which they propose via the Mayan Absolutive Parameter in (16).

- (16) *Mayan Absolutive Parameter* (Coon et al., 2014, 194)
 In **high-abs** languages, transitive objects are assigned absolutive by **Infl**⁰.
 In **low-abs** languages, transitive objects are assigned absolutive by **Voice**⁰.

The crucial aspect of Coon et al.’s 2014 proposal that explains Tada’s Generalization is that transitive objects must invert with transitive subjects in order to receive case from Infl⁰ and create a high Set B morpheme. Coon et al. (2014) and Coon et al. (2021) attribute the EEC in high-abs languages to the derived height of objects, illustrated in the schema in (17). This restriction is perhaps surprising given principles of locality and articulated probes. The \bar{A} probe on C is searching for an \bar{A} goal, so it is surprising that the non- \bar{A} object should serve as an intervener between the probe and the \bar{A} subject. This restriction is summarized in (18).



- (18) **MAYAN EEC GENERALIZATION** (Coon et al., 2021, 271)
 When an interpreted DP object structurally intervenes between the subject and the \bar{A} -probe on C⁰, the subject is restricted from undergoing \bar{A} -extraction.

Contra work that attributes the problem of extraction to properties of the ergative argument itself (Deal, 2016; Polinsky, 2016), Coon et al. (2021) follow other work that attribute the extraction asymmetry to the inversion of the object above the subject (e.g. Campana 1992, Ordóñez 1995, Aldridge 2004, Aldridge 2008, Coon et al. 2014, Assmann et al. 2015; also see Deal 2016 for an overview of syntactic ergativity).

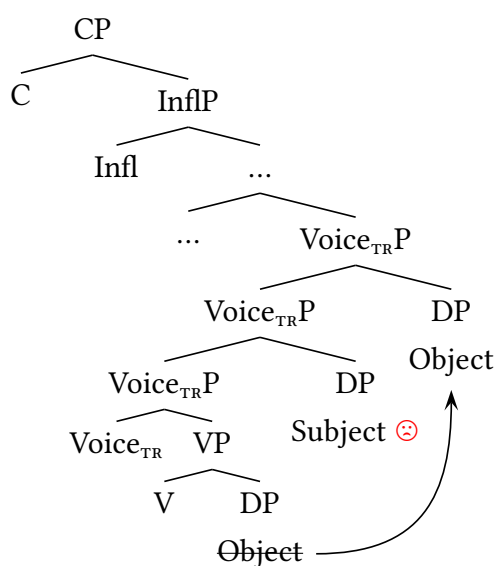
Coon et al. (2014) and Assmann et al. (2015) attribute the problem that arises in (17) to failure of abstract case assignment and nominal licensing. In particular, Coon et al. (2014) argue that the object— in order to be licensed by Infl— occupies the one and only “escape hatch” which the subject would use to move out of the vP for \bar{A} extraction. Assuming vP phasehood and the cyclicity of movement, their idea is that an argument within the vP must pass through Spec, vP in order to be \bar{A} extracted via the CP domain. In high-abs languages, the object occupies the relevant specifier position, and the subject is thus trapped in the vP.

An alternate analysis for the ungrammaticality in these cases is given in Coon et al. (2021). The authors agree that the height of objects in high-abs languages contributes to the extraction asymmetry, but they argue that it is the nature of the \bar{A} probe on C⁰, a complex probe searching for A and \bar{A} features simultaneously, which accounts for the inability for ergative subjects to extract.

The exact mechanism driving the ungrammaticality of extracting ergative subjects does not matter for the analysis of SJA Mam presented here. What is relevant is that the movement of

objects above subjects restricts the subject from extracting. In this research I adopt the insight that in high-abs languages, objects move above subjects, and that the result of this inversion is the inability for the ergative subject to extract.

(19) Subject is “trapped” in high abs languages

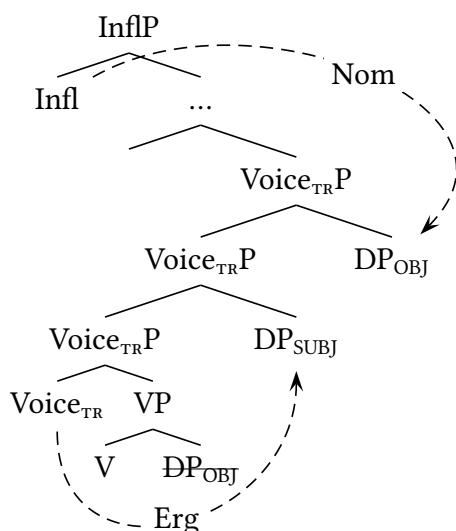


The Mayan Absolute Parameter, in addition to accounting for Tada’s generalization, is based on Legate’s 2008 work on absolutive case assignment. Legate (2008) argues that in a given ergative language, the notion of “absolutive” either refers to structural nominative (all absolutive case is assigned high by T/Infl) or it refers to the morphological default case morpheme in the languages, realizing both structural nominative and accusative as a single surface case form. The former type of languages are called ABS=NOM, and the latter type ABS=DEF. The two types of Mayan languages proposed in Coon et al. (2014) map directly onto these categories: high-abs languages are ABS=NOM, illustrated in (20), and low-abs languages are ABS=DEF, illustrated in (21).

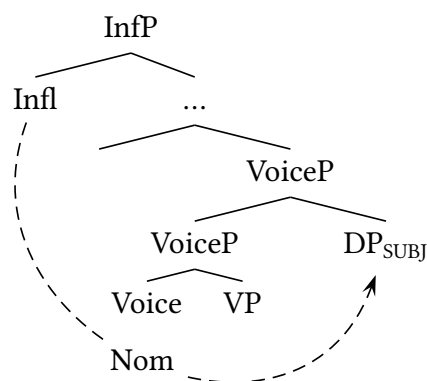
Note that it is specifically the licensing of transitive *objects* that indicates whether a language is ABS=NOM (high-abs) or ABS=DEF (low-abs). In both types of languages, intransitive subjects are case licensed via Infl, receiving nominative case, and transitive subjects are case licensed via Voice, receiving ergative case, shown below.

(20) High-abs (Coon et al., 2014), ABS=NOM (Legate, 2008)

a. Transitive clauses

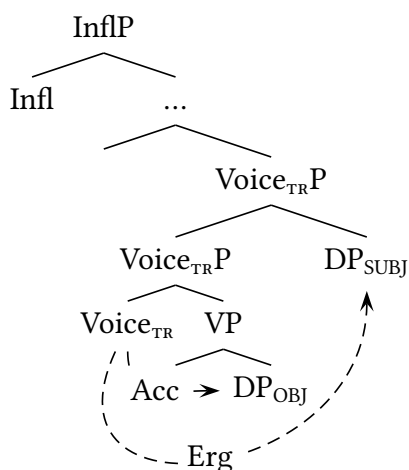


b. Intransitive clauses

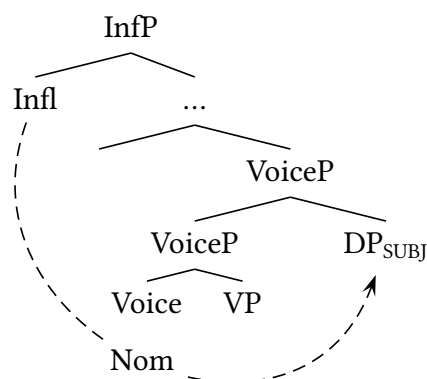


(21) Low-abs (Coon et al., 2014), ABS=DEF (Legate, 2008)

a. Transitive clauses



b. Intransitive clauses



Notice that in low-abs languages, S, A and O all have distinct syntactic Cases (nominative, ergative, and accusative, respectively), making these languages tripartite in the syntax, akin to more well known morphologically tripartite languages such as Walpiri (Legate, 2006), Nez Perce (Deal, 2010), and Amahuaca (Clem, 2019). However, in low-abs languages, nominative and accusative are collapsed in the morphology and represent the default/absolute case, resulting in surface ergative/absolute alignment (Coon et al., 2014). We will see in the following sections that the SJA Mam data reveal that despite having high placement of Set B morphemes, SJA Mam

is a low-abs language in that objects are licensed low, giving SJA Mam a tripartite underlying Case system.

Diagnosing whether objects are licensed by Voice or Infl can be achieved by examining non-finite clauses (Legate, 2008; Coon et al., 2014). Non-finite clauses by definition lack finite Infl, the case assigner for objects in high-abs languages. Thus, objects in high-abs languages cannot be licensed in non-finite clauses and should be unavailable. On the other hand, objects in low-abs languages retain their licenser, Voice, even in non-finite clauses and should be unaffected. In both types of languages, intransitive subjects should be unavailable as they are always licensed by Infl. Using this diagnostic, Coon et al. (2014) show that the Mayan languages with high-abs morphology lack typical transitive objects in non-finite clauses, while languages with low-abs morphology retain the ability to license transitive objects.

To illustrate this, take the following examples from Q'anjob'al. It is ungrammatical to embed a typical transitive matrix clause under predicates like *uj* 'to be able to' and the progressive marker *lanan*.

(22) Q'anjob'al

- a. *Chi uj [hin y-il ix Malin].
 ASP be.able.to 1ABS 3ERG-see CLF Maria
 intended: 'Maria can see me.'

(Coon et al., 2014, 196)

- b. *Lanan [hach hin-laq'-a'].
 PROG 2ABS 1ERG-hug-TV
 intended: 'I am hugging you.'

(Coon et al., 2014, 196)

In Q'anjob'al, embedding a transitive clause under these predicates requires a special use of the agent focus construction, dubbed the 'crazy antipassive' by Kaufman (1990), shown in (23). Coon et al. (2014) makes sense of this construction by analyzing the agent focus morpheme as a special flavor of Voice which exceptionally licenses objects low. Its use in non-finite clauses can be understood as a rescue licenser in the context of a clause which lacks the typical finite Infl licenser.³

(23) Q'anjob'al

- a. Chi uj [hin y-il-on-i ix Malin].
 ASP be.able.to 1ABS 3ERG-see-AF-ITV CLF Maria
 'Maria can see me.'

(Coon et al., 2014, 196)

- b. Lanan [hach hin-laq'-on-i].
 PROG 2ABS 1ERG-hug-AF-ITV
 'I am hugging you.'

(Coon et al., 2014, 196)

³Coon et al. (2021) reject the analysis that the agent focus is a "rescue licenser" and instead analyze the agent focus morpheme as a flavor of *v* which is distinct from transitive *v* in the following ways: while v_{AF} introduces both an external and internal argument, it also comes with a ϕ -probe generating a Set B morpheme for the internal argument which remains low.

The pattern in high-abs Q'anjob'al contrasts with the low-abs language Ch'ol, in which it is grammatical to embed transitive clauses under similar predicates without modification. This is predicted, given that objects in Ch'ol are licensed by Voice, not Infl, and thus the absence of finite Infl does not hinder the licensing of arguments in transitive clauses.

(24) Ch'ol

a. Mejl [i-k'el-oñ].

be.able.to 3ERG-see-1ABS

'She can see me.'

(Coon et al., 2014, 202)

b. Choñkol [k-mek'-ety].

PROG 1ERG-hug-2ABS

'I am hugging you.'

(Coon et al., 2014, 203)

In both languages, embedding an intransitive subject requires Set A (ergative) morphology, shown in the (25-a) and (26-a); using Set B (absolutive) morphology is ungrammatical. This is expected as both languages license intransitive subjects with Infl, which is crucially missing in these constructions.

(25) Q'anjob'al

a. Chi uj [ko-b'ey-i].

ASP be.able.to 1ERG.PL-walk-ITV

'We can walk.'

(Coon et al., 2014, 197)

b. *Chi uj [hon b'ey-i].

ASP be.able.to 1ABS.PL walk-ITV

intended: 'We can walk.'

(Coon et al., 2014, 198)

(26) Ch'ol

a. Choñkol [k-ts'äm-el].

PROG 1ERG-bathe-NML

'I am bathing.'

(Coon et al., 2014, 203)

b. *Choñkol [ts'äm-i-yoñ].

PROG bathe-ITV-1ABS

intended: 'I am bathing.'

(Coon et al., 2014, 203)

Coon et al. (2014) show that the difference in ability to license transitive objects in non-finite clauses extends beyond Q'anjob'al and Ch'ol and in fact maps up neatly with high- and low-abs languages. The generalization emerges that languages that mark absolutive (Set B) high in the clause license transitive objects with Infl, and thus lose the ability to license objects in nonfinite clauses. On the other hand, languages that mark absolutive (Set B) low in the clause license transitive objects with Voice (*v* in Coon et al. 2014), thus retaining the ability to license objects in nonfinite clauses. Further, high absolutive languages are associated with object movement above subjects, causing the EEC, while low absolutive languages are not. These three correlations are

summarized in Table 3.3, with Q’anjob’al and Ch’ol representing the two expected patterns in Mayan languages.

Table 3.3: Correlations in Mayan (adapted from Coon et al. 2021, 277)

	Set B	Obj Licensor	EEC
Q’anjob’al	high	Infl ⁰	yes
Ch’ol	low	v ⁰	no

In §3.4.3, I discuss the object licensing diagnostics as applied to SJA Mam, showing that the types of clauses assumed to lack Infl yet retain Voice do not serve to diagnose object licensing in SJA Mam; embedding strategies corresponding to those discussed by Coon et al. (2014) are either fully finite (having both Infl and Voice) or lack both. Alternatively, I identify a new diagnostic, showing that a handful of ‘never-abs’ verbs, which never show Set B marking for objects, still allow the presence of objects, indicating that objects are licensed low. This argument provides evidence that SJA Mam has clause structure which has not previously been described in Mayan languages: a high-abs language which licenses objects low.

Further, the SJA Mam pattern reveals that the relationship between case licensing of the object and the EEC is not bidirectional. In §3.4, I show that despite being licensed low by Voice, objects still undergo inversion with subjects, causing the EEC. This suggests that the need for case is not the only factor that can drive object movement, and further, that the correlations summarized in Table 3.3 do not hold in SJA Mam, whose properties are added to the typology and summarized in Table 3.4.

Table 3.4: Correlations in Mayan (with SJA Mam)

	Set B	OBJ Licensor	EEC
Q’anjob’al	high	Infl ⁰	yes
Ch’ol	low	v ⁰	no
SJA Mam	high	v⁰	yes

In summary, SJA Mam has some characteristics of high-abs languages and some characteristics of low-abs languages: objects are licensed like that of a low-abs language, while, like high-abs languages, the verbal Set B slot is high and the EEC is active. The SJA Mam pattern requires a closer look at the labels “high-abs” and “low-abs” because in this language, the Set B marker is high (high-abs) but objects are licensed low (low-abs), a consequence of this analysis that I return to in §3.5. First, we must examine the pattern of Set B marking for both intransitive subjects and transitive objects in SJA Mam.

3.3 Agreeing and default Set B in SJA Mam

3.3.1 Intransitive subjects: agreeing Set B

In SJA Mam, intransitive subjects consistently trigger the full agreeing paradigm of Set B morphology on the verb, shown in (27). This matches the pattern reported for other varieties of Mam (England, 1983b, 1990).

- (27) a. Ma **chin** b'et=i.
PROX B1SG walk=DISAGR
 'I walked.'
- b. X walked.
 I Ma **chin** b'eti.
 you Ma \emptyset b'eti.
 she Ma \emptyset b'et txin.
 we (excl) Ma **qo** b'eti.
 we (incl) Ma **qo** b'et.
 you (pl) Ma **chi** b'et qi.
 they (pl) Ma **chi** b'et qa.

Although it has been assumed that the 3SG Set B morpheme in all Mayan languages is null (Coon et al., 2021, 274), the 2/3SG morpheme in Mam has several overt prevocalic allomorphs. Before the vowel initial root in (28-a), the 2/3SG morpheme is *tz'*.

- (28) a. Ma **tz'**=ok=x=i.
PROX B2/3SG=DIR:in=DIR:go=DISAGR
 'You went in.'
- b. X went in.
 I Ma **chn**=okxi.
 you Ma **tz'**=okxi.
 she Ma **tz'**=okx txin.
 we (excl) Ma **qw**=okxi.
 we (incl) Ma **qw**=okx.
 you (pl) Ma **chj**=okx qi
 they (pl) Ma **chj**=okx qa.

As illustrated in (27-b) and (28-b), each of the Set B markers displays allomorphy depending on whether it precedes a vowel or consonant. Most important of these allomorphs is the overt 2/3SG, as it allows us to differentiate between the absence of agreement and default agreement.

The fully agreeing Set B paradigm is used with active intransitive verbs in environments with overt aspectual marking, shown in (29).⁴

- (29) a. O chin b'et=i.
PFV B1SG walk=DISAGR
'I walked (yesterday or before).'
- b. Ma chin b'et=i.
PROX B1SG walk=DISAGR
'I walked/ I was walking.'
- c. N=chin b'et=i.
IPFV=B1SG walk=DISAGR
'I am walking/I walk.'
- d. Ma n=chin b'et=i.
PROX IPFV=B1SG walk=DISAGR
'I just walked.'
- e. Chin k=b'et-l=i.
B1SG POT=walk-POT=DISAGR
'I will walk.'

However, Mam shows distinct person marking for non-verbal predicates (NVPs). Non-verbal predicates never appear with aspectual morphology, nor do they appear with Set B morphemes in the typical pre-verbal position: subjects in NVP constructions follow the predicate in their full pronominal form, shown in (30). For an overview of these constructions, see Chapter 2 §2.4.2.3.

- (30) Ajxnaq'tzal qin=i.
teacher 1SG=DISAGR
'I am a teacher.'

Some verbal roots can alternate between between verbal and non-verbal constructions. This is illustrated below for the intransitive verb of motion *ul* 'arrive here' and *tan* 'sleep.' In these alternations, the non-verbal construction is associated with a distinct aspectual interpretation as well as restrictions on adverb used.⁵

- (31) a. Ul qin=i.
arrive.here 1SG=DISAGR
'I arrived here (a while ago).'

⁴While most aspectual morphemes appear before the Set B markers, the potential marker *k=* appears as a verbal prefix, shown in (29-e). See Chapter 2, Section 4.1.4 on the potential aspect for more on this pattern.

⁵Specifically, the non-verbal construction is interpreted as occurring in the past (which is also the default interpretation of the perfective) but further in the past than the perfective. See Chapter 2 §2.4.1.1 for a more detailed discussion of the differences between (31-a) and (31-b).

- b. O **chn=**ul=i.
 PFV **B1SG=arrive.here=DISAGR**
 ‘I arrived here (recently but not today).’

Important to note about the non-verbal construction is that there are no aspectual morphemes. I take this to indicate the absence of an Asp projection in these clauses. Additionally, no high Set B morphemes are present. For example, in (31-a), there is no pre-verbal agreeing Set B morpheme, which would be *chn=*, and there is no default Set B morpheme which would be *tz=*. I take this to indicate the absence of InflP in non-verbal constructions. These facts about non-verbal constructions are relevant when compared to the marking of transitive objects, which take the same form as the pronouns in non-verbal constructions but co-occur with default Set B markers. We turn now to the full pattern of transitive object marking in SJA Mam, where we see that the high Set B slot receives invariant default marking and the objects themselves are spelled out in object position. §3.4 then provides an analysis of the default object agreement.

3.3.2 Transitive objects: default Set B

In SJA Mam, transitive objects behave differently from intransitive subjects. The basic pattern is the following. Regardless of person or number features, the verb appears with the 2/3SG Set B marker. I refer to this usage of the 2/3SG marker as the default Set B marker. With the reduction in object features on the verb, independent pronominal objects are obligatorily expressed in object position following the subject. (32-a) illustrates the pattern: although the object is 1SG, the default Set B morpheme *tz’=* is used, which, when used in agreeing Set B contexts, only refers to 2/3SG arguments. The overt pronoun *qini* appears following the subject. A full paradigm of transitive objects is given in (32-b).

- (32) a. Ma tz’=ok ky-ke’y-an qa **qin=i**.
 PROX B2/3SG=DIR:in A2/3PL-see-DS PL 1SG=DISAGR
 ‘They saw me.’
- b. They saw...
- | | |
|-----------|---|
| me | Ma tz’ ok kyke’yan qa qini . |
| you | Ma tz’ ok kyke’yan qa ay . |
| her | Ma tz’ ok kyke’yan qa txin . |
| us (excl) | Ma tz’ ok kyke’yan qa qo’y . |
| us (incl) | Ma tz’ ok kyke’yan qa qo . |
| you (pl) | Ma tz’ ok kyke’yan qa qi . |
| them (pl) | Ma tz’ ok kyke’yan qa qa . |

This pattern holds for all transitive verbs, regardless of which directional is used, though the default Set B marker is null before consonant initial directionals. Transitive examples with various directionals, including (33-d), which has no directional, are given below.

- (33) a. Ma \emptyset -jaw t-ke'y-an Lucrecia qin=i.
 PROX B2/3SG=DIR:up A2/3SG-see-DS Lucrecia 1SG=DISAGR
 'Lucrecia looked up at me.'
- b. Ma \emptyset -tzaj ky-txko-n qa qo'=y.
 PROX B2/3SG=DIR:come A2/3PL-invite-DS PL 1PL=DISAGR
 'They invited us.'
- c. Ma \emptyset -txi t-q'olb'e-n Henry qa xjal.
 PROX B2/3SG=DIR:go A2/3SG-greet-DS Henry PL person
 'Henry visited the people.'
- d. Ma \emptyset w-il=i q=i.
 PROX B2/3SG A2/3SG-see=DISAGR 2PL=DISAGR
 'I saw you all.'

In contrast to the default Set B pattern above, which is the main strategy for object marking in the language, some speakers of SJA Mam also accept constructions with the expected agreeing high-abs Set B pronominal marking for transitive objects. Compare the object marking in (34), in which the first person singular object is inflected on the verb via Set B marking, to (35), in which the Set B marking is default.

- (34) SJA Mam agreeing Set B
 Ma chn=ok ky-ke'y-an qa.
 PROX B1SG=DIR:in A2/3PL-see-DS PL
 'They saw me.'
- (35) SJA Mam default set Set B
 Ma tz'=ok ky-ke'y-an qa qin=i.
 PROX B2/3SG=DIR:in A2/3PL-see-DS PL 1SG=DISAGR
 'They saw me.'

The agreeing Set B construction in (34) is the form cited in England's 1983b grammar of Ixtahuacán Mam and B'aayil and Ajb'ee's 2001 grammar of San Sebastián Huehuetenango and Cajolá Mam. Some speakers describe the fully agreeing Set B object forms as being used in formal settings (such as speeches) more often than the default form. One speaker, Carrillo Godínez, guesses that she uses the default Set B form 60% of the time and fully agreeing form 40% of the time. Importantly, the default Set B constructions are the forms given by all speakers in elicitation; the agreeing Set B constructions are sometimes accepted, but rarely given.

Considering that the agreeing Set B pattern is the one described for all high-abs Mayan languages in the literature, the default Set B pattern is likely an innovation in SJA Mam. Based on preliminary elicitation data collected by myself in 2020, the default Set B pattern is also offered by speakers from two other towns in the Northern dialect region in Huehuetenango: San Ildefonso Ixtahuacán (the same town which served the basis of England 1983a) and San Sebastián Huehuetenango (also called Sanse and Sqisan).

- (36) San Ildefonso Ixtahuacán Mam
 a. Ma **tz'**=ok t-ki-'n q'a **qin**.
 PROX **B2/3SG**=DIR A2/3SG-see-DS CLF:boy **1SG**
 'He saw me.'
- (37) San Sebastián Huehuetenango Mam
 a. Ma \emptyset t-il Henry **qin**.
 PROX **B2/3SG** A2/3SG-see Henry **1SG**
 'Henry saw me.'

Myers et al. (2023) also describe the default Set B pattern for a variety of Mam the authors refer to as Heritage Mam, spoken by a university-age speaker of Mam born and raised in the United States. Myers et al. describe this variety as “no-ABS” and shows that transitive objects consistently show zero marking in the verbal domain, but surface as full pronouns in object position instead. This same pattern is also described for Todos Santos Mam by Elkins and Brown (2023).

- (38) Heritage Mam
 Ma t-il-a **qin**.
 PFV A2S-see-ENC2S **PRON1S**
 'She saw me.' (Myers et al., 2023, 19)
- (39) Todos Santos Mam
 Ma **tz'**-ok t-pju-'n xin xjaal **na'ya**.
 PROX **B2/3SG**-DIR A2/3SG-hit-DS CLF man **1SG.PRO**
 'The man hit me.' (Elkins and Brown, 2023)

Speakers of SJA Mam use both the default Set B and the agreeing Set B pattern, and I propose a way to formalize this variation between these two grammars. In §3.4, I give a formal account for why the expected Agree relationship between Infl and transitive objects in SJA Mam fails and results in default Set B agreement. The variation between the two grammars is located in the probe structure on Infl. For the default Set B instances, the probe on Infl is restricted from probing into transitive VoiceP. This restriction on the probe is not present in the grammar which permits agreeing Set B morphemes. For the default Set B pattern, in the absence of high (Infl) licensing, I show that transitive objects in SJA Mam are licensed via Voice, in line with low-abs Mayan languages. However, contra to expectations for low-abs languages, SJA Mam also provides evidence that objects nonetheless invert with subjects, causing an extraction symmetry.

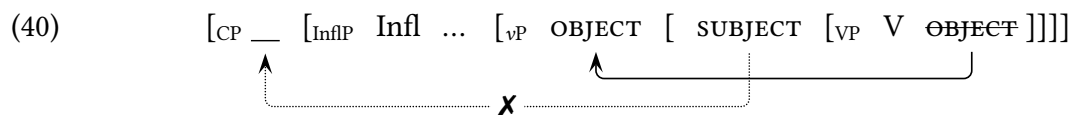
3.4 Accounting for default object agreement

I propose that transitive objects in SJA Mam are not agreed with or case licensed by Infl. This inability of Infl to agree with the transitive object is surprising given that we assume that the object has raised above the subject (accounting for extraction asymmetries) in high-abs languages, and is therefore within the domain of Infl. In §3.4.1, I show that SJA Mam exhibits a restriction on

extracting the ergative subject in most cases, suggesting that objects indeed invert with subjects. Therefore it must not be an issue of locality which is causing the lack of agreement; something else must be blocking the Agree relationship. In §3.4.2 I argue that the ϕ -probe on Infl is specified to stop its search when it reaches the edge of transitive VoiceP, drawing on work by Deal (2021) and Keine (2019, 2020). In §3.4.3 I provide evidence that transitive objects in SJA Mam are licensed by Voice.

3.4.1 Ergative Extraction Constraint points to high objects

As discussed in §3.2.3, in some languages, ergativity does not only manifest in the morphology, but also in the syntax. Syntactic ergativity refers to syntactic processes that treat transitive subjects differently from transitive objects and intransitive subjects. This phenomenon has been most closely examined with respect to ergative extraction in Mayan.⁶ As discussed in §3.2.3, I adopt the view that the presence of the EEC (ergative extraction constraint) is attributed to object inversion above the transitive subject, serving as a diagnostic for object height (Campana 1992, Ordóñez 1995, Aldridge 2004, Aldridge 2008, Coon et al. 2014, Assmann et al. 2015); the schema for this view is repeated in (40).



In this section, I show that \bar{A} extracting ergative subjects in SJA Mam generally results in ungrammaticality and instead a non-ergative construction must be used. I take these facts to indicate object movement above subjects.

We start with *wh*- extraction. Using typical transitive syntax, shown in (41), the ergative subject cannot be *wh*- extracted, shown in (42). Instead, these clauses are expressed via a non-ergative construction which has properties of both antipassive and agent focus construction, shown in (43), and discussed further below. This construction is non-ergative in that it lacks ergative agreement and includes the antipassive suffix on the verb.

(41) SJA Mam Baseline

Ma tz'=ok t-b'yo-'n q'a qin=i.
 PROX B2/3SG=DIR:in A2/3SG-hit-DS CLF:boy 1SG=DISAGR
 'He hit me.'

(42) SJA Mam Ergative extraction ungrammatical

*A'l ma tz'=ok t-b'yo-'n q'a qin=i?
 who PROX B2/3SG=DIR:in A2/3SG-hit-DS CLF:boy 1SG=DISAGR
 Intended: 'Who hit me?'

⁶See England (1983a) for other syntactic operations that target the ergative subject uniquely in Mam.

- (43) SJA Mam antipassive/agent focus repair
 A'l ma tz'=ok b'yo-n-ta qin=i?
 who PROX B2/3SG=DIR:in hit-AP-AF 1SG=DISAGR
 'Who hit me?'

The ungrammaticality of (42) is predicted for Mam in general, since Set B is marked high in the clause (Coon et al., 2014). I take (42) to indicate that objects move above subjects in SJA Mam. This pattern is somewhat weaker for relativization and focus constructions, in which speakers do not reject the ergative extraction examples as ungrammatical; however, they consistently prefer the non-ergative repair clauses.

- (44) Relativization
- a. ?Aj xjal [ma tz'=ok t-b'yo-'n qin=i] tz=ul.
 who person PROX B2/3SG=DIR:in A2/3SG-hit-DS 1SG=DISAGR B2/3SG=arrive
 'The person who hit me will come.'
- b. Aj xjal [ma tz'=ok b'yo-n-ta qin=i] tz=ul.
 who person PROX B2/3SG=DIR:in hit-AP-AF 1SG=DISAGR B2/3SG=arrive
 'The person who hit me will come.'
- (45) Focus
- a. ?A Jse ma tz'=ok t-b'yo-'n a=y.
 DET Jose PROX B2/3SG=DIR:in A2/3SG-hit-DS DET=DISAGR
 'Jose_{FOC} hit you.'
- b. A Jse ma tz'=ok b'yo-n-ta a=y.
 DET Jose PROX B2/3SG=DIR:in hitAP-AF DET=DISAGR
 'Jose_{FOC} hit you.'

One possible interpretation of the looser EEC effects in relativization and focus constructions is that speakers are using the low object pronouns as an indication that the object actually remains low. Their grammars could slowly be shifting towards the object remaining low and allowing the extraction of the ergative subject using normal ergative syntax like low-abs languages.

The type of clause used to circumvent the ban on extracting ergative arguments in SJA Mam is worth discussing here, especially in its relation to other varieties of Mam and other Mayan languages. One of the types of constructions used to circumvent the EEC in Mayan that has been discussed is "agent focus" constructions. Agent focus has been a long-standing topic in the Mayanist literature as well as in broader morphosyntactic discussions (Smith-Stark, 1978; Craig, 1979; Larsen and Norman, 1979; Dayley, 1983; Ayres, 1983; Stiebels, 2006; Aissen, 2011; Coon et al., 2014; Preminger, 2014; Assmann et al., 2015; Erlewine, 2016; Aissen, 2017a; Watanabe, 2017; Henderson and Coon, 2018; Coon et al., 2021).

The details of the full range of variation within the agent focus are not necessary here, though one main distinction is relevant. Some languages are described as using an antipassive construction to first intransitivize the verb, allowing the agent to extract. An example is given for Ix-

tahuacán Mam (England, 1983a) in (46). Importantly, the antipassive construction is formally intransitive. This can be seen by i) the extracted subject which is cross referenced with Set B (absolute) morphology on the verb instead of Set A (ergative), and ii) the object is demoted to an oblique (relational noun) phrase, a common strategy to introduce oblique arguments. Relational nouns in Mayan are semantically similar to prepositions and cross-reference their complements with ergative/possessive (Set A) morphology (see Chapter 2 §2.3.3 for an overview of relational nouns in SJA Mam).

- (46) Ixtahuacán Mam
 Xiinaq x-∅-kub' tzyuu-n t-e qa-chej.
 man DEP.PROX-B3SG grab-AP A3SG-RN:PAT PL-horse
 'The man_{FOC} grabbed the horses.' (England, 1983a, 5)

The antipassive construction in (46) contrasts with constructions which Coon et al. (2021) take as true Agent Focus constructions, found in Q'anjob'al, for example, in (47). Importantly contrasting with demoted objects in the antipassive in Mam, as we saw in (46), Q'anjob'al agent focus constructions—those in which the transitive argument has been extracted—consistently mark the internal argument of the verb with Set B, shown in (47). Recall from §3.2.3.2 that Coon et al. (2014) analyze the agent focus morpheme in (47) as a special flavor of Voice which exceptionally licenses objects low, thus removing the need for objects to raise above subjects, which would block ergative extraction.

- (47) Q'anjob'al Agent Focus
 Maktxel max-in il-on-i?
 who PFV-1ABS see-AF-ITV
 'Who saw me?' (Coon et al., 2014, 223)

The construction used in SJA Mam to extract ergative arguments has characteristics of both the antipassive in Ixtahuacán Mam as well as the agent focus construction in Q'anjob'al. (48) illustrates an example of focus extraction of a first person singular argument. First, like both antipassive and agent focus, Set A (ergative) agreement is not found in these constructions. Like the antipassive constructions in Ixtahuacán Mam, the antipassive suffix appears on the SJA Mam verb. However, unlike Ixtahuacán Mam, the extracted argument does not typically control Set B marking on the verb.⁷

- (48) SJA Mam ergative extraction clause
 A qin=i o ∅=txi' ke'yn-n=ta i'x ew.
 DET 1SG=DISAGR PFV B2/3SG=DIR:go chew-AP=AF corn yesterday
 'I_{FOC} ate corn yesterday.'

⁷There is variation with respect to Set B marking in these constructions. See Chapter 2 §2.7.1.2 for more on the pattern.

Lastly, some speakers demote pronominal objects to a relational noun phrase (49) while others do not (50); for those that do not demote the object, it does not control Set B marking on the verb, only the default Set B appears in these clauses, shown by the *tz'*= morpheme in (50). These clauses in (48) – (50) display *no* fully agreeing set of morphemes on the verb whatsoever.

(49) SJA Mam, Carrillo Godínez

A txin Tessa ma tz'=ok b'yo-n-ta w-i=y.
 DET CLF:girl Tessa PROX B2/3SG=DIR:in hit-AP-AF A1SG-RN:PAT=DISAGR
 'Tessa_{FOC} hit me.'

(50) SJA Mam, Sales

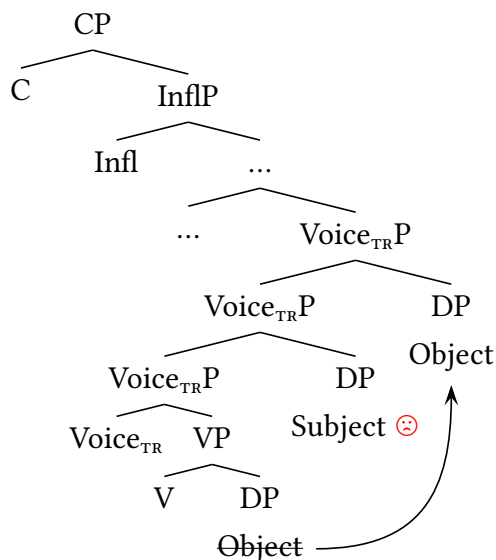
A t-txu q'a o tz'=ok b'yo-n-t qin=i.
 DET A2/3SG-mother boy PFV B2/3SG=DIR:in hit-AP-AF 1SG=DISAGR
 'The boy's mother_{FOC} hit me.'

Notice the presence of the suffix *-t(a)* on the verbs in (48) – (50). This suffix is invariant and obligatory, and I analyze it as the agent focus marker in the language, given that its distribution is limited to ergative extraction contexts. Given the variability in the marking of the object, there is not a clear picture of whether SJA Mam has an agent focus Voice head which can license objects, which (48) and (50) would suggest, or whether these clauses are a type of antipassive clause in which objects are licensed within the relational noun phrase, which (49) would suggest. See Chapter 2 §2.7.1 for more on these constructions in SJA Mam.

The important takeaway here is that SJA Mam has a ban on extracting the ergative argument of a transitive clause, meaning that the EEC is present. Following the discussion in §3.2.3, I take this diagnostic to indicate that objects in SJA Mam move above subjects, illustrated in (51).

The question emerges regarding what causes movement of objects over subjects in SJA Mam if objects are not licensed nor agreed with by Infl. Coon et al. (2021, 277) formalize the movement of objects in high-abs languages as a simple EPP feature on Voice (*v* in their work) that is only present in high-abs languages. The result of the EPP-driven movement is that the object is within reach of the probe on Infl. In typical high-abs languages, object movement seems then to be motivated by the need to be local to Infl. However, as we have seen for SJA Mam, Infl does not realize features of the object, and thus this movement seems not to be motivated by Case licensing, providing support for the same analysis by Legate (2012) for Dyirbal and Aldridge (2004) for Austronesian. In this sense, both high- and low-abs Mayan languages could in theory have the object shifting EPP, and indeed we see evidence that SJA Mam – a syntactically low-abs language – does have the object shifting EPP.

(51) SJA Mam EEC and object movement



Given that object movement is not driven by a need for agreement or licensing in SJA Mam, it may more economical for the language to keep objects low, allowing subjects to extract, since this will not have an effect on agreement. This seems to be exactly what is found in Heritage Mam (Myers et al., 2023). In this variety, objects are not indicated on the verb, the same pattern we saw in SJA Mam, shown in (52). However, in Heritage Mam, ergative subjects can freely extract, shown in (53).

(52) Ma t-il-a qin.
 PFV A2S-see-ENC2S PRON1S
 ‘You saw me.’

Heritage Mam (Myers et al., 2023, 19)

(53) Alkee ma tzaj t-tzyuu-’n qe xinaaq?
 who PFV DIR A3S-grab-DS PL man
 ‘Who grabbed the men?’

Heritage Mam (Myers et al., 2023, 21)

Myers et al. (2023) take these facts to indicate that objects stay low in Heritage Mam, and that there is no probe on Voice which would generate object agreement and/or drive movement of the object. This suggests that SJA Mam represents an intermediate step on the historical timeline beginning with high-abs syntax (e.g. Ixtahaucán Mam (England, 1983a)) and developing into no-abs (Heritage Mam (Myers et al., 2023)). The looser (but existent) EEC effects in relativization and focus constructions in SJA Mam perhaps point to speakers beginning to analyze the lack of Set B agreement for objects as reflecting low objects and thus allowing subject extraction. For the speaker of Heritage Mam, this change has been solidified the grammar.

With the presence of the EEC and high objects in Mam established, the question emerges why high objects in SJA do not trigger agreeing Set B morphemes on the verb, as described in §3.3. §3.4.2 provides an analysis of the default Set B agreement for transitive objects.

3.4.2 Default Agree in interaction/satisfaction framework

Having established that objects in SJA Mam move above subjects, I turn now to the question of how default Set B morphemes are derived for transitive objects. I assume that both Set A and Set B morphemes are the spell out of agreement as opposed to syntactic clitics. Thus, I start with the assumption that Set B morphemes in high-abs languages like Mam are created by Infl through an Agree relationship.⁸ In this section I provide an analysis of default Set B morphemes in transitive clauses in SJA Mam.

I adopt an interaction/satisfaction theory of Agree (Deal, 2015, 2020, 2021) whereby probes come with two specifications: the interaction condition and the satisfaction condition, detailed in (54).

- (54) a. Interaction condition: the set of features a probe copies back to itself
 b. Satisfaction condition: the set of features that cause a probe to stop probing

In this theory, the purpose of Agree is syntactic redundancy, to make copies of features that are present into the derivation. A probe exists on syntactic objects (such as an X^0) and it specifies features in its interaction and satisfaction conditions. This contrasts with the conceptual idea in Chomsky 2000, 2001 and subsequent work whereby the Agree operation is the result of unvalued and uninterpretable features that must be valued by a goal bearing a valued/interpretable instance of the feature. Under Chomsky's conception, once valued by the goal, the probe's features are then marked to be deleted following vocabulary insertion. The purpose behind that model of Agree is for uninterpretable features to be eliminated by the Agree relation in order for the derivation to converge.

Simple ϕ agreement can be easily captured within either framework; the benefit of Deal's theory is highlighted in complex agreement systems. For example, the paradigm of C agreement in Nez Perce in Deal 2015: the probe copies back all ϕ features in its domain until it reaches second person features, then it stops. Deal captures the intuition of this pattern with the probe that interacts with ϕ and is satisfied by an addressee feature, summarized in (55):

- (55) ϕ probe on Nez Perce C: Int: [ϕ], Sat: [ADDR]

The probe in (55) searches each element one-by-one in its c-command domain. If the element has ϕ features, those are copied back to the probe. If the element has [ADDR], the probe stops its search; if not, the probe continues to search the next element in the domain. The result is that any ϕ features between the probe and a second person argument will be copied back and indeed in Nez Perce potentially realized on the probe. Any ϕ features beyond an [ADDR] argument will *not* be considered for agreement. As we will see later, the choice to adopt an interaction/satisfaction

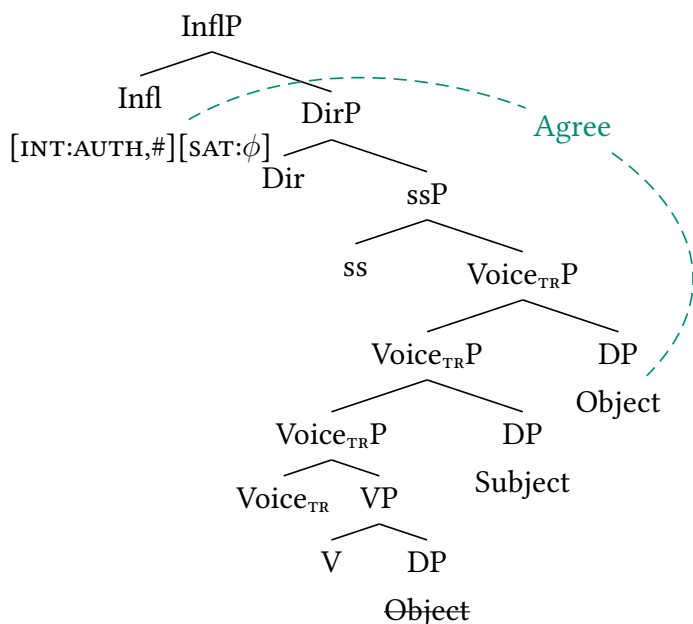
⁸There is a discussion in the literature surrounding whether Set B morphemes in Mayan are clitics or agreement markers (see Coon 2016). Though I assume that Set B morphemes are agreement, even if they were clitics, I take it that an underlying Agree operation is required for both agreement and clitics (see Kramer 2014), and is the mechanism under discussion here.

framework in accounting for the SJA Set B pattern lies in its ability to capture disjunctive satisfaction patterns: probes which stop probing when they reach feature X *or* Y.

First, as discussed more in Chapter 4, I adopt a bivalent theory of ϕ features following Harbour (2016) in which pronouns in Mam have the features [+/-author] and [+/-participant], as well as number features, for which I adopt the label [+/-singular]. I represent the bivalent features as AUTH, PART, and #, respectively, in the trees below.

In SJA Mam, let us start with the fully agreeing high-abs Set B pattern for transitive object agreement. Recall that this is the pattern reported in much of the literature on Mam and is found in other high-abs Mayan languages. Set B morphemes appear between aspect marking and directionals and show the features of the object. The probe on Infl only ever shows features of the direct object, indicating that the first argument it encounters stops its search. This is modeled with a simple satisfaction condition: ϕ . Since we only see [+/-author] (AUTH in the trees) and [+/-singular] (# in the trees) features realized with Set A or Set B morphology, I propose that the probe only copies those features (i.e. has those features in its interaction condition).⁹

(56) Standard Mam agreement



The most local argument to the probe on Infl within its domain is the transitive object, and its features are copied back to the probe. At PF, these features are spelled out as Set B morphemes. This is illustrated for the agreeing Set B pattern repeated in (57).

⁹An alternative option is that the probe is specified as [Int:φ], copying back all ϕ features of the goal. Within a Distributed Morphology (Halle and Marantz, 1993) framework, this is not a problem given the subset principle: that morphemes can realize less features than are present on a syntactic node but not more. Set A and Set B agreement could copy back all ϕ features (four-way person contrast) and only make a two-way person contrast in the morphology. In Chapter 4, I argue in support of the analysis in which SJA Mam ϕ probes only copy back [+/-author] and [+/-singular], resulting in a two-way person contrast in the morphology.

- (57) SJA Mam
 Ma **chn**=ok t-ke'y-an Mintz.
 PROX **B1SG**=DIR:in A2/3SG-see-DS Mintz
 'Mintz saw me.'
- (58) Features copied back to Infl: [+author][+singular]
 Relevant morpheme inserted: **chn**= ↔ [+author][+singular] / Infl, prevocalic

Now we turn to the default Set B pattern. First, I take the presence of default Set B morphemes in transitive clauses to indicate that the object's features are not copied back to the probe. I assume that the 2/3SG morpheme in SJA Mam is underspecified for person and number features and that it is the spell out of the ϕ probe on Infl when it has not copied back any features. Table 4 provides the proposed set of vocabulary entries for Set B morphemes.¹⁰ The analysis of 2/3SG as only realizing the *Infl* context can be thought of as a way to formalize the elsewhere condition for this context. If first person or plural features are copied to the probe on Infl, those features will be realized. If none of those features are present on the probe, the 2/3SG form will be used. The analysis of the 2/3SG forms thus encompass both the realization of 2/3SG features as well as the lack of features. See Chapter 4 for a more detailed morphological analysis of Set A, Set B, and independent pronouns in SJA Mam.

Table 3.5: SJA Mam Set B vocabulary items

	Set B (Infl)		VI analysis	Context
1sg	chin	↔	[+Auth,+SG]	<i>Infl</i>
2/3sg	∅ / tz' =	↔		<i>Infl</i>
1pl	qo	↔	[-Auth,-SG]	
2/3pl	chi	↔	[-Auth,-SG]	<i>Infl</i>

With objects so high in the structure, this raises the question of why the ϕ probe on Infl does not copy back features of the object, especially given that the ϕ probe on Infl *does* copy back features of intransitive subjects. I propose that the difference lies in the transitivity of the VoiceP. In particular, I propose that the search domain of the ϕ probe on Infl is restricted via a disjunctive satisfaction condition, a property of probes that has recently been independently proposed for other languages (Roversi et al., 2020; Scott, 2021a; Deal, 2021). The probe on Infl stops its search when it reaches either ϕ or Transitive VoiceP. I assume that when the probe encounters the highest node of the transitive VoiceP, the probe stops its search completely and is unable to see the DP object or copy its features.¹¹ The analysis is illustrated below, for the default

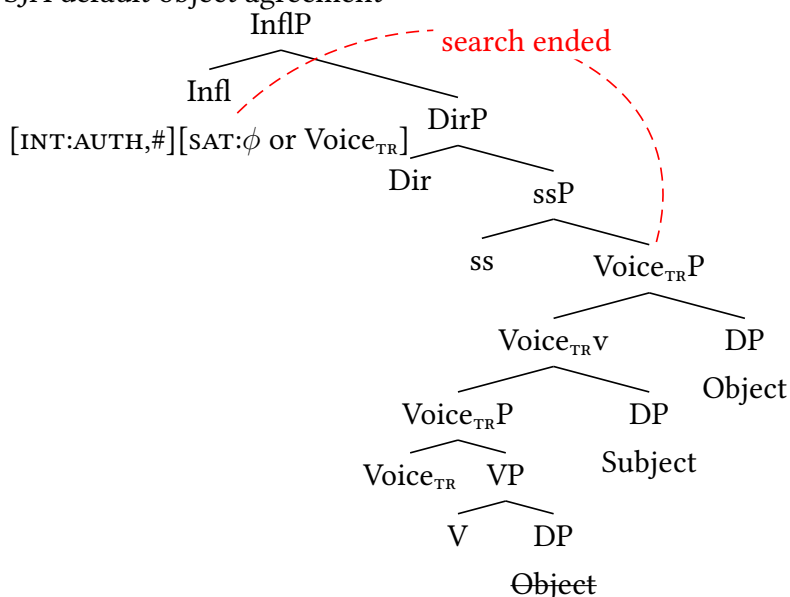
¹⁰First person plural *qo* is not specified for Infl, as it appears in full pronominal forms as well. See Chapter 4 §4.3.2 for more discussion of the full set of vocabulary items in SJA Mam.

¹¹There is independent motivation that the grammar distinguishes transitive and intransitive VoiceP. First, when transitive verbs combine with directionals, they take the directional suffix 'n, whereas intransitive verbs never do (see Chapter 2 §2.4.2.1 on verbal suffixes). Secondly, all but a handful of transitive verbs actually require directionals, and therefore DirP in their structure, while intransitive verbs do not require directionals (see Chapter 2 §2.4.2.2 on directionals).

Set B counterpart to (57).

- (59) Ma **tz'**=ok t-ke'y-an Mintz **qin=i**.
 PROX **B2/3SG=DIR:in** A2/3SG-see-DS Mintz **1SG=DISAGR**
 'Mintz saw me.'

- (60) SJA default object agreement



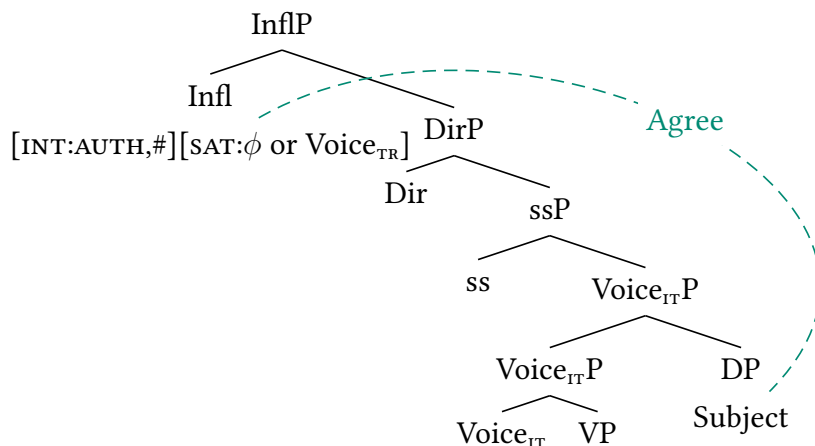
- (61) Features copied back to Infl: *none*
 Relevant morpheme inserted: **tz'** = ↔ Infl, prevocalic

Even with the added disjunctive satisfaction condition, the derivation for intransitive subjects proceeds with full agreement with Set B morphology without problem because there is no transitive Voice phrase to block agreement. When the probe reaches intransitive VoiceP, it proceeds to find the intransitive subject, which bears ϕ and halts the probe's search. This is illustrated below.

- (62) Ma **chin** b'et=i.
 PROX **B1SG** walk=DISAGR
 'I walked.'

- (63) Features copied back to Infl: [+author][+singular]
 Relevant morpheme inserted: **chin** ↔ [+author][+singular] / Infl, pre-consonantal

(64) Intransitive subject agreement



The result is that in a transitive clause, the probe is vacuous in the sense that it can never reach an argument; however, in an intransitive clause, the probe easily finds the subject. The probe’s restriction captures the fact that intransitive subjects consistently trigger agreeing Set B morphemes while transitive objects do not. The difference between standard Mam Set B agreement and the default Set B pattern in SJA Mam then, simply lies in whether the probe on Infl has a disjunctive satisfaction condition which states that transitive VoiceP satisfies the probe. For the agreeing object pattern, the probe on Infl is $[SAT:\phi]$ only, and thus both intransitive and transitive VoiceP are transparent, allowing both intransitive subjects and transitive objects to be agreed with.

Disjunctive satisfaction conditions have been proposed to capture agreement patterns in which a probe agrees with feature X or feature Y (typically ϕ features) regardless of whether these features are found on the first or second argument that the probe encounters. For example, ϕ -agreement in Äiwoo is with the highest argument bearing either [ADDR] or [AUG] (Roversi et al., 2020), which Deal (2021, 12) analyses with a disjunctive satisfaction condition: “ ϕ -agreement halts at either [ADDR] or [AUG]”. In addition, Algonquian inverse marking ϕ -agreement takes place with either [ADDR] or [PART+PL] arguments (Oxford, 2022), which Deal (2021, 12) also analyses with a disjunctive satisfaction condition.¹²

The present analysis of default object agreement implements disjunctive satisfaction to capture a different phenomenon. Instead of capturing agreement with one feature or agreement with another feature, this analysis leverages the distinction between satisfaction and overt agreement. According to Deal (2021), the features that satisfy a probe simply constitute the features that, when encountered by the probe, tell the probe to stop searching. There is nothing in that step that involves copying back features (the work of the interaction condition) or agreement morphemes (morphological insertion). The disjunctive satisfaction condition on the Infl probe in SJA

¹²In this example, both disjunctive and *conjunctive* satisfaction conditions are present on one probe; the latter is a tool that I introduce in Scott 2021b in accounting for mixed A/Ā phenomena in Ndengeleko (Bantu).

Mam captures this function of the satisfaction condition: when the probe encounters Transitive VoiceP, the search is ended.

This analysis of SJA Mam is inspired by Deal (2021), who uses the idea of disjunctive satisfaction to implement Keine's notion of probe "horizons," which are specifications on a probe that account for certain locality restrictions. Keine (2019, 2020) argues that probes can be specified to have a "horizon" which restricts them from probing into certain phrases, including the edges of such phrases: if a probe has a horizon X, it cannot search into XP. Keine uses the concept of horizons to account for configurations in which a given constituent is opaque for some operations but transparent for others. An example of this selective opacity is that finite clauses in English are opaque for A-movement (65-a) but transparent for \bar{A} -extraction, shown in (65-b) (Keine, 2019, 14).

- (65) a. *John₁/Who₁ seems [CP t₁ eats oatmeal for breakfast]?
 b. Who₁ do you think [CP t₁ eats oatmeal for breakfast]?

Concretely, Keine proposes that different probes are specified for different category features which terminate their search process. It is these specific category features blocking a probe's search that are considered the probe's horizon, defined in (66).

- (66) Horizons (Keine, 2019, 36)

If a category label X is a horizon for probe π (notated as " $\pi \dashv\vdash X$ "), then a π -initiated search terminates at a node of category X. All elements dominated by XP are therefore outside π 's search space.

As a result of (66), any element separated from a probe π specified with C as its horizon ($\pi \dashv\vdash C$) by a CP would be out of π 's domain because its search would be terminated before it could reach such an element. As Keine puts it, "Like horizons in the real world, anything beyond a probe's horizon is invisible to it" (Keine, 2019, pg. 36). The pattern of object agreement in SJA Mam suggests that arguments within transitive VoiceP are "invisible" to the probe, that transitive VoiceP is a horizon for Infl.¹³ Deal (2021) implements horizons as a part of a probe's disjunctive satisfaction conditions. If a ϕ probe has horizon X, its satisfaction condition reads: [SAT: ϕ or X].

Before moving on, let us entertain an alternative proposal in which the default object agreement in SJA Mam is not syntactic, but in fact due to a reduction of features in the morphology. Baier (2018), for example, argues that instances of antiagreement that were once thought to have purely syntactic explanations are instead due to morphological impoverishment. For SJA Mam, this would mean that the probe on Infl could see the transitive object, and could copy back its features, just like with intransitive subjects. At the time the syntactic derivation is sent to PF,

¹³My implementation of horizons technically violates a restriction from Keine 2019; 2020, though I believe it does not violate the spirit of his proposal. The restriction under discussion is that a probe on category Y cannot have a horizon of category X if X is lower on the extended projection than Y. This captures what Keine calls the Height-Locality connection. Without this restriction, probes could be *vacuous*, having a horizon so close that they would never encounter an argument. Vacuous probes are seen as something to avoid. However, because the horizon on Infl in SJA Mam is a certain *type* of VoiceP, it is only vacuous in transitive clauses, which indeed captures the pattern.

the full ϕ features from the object would be present on Infl. A reduction of features would occur at PF before vocabulary insertion, where the feature bundle would undergo impoverishment, deleting all of the ϕ features. The default Set B $tz=$ would then be inserted, spelling out the reduced feature bundle on Infl.

The main issue with this proposal is that it requires the morphology to be able to differentiate the features copied back to Infl as coming from intransitive subjects or transitive objects. Specifically, the rule on impoverishment would have to be parameterized to only transitive objects. The idea of parameterizing an impoverishment rule is not absurd, in fact, to account for the deletion of ϕ features on extracted elements, [Baier \(2018\)](#) relativizes the relevant impoverishment rule to the context of an \bar{A} feature. However, if the probe on Infl in SJA only copies back ϕ features, it is unclear how that feature bundle would differentiate intransitive subjects (which always show full agreement) from transitive objects (which show default agreement), a crucial distinction in the grammar.

3.4.3 Voice Licensing

Taken together, the theoretical assumptions about case licensing and the inability for Infl to reach transitive objects leaves us with one analysis for the object licenser in SJA Mam: Voice. Recall that [Coon et al. \(2014\)](#) split Mayan languages into two types based on the head that licenses transitive objects: high-abs (objects licensed by Infl) and low-abs (objects licensed by Voice). We saw in §3.4.2 that Infl does not reach objects in SJA Mam and therefore, I assume that objects are licensed by Voice. Providing evidence in support of this view, in this section I explore how the diagnostics in [Legate \(2008\)](#) and [Coon et al. \(2014\)](#) for distinguishing Voice from Infl licensing do and do not apply to SJA Mam, as well as offer new diagnostics within SJA Mam.

Recall that the main diagnostic for which head licenses objects is found in non-finite clauses which presumably lack the high-licensing option (finite Infl), allowing us to see whether the transitive object remains licensed in the same way. For languages that license objects with Voice, transitive objects should be unaffected by manipulations of the clause above Voice. Whereas for languages that license object with Infl, manipulations to this part of the clause will have a direct effect on objects.

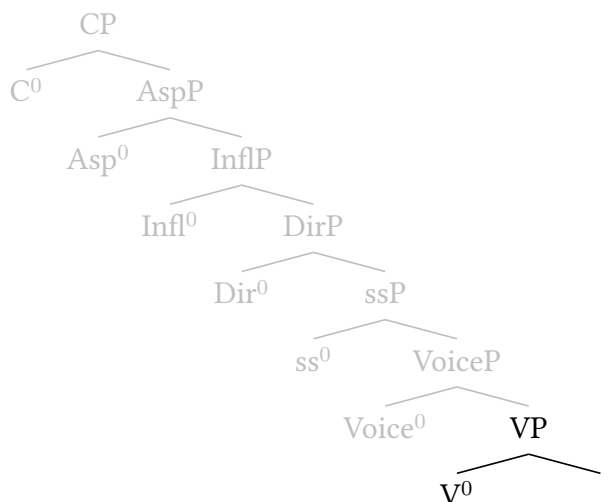
[Coon et al. \(2014\)](#) apply this diagnostic to Ixtahuacán Mam, based on the description of non-finite clauses in [England 2013b](#), concluding that objects are licensed by Infl. In applying these same diagnostics to SJA Mam, we must be careful to distinguish verbal morphology from argument licensing. In §3.3 we saw that Infl – the typical head that agrees with the object and shows us a morphological realization of licensing – does not actually agree with objects, thus it does not license them. As a consequence, we cannot look to the high Set B slot in the verb for evidence of a change in licensing mechanisms. High Set B morphology could come or go without disrupting the Voice licensing of transitive objects in SJA Mam. What we must look at are the objects themselves. We predict that in clauses that lack Infl, objects should not be absent nor demoted to oblique relational noun phrases; objects should appear the same as in finite clauses, which is indeed what we find.

The other delicate aspect of these diagnostics is the assumed structure of non-finite clauses. The crucial clause type for testing licensing includes Voice, which licenses the ergative subject and possibly licenses the object, but lacks Infl and thus unable to license objects high. Here I will discuss the types of non-finite clauses applied as diagnostics for Ixtahuacán Mam in [Coon et al. 2014](#). Examining these clause types, I argue for each one that they do not provide a sufficient testing ground for licensing in SJA Mam, and that a better testing ground for diagnosing object licensing is found in with certain transitive *matrix* verbs that disallow high Set B marking but nonetheless allow transitive objects. Evidence suggests that these clauses possess Voice but lack finite Infl, and since objects remain unaffected, this supports a Voice licensing account.

3.4.3.1 Fully non-finite clauses: no licenser

According to [England \(2013b\)](#), Mam clauses fall on a spectrum between fully finite and fully non-finite, with various aspectless clauses in between. Starting with fully non-finite clauses, these clauses never appear with any person marking: neither Set A nor Set B are allowed in these clauses. I conclude that these clauses lack the mechanism for ergative licensing, Voice, which could act as an object licenser and therefore these clauses are not an appropriate diagnostic. I assume that these clauses lack any verbal structure above VP, illustrated in (67).

(67) Nonfinite clauses



In fully non-finite clauses, objects are typically introduced with relational nouns, shown in (68). The relational noun *-e* in (68-a) introduces a 3SG pronominal argument, while the reciprocal relational noun *-ib'* in (68-b) introduces a 1PL inclusive argument. However, (69) shows the noun *si* 'fire wood' appearing after the verb without a relational noun or verbal agreement. [England \(2013b\)](#) analyses the construction in (69) as object incorporation, more specifically as an example of the antipassive of incorporation. I follow [England \(2013b\)](#) and work which assumes bare objects, such as those in (69), are licensed by being incorporated ([Baker, 1988](#)) or pseudo-incorporated ([Massam, 2001](#)) into the verb.

- (68) a. Ma chj=e'x xjal [laq'o-l (t-e)].
 PROX B2/3PL=go person [buy-NF A2/3SG-RN:PAT]
 'The people went to buy (it).'
- b. Taj x=Ø=pon Geovanni, n=qw=a'i yo-l,
 when DIST=B2/3SG=arrive.there Geovanni, IPFV=B1PL=start=DISAGR speak-NF
 n=qw=a'i [q'olb'e-l q=ib'i].
 IPFV=B1PL=start=DISAGR [greet-NF A1PL-RN:RR=DISAGR]
 'When Geovanni arrived, we started to talk and greet each other.'
- (69) Ma tz'=ex xjaal [tx'ema-l si].
 PROX B2/3SG=go person [cut-NF fire.wood]
 'The person went to cut wood.'

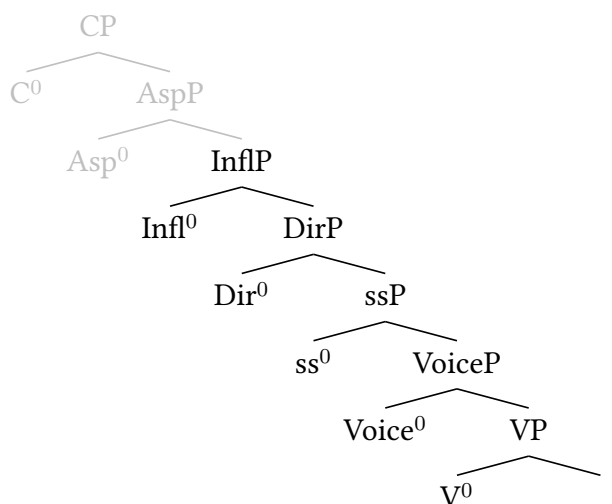
These clauses clearly lack Voice and Infl, and no arguments are licensed by agreement. In the absence of a licenser, objects are demoted to oblique phrases or incorporated in order to be licensed. We conclude that fully non-finite clauses are not a good testing ground for object licensers in Mam. Subjects are not allowed to appear within the non-finite clause and no person markers (Set A or B) ever appear in these clauses, suggesting these clauses lack both Infl and Voice.¹⁴

3.4.3.2 Finite aspectless clauses

Within the realm of less-than-finite clauses in Mam, there are several different types of aspectless clauses (England, 2013b). Interestingly, there are aspectless clauses that otherwise display many of the characteristics of fully finite clauses, including high-abs Set B morphology, yet systematically lack aspectual morphemes. I simply take these clauses as evidence supporting the separation between Asp and Infl in Mam, each head being independently responsible for aspectual morphemes and agreement/licensing, respectively. Specifically, I assume these clauses are InflPs, as they they can have directionals and high set B morphemes, but not aspect, which is above Infl.

¹⁴Aspectless clauses with antipassive characteristics (no subjects, incorporated objects) are also used as a diagnostic in Coon et al. 2014 for Infl-licensed objects in various high-abs languages (Q'eqchi, Kaq'chikel). Though there is a correlation between this embedded non-finite clause type and high-abs morphology, the best evidence would be found in clauses that lack Infl but clearly do have Voice in order to show that Voice is an insufficient licenser for objects. These clauses seem to lack both and therefore I propose are not a good diagnostics for object licensing.

(70) Finite aspectless clauses



These clauses appear as complements of *aj* ‘want’, shown for Ixtahuacán Mam in (71), and for SJA Mam in (72). Notice that the pattern in SJA Mam is exactly that found in matrix clauses: the high Set B slot marks intransitive subject agreement and optionally marks object agreement.

(71) Ixtahuacán Mam

- a. \emptyset -w-ajb’el=a [chin aq’naa-n=a].
 B3SG-A1SG-want=1SG B1SG work-AP=1SG
 ‘I want to work.’

(England, 1983b, 302)

(72) SJA Mam

- a. W-aj=i [chn=aq’n-an=i].
 A1SG-want-AP=DISAGR B1SG=work=DISAGR
 ‘I want to work.’
- b. W-aj=i [tz’=ok t-ke’y-an Mintz qin=i].
 A1SG-want=DISAGR B2/3SG=DIR:in A2/3SG-see-DS Mintz 1SG=DISAGR
 ‘I want Mintz to see me.’
- c. W-aj=i [chn=ok t-ke’y-an Mintz].
 A1SG-want=DISAGR B1SG=DIR:in A2/3SG-see-DS Mintz
 ‘I want Mintz to see me.’

These clauses tell us little about the source of object licensing because even intransitive subjects (always assumed to be licensed by Infl) are expressed normally with Set B markers. This suggests that these clause do contain InflP and thus do not provide an environment to see whether objects persevere in Infl-less contexts.

3.4.3.3 Aspectless clauses with super-extended ergative

One typical characteristic of aspectless clauses in Mayan is that ergative marking (Set A) is extended to intransitive subjects. Coon et al. (2014) argue that this is because these clauses lack finite Infl – the licenser for intransitive subjects – and thus intransitive subjects must be licensed some other way. Both high- and low-abs Mayan languages show this pattern, because intransitive subjects across both types of languages are licensed by Infl.¹⁵

The important property of extended ergative clauses is that the features of the intransitive subject argument must be realized differently because the typical licenser is unavailable.¹⁶ This pattern of extended ergativity is found in SJA Mam: ‘when’ clauses in SJA Mam require the use of ergative marking for intransitive subjects, shown in (73).

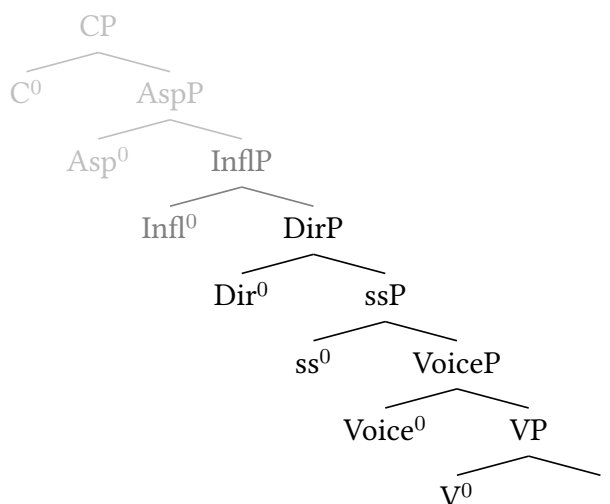
- (73) SJA Mam Extended ergative
 Taj w-ul=i...
 when A1SG-arrive=DISAGR
 ‘When I arrived...’

Coon et al. (2014, 201) argue that the extended ergative facts in Mam support the idea that these clauses lack Infl, and thus are a good testing ground for the licensing of objects. However, (Coon et al., 2014) do not discuss transitive extended ergative clauses in Mam, which show a unique pattern within Mayan languages. I argue that transitive extended ergative clauses in SJA Mam may lack finite Infl, and since objects are licensed, this is consistent with the analysis that objects are licensed low in SJA Mam. Though, these clauses may instead involve a distinct non-finite flavor of Infl, and thus would not be a good testing ground for the licensing of transitive objects.

¹⁵Coon (2013) provides a theory of this pattern of split ergativity, arguing that what seem to be formally intransitive subjects marked with Set A are actually possessors of nominalized verbs, thus receiving expected Set A marking. I refer the reader to Coon 2010 and Coon 2013 for a fuller theory of split ergativity with special attention to Mayan. I do not adopt nor argue against the nominalization analysis of extended ergative in Mam.

¹⁶To account for this, either Infl is not present or a different Infl is present. If Infl is not projected in these clauses, one way to explain the extended ergative pattern is by saying that C assigns the default Set A case to caseless arguments, as proposed by Imanishi (2014).

(74) Extended ergative clauses



We saw in §3.2.3 that the high-abs language Q’anjob’al requires the addition of the AF suffix to license objects in these clauses, whereas the low-abs language Ch’ol requires no changes. Other high-abs languages deal with the lack of Infl by requiring transitive verbs be passivized or antipassivized (Kaqchikel; Imanishi 2014). Mam is unique in that it employs a ‘super-extended ergative’ pattern (England, 2017), a pattern in which objects of transitive verbs also get marked ergative—resulting in both arguments receiving ergative agreement on the verb. This pattern is shown below for Ixtahuacán Mam, for verbs with and without directionals. Notice in (75-b) that the Set A marker *n-* shows full agreement with the first person singular object.

(75) Ixtahuacán Mam

- a. Ok qo tzaalaj-al [ok t-q-il u’j].
 POT B1PL be.content-POT when A3SG-A1PL-see book ...
 ‘We will be happy when we see the book.’ (England, 1989, 292)
- b. O chin ooq’=a [aj n-kub’ t-tzeeq’a-n=a].
 PFV B1SG cry=1SG [when A1SG-DIR A2SG-hit-DS=2SG/1SG]
 ‘I cried when you hit me’. (England, 1983a, 14)

We can understand these examples in Ixtahuacán Mam by starting with the fact that, in matrix clauses, objects are typically licensed by Infl, as shown by the fact that objects trigger full Set B agreement. In the super-extended ergative clauses shown in (75), the typical licenser, finite Infl, is not present, and objects are licensed in some other way, triggering full Set A agreement instead. In other words, the important take away from this pattern is that the way the features of transitive objects are realized is crucially different in super-extended ergative clauses, suggesting that the typical object licenser is missing.

Before turning to the clauses in SJA Mam, it is important to recall object marking in matrix clauses in SJA Mam. We saw in §3.3.2 that transitive objects typically do not control agreement on verbs, instead the default Set B marker is used regardless of the features of the object. I analyzed

this in §3.4.2 as the inability for matrix Infl to reach and license transitive objects. Therefore, I assume that in matrix clauses, since the expected Set B verbal marking does not agree with objects, there is no licensing by Infl. Instead, objects are invisibly licensed by Voice. Likewise in extended ergative clauses, if the expected Set A verbal marking does not agree with objects, I assume there is no licensing by Infl, and instead objects are licensed invisibly by Voice. This is exactly the pattern we find in SJA Mam.

To start, the pattern in SJA Mam similarly utilizes Set A morphemes for objects, exemplifying the super-extended ergative pattern, shown in (76).¹⁷

(76) SJA Mam super-extended ergativity

- a. ... taj t-w-il=i a=y ...
 ... when A2/3SG-A1SG-see DET=DISAGR ...
 ‘... when I saw you.’
- b. ... taj t-tzaj q-laq’o-n=i pan.
 ... when A2/3SG-DIR:come A1PL-hit-DS=DISAGR bread
 ‘... when we cut the bread.’

However, this Set A slot for objects cannot fully agree with transitive objects, shown in (77-b); only the default Set A morpheme (2/3SG *t-*) can appear on the verb, shown in (77-a). Objects themselves must be pronounced as full pronouns in object position, the pattern also found in matrix clauses.

(77) SJA Mam Only default Set A allowed

- a. Taj t-ok t-ke’y-an=i qin=i ...
 when A2/3SG-DIR:in A2/3SG-see-DS=DISAGR 1SG=DISAGR ...
 ‘When you saw me...’
- b. *Taj w-ok t-ke’y-an=i ...
 when A1SG-DIR:in A2/3SG-see-DS=DISAGR ...
 intended: ‘When you saw me ...’

The important take away from the SJA Mam pattern is that the way the features of transitive objects are realized– via independent pronouns in object position– is crucially the same in both matrix clauses and super-extended ergative clauses. This suggests that the object licenser is present in both types of clauses. The only difference is the type of default morpheme on the verb: Set B in matrix clauses vs. Set A in super-extended ergative clauses. What accounts for this difference is tangential to the realization of transitive objects in SJA Mam.

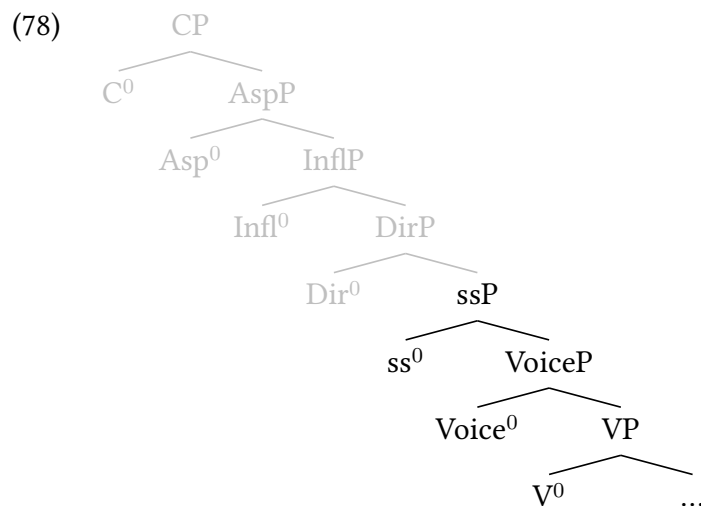
Notice that super-extended ergative clauses differ from matrix clauses in the optionality of verbal inflection for transitive objects in an important way. In matrix clauses, we see optionality between agreeing and default Set B for objects; in super-extended ergative clauses, that optionality is gone and only the default Set A marker is used. Thus emerges two grammars in matrix

¹⁷For discussion of other clause types that require super-extended ergativity, see Chapter 2 §2.6.3.

clauses: one in which the probe reaches the object and agrees with it (the probe is satisfied by ϕ) and one in which the probe comes with a horizon blocking it from accessing the object (the probe is satisfied by ϕ or transitive VoiceP). In super-extended ergative clauses, however, the default object Set A marker is obligatory, indicating that the only accessible grammar is one in which the horizon is present on the probe. Thus, the probe on Infl in super-extended ergative clauses never has the option of agreeing with the object, seen in the ungrammaticality of the Set A marker agreeing with the object in (77-b). I turn now to a last argument from matrix clauses in support of Voice licensing of SJA Mam objects.

3.4.3.4 Matrix clauses without Infl: never-abs verbs

In this section, I propose a new diagnostic for object licensing. Instead of looking at embedded clauses, I examine a type of matrix clause in Mam which consistently lacks not only aspectual marking, but also obligatorily lacks Set B morphemes and directionals. This systematic omission of these morphemes points to the absence of AspP, InflP, and DirP in these clauses. Verbs of this clause type license ergative subjects, pointing to the presence of VoiceP, and I assume ssP, illustrated in (78).



These clauses being formally transitive and allowing pronominal objects to surface in object position strongly suggest that objects are not licensed by Infl, but instead are licensed by Voice. This type of clause is found with the verbs in (79).

(79) SJA never-abs verbs

<i>tzqin</i>	know
<i>aj</i>	want
<i>ky'i</i>	not want
<i>ach</i>	like

Before examining the behavior of the verbs in (79), recall that in matrix clauses, the agreeing Set B option is available for objects in addition to the default Set B option, shown again in (80). In §3.4.2 I analyzed this optionality as two grammars that differ only in the satisfaction condition of the probe on Infl. In other words, the probe on Infl should have the *option* to reach the object if Infl itself is present in the structure.

- (80) a. Ma t-il=i **qin=i.**
 PROX A2/3SG-see=DISAGR 1SG=DISAGR
 ‘You saw me.’
- b. Ma **chin** t-il=i.
 PROX B1SG A2/3SG-see=DISAGR
 ‘You saw me.’

Turning now to the verbs in (79), like other transitive verbs in SJA Mam, the typical way to express pronominal objects of these never-abs verbs is through the use of full pronouns in object position, shown in (81-a) and (82-a). However, the verbs in this class are unique because the agreeing high-abs Set B option is strikingly unavailable for never-abs verbs, shown in (81-b) and (82-b).

- (81) a. T-tzqin Mintz **qin=i.**
 A2/3SG-know Mintz 1SG=DISAGR
 ‘Mintz knows me.’
- b. ***Chin** t-tzqin Mintz.
 B1SG A2/3SG-know Mintz
 intended: ‘Mintz knows me.’
- (82) a. N-ky’i=y **qa.**
 A1SG-know=DISAGR PL
 ‘I don’t want them.’
- b. ***Chi** n-ky’i=y.
 B2/3PL A1SG-know=DISAGR
 intended: ‘I don’t want them.’

Whereas Carrillo Godínez reports that the agreeing high-abs Set B option possibly reflects a higher register and is used 40% of the time, she says that she would use the high-abs version of never-abs verbs, like that in (81-b), “zero point one percent of the time.” She says that this sentence sounds very poetic, like something that would be said in a ceremony by an elder, and that it is not used by people normally, even in higher registers. This indicates that whatever allows high-abs in matrix clauses is not present in never-abs clauses.

I argue in §3.4.2 that the locus of variation between agreeing and default Set B marking in matrix clauses is the satisfaction condition of the probe on Infl (ϕ and [ϕ or Voice_{TR}], respectively). To account for the complete inability to derive high Set B morphemes in never-ABS verbs, I propose

that these clauses truly lack Infl altogether, and in fact are quite small in size, only constituting ssPs. This also explains the fact that no-ABS verbs lack directionals or aspectual marking.

Further pointing to their small clauses size, never-ABS verbs cannot be embedded in aspectless finite complement clauses described in §3.4.3.2, shown in (83-a) with the verb *aj* ‘want’ attempting to embed a *tzqin* ‘know’ clause. In order to express the meaning intended in (83-a), a different construction is used with the verb *ke’yl* ‘see/meet’, shown in (83-b). This fact makes sense if the matrix verb *aj* ‘want’ requires at least an InflP complement (similar to the generalization that complements of ‘want’-type verbs in Romance can be TPs/ModPs (Wurmbrand, 2001)). In SJA Mam, *tzqin* clauses are not InflPs so they cannot occur as complements of *aj* ‘want.’

- (83) a. *W-aj=i n-tzqin=i Rebeca.
 A1SG-want=DISAGR A1SG-know=DISAGR Rebeca
 Intended meaning: ‘I want to know Rebeca.’
- b. W-aj=i tz’=ok n-ke’y-n=i Rebeca.
 A1SG-want=DISAGR B2/3SG=DIR:in A1SG-see-DS=DISAGR Rebeca
 ‘I want to meet (lit. see) Rebeca.’

No-ABS verbs likewise cannot be embedded in aspectless clauses with super-extended ergativity, described in §3.4.3.3, shown in (84-a). Again, in order to express the meaning intended in (84-a), a different construction is used with the verb *ke’yl* ‘see/meet’, shown in (84-b).

- (84) a. *Taj t-n-tzqin=i Rebeca, ajxnaq’tzal Rebeca.
 when A2/3SG-A1SG-know=DISAGR Rebeca teacher Rebeca
 Intended meaning: ‘When I knew Rebeca, she was a teacher.’
- b. Taj t=ok n-ke’y-n=i Rebeca, ajxnaq’tzal Rebeca.
 when textscb2/3sg=dir:in A1SG-see-DS=DISAGR Rebeca teacher Rebeca
 ‘When I knew (lit. saw) Rebeca, she was a teacher.’

Though the four never-abs verbs in (79) share the semantic domain of being psych verbs, other psych predicates do allow aspect, directionals and Set B. Take for example the semantically stative verb *tzalj* ‘to be happy/excited’. This verb references the subject with Set B morphemes, can appear with or without a directional, and takes a number of aspectual morphemes. This shows us that it is not necessarily the semantics of the verbs in (79) which is causing the syntactic restriction.

- (85) a. N=chin tzalj=i.
 IPFV=B1SG happy=DISAGR
 ‘I am happy.’
- b. Ma chin jaw tzalj=i.
 PROX B1SG DIR:up happy=DISAGR
 ‘I was excited (today).’

- c. O chin jaw tzalj=i.
 PFV B1SG DIR:up happy=DISAGR
 ‘I was excited (before today).’

In summary, while typical finite matrix clauses have a probe on Infl which fails to reach the transitive object, I analyze NO-ABS clauses as lacking Infl altogether. Recall that one way to tell the difference between these two analyses in Mam is the overt prevocalic allomorph of the default Set B marker. However, since these clauses never take directionals, Set B markers could (if present) only ever appear before Set A markers, all of which are consonants (*n-*, *w-*, *t-*, *q-*, *ky-*). The result is that the choice between a null default Set B marker and *no* Set B marker in these examples cannot be directly tested. However, the fact that overt Set B markers are never available suggests that these clauses simply lack the structure which is responsible for Set B agreement altogether.

Important to no-ABS clauses is that they are fully transitive and allow objects to surface in their usual way, without being demoted to a relational noun phrase, shown in (86).

- (86) a. T-tzqin Mintz qin=i.
 A2/3SG-know Mintz 1SG=DISAGR
 ‘Mintz knows me.’
- b. *T-tzqin Mintz w-i=y.
 A2/3SG-know Mintz A1SG-RN:PAT=DISAGR
 Intended meaning: ‘Mintz knows me.’

This provides the strongest evidence that objects are licensed by Voice, or at least not by Infl. If we relax the assumption that all arguments must be licensed via Agree for the clause to be well-formed, a possible alternative analysis of the default and no-ABS clauses in SJA is that the objects are simply not licensed. Either way, SJA Mam no-ABS verbs do not have the structure for a high-licensor such as Infl, evidenced by the ungrammaticality of high-abs marking.

3.5 Consequences for the high-/low- abs distinction

SJA Mam is a language that shows characteristics of both high- and low-abs Mayan languages, requiring an updated discussion of the two types of languages. First, since Coon et al. 2014, the terms ‘high-abs’ and ‘low-abs’ have come to mean two things at once. On the one hand, these labels refer to the linear placement of Set B morphemes within the verb stem. In this sense, SJA Mam is a high-abs language. Based on the conclusions in Coon et al. 2014, these labels also refer to the way that objects are licensed, with ‘high-abs’ meaning Infl-licensed objects and ‘low-abs’ meaning Voice licensed objects. In this sense, SJA Mam is a low-abs language. For the majority of Mayan languages, these two senses of the terms are aligned, but for SJA Mam they are not.

Table 3.6: SJA Mam and the high-/low-abs distinction in Mayan

	Infl Obj	Voice Obj
morphologically high Set B	Q'anjob'al	SJA Mam
morphologically low Set B		Ch'ol

Given the novelty of the default Set B pattern compared to the existing literature, and given the availability of the agreeing Set B pattern in SJA Mam, I assume that the default pattern is an innovation in SJA Mam. While the licensing of SJA Mam arguments has transformed to take on a low-abs profile in the syntax, the morphology of SJA Mam is still of the historical high-abs profile. This syntax-morphology mismatch is in some respects unsurprising given the assumed relative independence of these two modules of grammar. While the morphology takes the syntax as its input, it does not need to match it completely. This helps us make sense of why the Agree relationship responsible for licensing transitive objects in SJA Mam does not result in a low Set B morpheme. For example, other low-abs Mayan languages indicate objects with Set B markers on the verb; these morphemes are the spell out of the features copied back via the Agree relationship between Voice and the object which licenses objects. If the Voice-object Agree relationship resulted in an agreement morpheme in SJA Mam, we would expect the construction in (87) in which the high Set B slot is completely empty and a Set B morpheme referencing the object appears at the end of the verb. This is ungrammatical in SJA Mam.

- (87) SJA Mam
 *Ma ok t-ke'y-an=**chin** Mintz.
 PROX DIR:in A2/3SG-see-DS=**B1SG** Mintz
 intended: 'Mintz saw me.'

Even if we assume that the object licensing probe on Voice copies back the features of the object in SJA Mam, the morphology of SJA Mam does not need to insert vocabulary at that node, and thus from the perspective of our assumptions about the independence of the morphology and syntax, the seeming mismatch between SJA Mam's low-abs syntax and high-abs morphology is not so strange.

The high-/low-abs mismatch in SJA Mam is also not surprising if we take a closer look at intransitive subjects in Ch'ol and embedded objects in Q'anjob'al. Recall that for [Coon et al. \(2014\)](#), the correlation between morpheme order and licensing is actually between the *general* placement of Set B in a language and the licensor of transitive objects. This means that the licensor of objects dictates the Set B placement for both objects *and* intransitive subjects, which are always licensed by Infl. To illustrate, take the realization of intransitive subjects in low-abs Ch'ol. We know that Ch'ol is morphologically low-abs given the placement of the Set B marker. We know that Ch'ol has low-abs licensing given the behavior of transitive objects in non-finite clauses, discussed in §3.2.3. However, [Coon et al. \(2014\)](#) analyze all intransitive subjects in Mayan as being licensed by Infl. Thus notice the 'mismatch' in (88): the intransitive subject is licensed (high) by Infl, yet the morpheme appears low.

- (88) Ch'ol
 Tyi uk'-i-yety.
 ASP cry-ITV-2ABS
 'You cried.' (Coon et al., 2014, 190)

The flip side of the licensing/morphology mismatch is found for embedded objects in Q'anjob'al. Recall that Coon et al. (2021) analyze the use of the agent focus morpheme in (89) as a flavor of Voice which licenses objects low. Yet, Q'anjob'al is a morphologically-high-abs language, and thus, even though the object licenser is Voice in embedded clauses, Set B morphemes always appear high.

- (89) Q'anjob'al
 Chi uj [hin y-il-on-i ix Malin].
 ASP be.able.to 1ABS 3ERG-see-AF-ITV CLF Maria
 'Maria can see me.' (Coon et al., 2014, 196)

These cases highlight the fact that for a given argument in a given language, there is not an exceptionless relationship between the head that licenses it and where the morpheme surfaces on the verb, illustrated in Table 3.7.

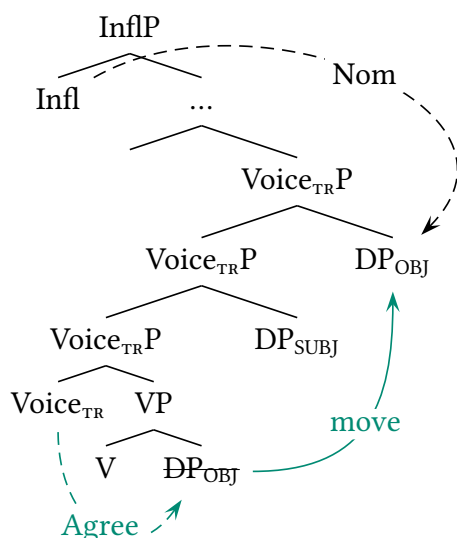
Table 3.7: Morphological vs. Syntactic high- and low- abs in Mayan

	Infl licensing	Voice licensing
high Set B	Q'anjob'al matrix obj	Q'anjob'al embedded obj
low Set B	Ch'ol intransitive subj	Ch'ol transitive obj

A last note on object movement: here I used the presence of the ergative extraction constraint in SJA Mam suggest that objects undergo movement above subjects. In line with current understandings of syntactic movement, object shift in Mayan should be derived via an Agree operation that targets the object and results in the movement. Indeed, Coon et al. (2021) assume that object shift in high-abs languages is achieved through a probe on Voice (v in their work) that creates and abstract Agree relationship with objects in order to move them to Spec,VoiceP. In these typical high-abs languages, the Agree relationship results only in movement, not ϕ agreement

Therefore, according to Coon et al. (2021), Voice always Agrees with objects across all Mayan languages. In low-abs Mayan languages, Voice-Agree licenses the object and results in Set B agreement. In high-abs Mayan languages, Voice-Agree does not license the object or create Set B agreement; instead, Voice Agree only triggers movement of the object above the subject, illustrated in (90). In typical high-abs languages, a subsequent Agree operation from a probe on Infl licenses the object (assigning it nominative case) and results in Set B agreement.

- (90) High-abs Mayan languages: object agreement by Voice triggers movement (Coon et al., 2021)



Therefore we can think of the Agree relationship between Voice and the object in typical high- and low-abs languages as differing in their outcomes of Agree, summarized in Table 3.8. In high-abs languages, Voice does not create ϕ agreement with the object, but it does Agree with the object, prompting its movement. Subsequently, Infl Agrees with the object, resulting in ϕ agreement. In low-abs languages, Voice does create ϕ agreement with the object, Voice does not trigger movement, and there is no subsequent Infl ϕ agreement. In SJA Mam, the only outcome of Agree that we see for objects is movement, derived by Voice-Agree. Neither the probe on Voice nor the probe on Infl creates ϕ agreement. My analysis is that Voice happens to not result in any ϕ agreement, where as the probe on Infl failed to reach the object and thus cannot result in morphemes that agree with the object.

Table 3.8: Outcomes of Agree across Mayan

	Voice: ϕ -agreement	Voice: movement	Infl: ϕ -agreement
high-abs objects	✗	✓	✓
low-abs objects	✓	✗	✗
SJA Mam objects	✗	✓	✗

Recall from §3.4.1 the no-abs pattern described for Heritage Mam by Myers et al. (2023): in this grammar, neither Voice nor Infl Agree with transitive objects, and evidence suggests that objects remain low. Thus, Heritage Mam, if added to Table 3.8, would receive an ✗ for each column, as there are no outcomes of Agree for objects because there is no agreement or movement of objects.

The SJA Mam data confirm a prediction discussed in Coon et al. (2021) regarding the EEC. Namely, that a language which licenses objects low could, in principle, also show EEC effects. Specifically, in a language where Infl is responsible for absolutive agreement, objects are expected

to raise above subjects. However, [Coon et al. \(2021\)](#) note that nothing rules out movement of Voice-licensed objects nonetheless above the subject, which is indeed what we find in SJA Mam. A body of literature on the source of syntactic ergativity outside of Mayan also comes to this conclusion. For example, [Legate \(2012\)](#) proposes for Dyirbal that absolutive has a low source but that the language nonetheless shows effects of an EEC. Additionally, [Aldridge \(2004\)](#) in analyzing variation in Austronesian ergativity, proposes that object inversion can be non-case driven.

3.6 Chapter summary

In summary, in this chapter I presented a pattern of object realization in SJA Mam which diverges from not only other Mayan languages, but other varieties of Mam in the literature. The expected pattern for marking transitive objects in Mam is through a fully agreeing set of absolutive (Set B) morphemes in a high position in the verbal domain. Although this way of expressing objects is grammatical in most transitive clauses, a more robust way of marking the object's features is through the use of full pronouns in object position. In the typical Set B position in the verbal complex, the default (2/3sg) Set B morpheme is used, regardless of features of the object. This pattern is surprising because it is unavailable for intransitive subjects, which are expected to pattern with objects.

I argue that this pattern cannot be explained by transitive objects remaining in-situ and thus being outside of the domain of the Infl probe. On the contrary, I showed that transitive objects undergo movement above transitive subjects and are thus well within the domain of Infl. Evidence for this movement can be seen by the general inability to extract ergative subjects in the language. Following literature on the nature of extraction asymmetries cross-linguistically as well as specific work on Mayan, I conclude that ergative arguments cannot extract due to inversion of the object above the subject.

With the height of objects established, I argue that the default Set B morphemes reflect the failure of the ϕ probe on Infl to reach the transitive object, not due to locality but due to a restriction on the probe from accessing transitive VoiceP. Following [Deal's 2021](#) implementation of [Keine's 2019,2020](#) concept of "horizons" in the interaction/satisfaction theory of Agree, I formalized this restriction with a disjunctive satisfaction condition on the probe on Infl. The ϕ probe on Infl stops its search when it reaches ϕ or transitive VoiceP. The result is that this probe is vacuous in all transitive clauses, resulting in default Set B morphology across the board, whereas this probe results in a fully agreeing Set B paradigm in intransitive clauses.

Lastly, I argue that objects in SJA Mam are licensed low, via Voice. To support this analysis, I discussed the typical diagnostics for Voice licensing given in [Legate \(2008\)](#) and [Coon et al. \(2014\)](#), concluding that many of the typical diagnostics fail to provide good testing ground in Mam. In lieu of these, I present a type of *matrix* 'never-abs' transitive clause that consistently lacks the option of expressing objects with Set B morphemes on the verb, suggesting that those clauses truly lack Infl. Despite lacking Infl, these clauses retain transitive VoiceP to license objects. The analysis for SJA Mam adds to the literature on Mayan case and agreement from a syntactic and morphological perspective, by showing that a morphologically *high-abs* Mayan language cannot

only have three distinct syntactic cases– like low-abs languages– but realize each one distinctly as well, resulting in a syntactically and morphologically tripartite system.

Chapter 4

The effect of Agree on the spell-out of pronouns

4.1 Introduction

In Chapter 3, I showed that the dominant pattern of object marking in SJA Mam reflects a syntactically tripartite alignment system, with intransitive subjects, transitive subjects, and transitive objects receiving Case from distinct heads. This same tripartite pattern is realized in the morphology: intransitive subjects are marked with Set B agreement, transitive subjects with Set A, and transitive objects with independent pronouns. In this chapter, I show that the fact that subjects trigger agreement morphology and objects do not has effects on the spell out of the pronouns themselves, concluding that when pronouns trigger Set A and Set B agreement, they are not dropped completely: first person pronouns are morphologically reduced, while second and third person pronouns are fully realized.

Evidence for this analysis comes from a series of ϕ morphemes in SJA Mam that appear in addition to verbal agreement. These extra morphemes require special analytical attention, as the literature on person inflection in Mayan languages focuses on Set A (ergative and possessive) and Set B (absolutive) inflection. This is because in most Mayan languages, Set A and B inflectional paradigms constitute the only realization of an pronoun's features in the clause, though there are some notable exceptions.¹ This is illustrated for Q'anjob'al in (1). The transitive subject is indexed on the verb with the Set A marker *ha-* and the object is indexed on the verb with the Set B marker *-in*.

¹Some Mayan languages, e.g. Tzotzil, Ch'ol, and Kaqchikel, display verb agreement paradigms that exist in addition to Set A and Set B, though they pattern distinctly from the pattern discussed for SJA Mam in this chapter. See §4.4.4.2 for a discussion of these examples.

- (1) Q'anjob'al
 X-in ha-mitx'-a'.
 ASP-B1SG A2SG-catch- TV
 'You caught me.'

(Mateo-Toledo 2008, 49)

SJA Mam is exceptional to this generalization in that it utilizes a series of pronouns for subjects and possessors in addition to Set A and B inflection. This is shown in (2) in which the second person plural subject is indicated by two morphemes: the 2/3PL Set B morpheme *chi* and the 2PL pronoun *qi*.

- (2) Ma chi b'et qi.
 PROX B2/3PL walk 2PL
 'You all walked.'

In this chapter, I present arguments in favor of analyzing Set A and Set B morphemes as agreement (derived via Agree probes copying back features of pronominal arguments) while the additional ϕ morphemes are the pronominal arguments.

These subject/possessor pronouns that double agreement markers show an interesting morphological pattern: second and third person pronouns appear in the same form as independent pronouns, while first person pronouns are reduced forms, both phonologically and featurally.² Table 4.1 shows the independent pronoun paradigm on the right and the subject/possessor pronoun paradigm on the left. Highlighted in yellow are the reduced first person pronouns.

²Throughout this work, and specifically in Table 4.1, I use the term “independent” to refer to the series of pronouns used for nonverbal predicate subjects, illustrated below (with modified glosses for illustrative purposes).

- (i) a. Ajxnaq'tzal qini.
 teacher 1SG
 'I am a teacher.'
- b. Ajxnaq'tzal=i.
 teacher=2SG
 'You are a teacher.'

Notice that the second person singular “independent” pronoun is the enclitic =*i*, which is in fact phonologically *dependent*. The term “independent” is thus better understood as “un-reduced” or “the most morpho-syntactically rich” pronominal paradigm. The second person singular =*i* has restrictions on what it can lean on, causing it to have a slightly augmented form in certain syntactic contexts, a pattern which I discuss in §4.4.1.

Table 4.1: Subj/Poss vs. Independent pronouns

Subj/Poss pronouns			Independent pronouns		
	SG	PL		SG	PL
1 EXCL	=i	=i	1 EXCL	qini	qoy
1 INCL	∅	∅	1 INCL	∅	qo
2	=i	qi	2	=i	qi
3	∅	qa	3	∅	qa

Given that Mam is overall an ergative language, and that verbal agreement in SJA Mam alternates between ergative and tripartite alignment,³ it is surprising that the reduced first person pronouns show a nominative alignment: intransitive and transitive subjects are both realized as reduced pronouns whereas transitive objects are realized as full pronouns. (3) illustrates this for first person singular: in (3-a), the reduced subject pronoun =i co-occurs with the Set B inflection indicating first person singular subject of an intransitive verb; in (3-b), the same reduced pronoun co-occurs with Set A inflection indicating the subject of a transitive verb; lastly, in (3-c), the full independent 1SG pronoun *qini* is used for a transitive object.

(3) Nominative alignment of reduced pronouns

a. Ma **chin** b'et (=i).

PROX B1SG walk =DISAGR
'I walked.'

intransitive subject

b. Ma ∅ kub' n-tz'ib'-n (=i).

PROX B2/3SG DIR:down A1SG-write-DS =DISAGR
'I wrote it down.'

transitive subject

c. Ma tz'=ok ky-ke'y-an qa (qini).

PROX B2/3SG=DIR:in A2/3PL-see-DS PL 1SG
'They saw me.'

transitive object

In addition to marking subjects, reduced pronouns are used for possessors, shown in (4). I gloss the =i enclitic pronoun as DISAGR reflecting the analysis discussed in §4.3 that it is used only when the person features of the pronoun have disagreeing values, following Noyer (1992).

(4) Possessor reduced pronoun

n-wiḫ (=i).

A1SG-cat =DISAGR
'my cat'

In this chapter, I provide a syntactic and morphological analysis of the double marking of subjects and possessors illustrated above. I additionally provide an analysis for the derivation of the reduced first person pronouns.

³See Chapter 3 for an analysis of the tripartite Case licensing system of SJA Mam.

Starting with their syntactic status, in §4.2, I provide evidence that the Set A and B morphemes are distinct from the subject possessor pronouns. While Set A and Set B are true agreement morphemes, which realize features copied from DP arguments, the subject and possessor pronouns *are* the DP that those features were copied from.

Thus, the subject/possessor pronouns (3) and (4) are themselves pronominal arguments in subject/possessor position, *contra* the analysis in Scott 2020b in which these ϕ forms are argued to be an additional set of agreement morphemes. These two competing analyses (agreement vs pronoun) arise given that the forms are phonologically reduced and sometimes dependent (like agreement affixes) and also express ϕ features (like pronouns). I conclude that it is not an accident that reduced subject/possessor pronouns occupy the same surface position as subject/possessor lexical arguments, a generalization illustrated in (5).

- (5) a. Ma \emptyset b'et Rebeca.
 PROX B2/3SG walk Rebeca
 'Rebeca walked.'
- b. Ma chin b'et =i.
 PROX B1SG walk =DISAGR
 'I walked.'

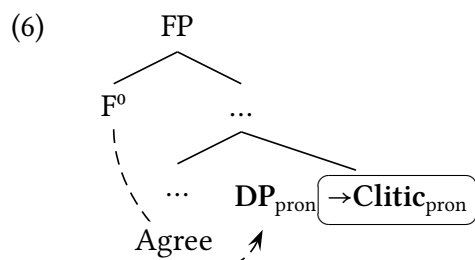
Evidence that subject/possessor pronouns occupy argument positions comes from constructions which dislocate subjects and possessors from the verb/noun, namely, reflexives, focus movement, possessor movement, and second position clitic placement. For each of these constructions, I show that the behavior of the subject/possessor pronouns is the same as that of lexical subjects/possessors, supporting their syntactic status as arguments and not agreement morphemes.

Having established that subject/possessor pronouns are not derived via agreement but are themselves pronominal arguments in §4.2, I then provide a Distributed Morphology (DM; Halle and Marantz 1993) featural analysis of Set A and Set B agreement, full pronouns, and reduced first person pronouns in §4.3, focusing on the =*i* reduced pronoun used for first and second singular, first exclusive and second plural. This morpheme has cognates in many Mam varieties and has received many analyses by scholars of Mam and theoretical morphologists. In §4.3.3, I summarize the literature on this morpheme across Mam varieties, which has been argued to realize *disagreeing* person features: both [+author, -participant] and [-author, +participant], originally argued for by Noyer (1992). This analysis of =*i* supports theories of bivalent person features– and the idea that disagreeing features can form a natural class– as it requires reference to both the positive and negative values of features. Then, in §4.4, I provide an analysis of the nature of the reduction of full pronouns to reduced subject/possessor pronouns. Namely, I account for why this reduction only applies to first person pronouns.

To account for the reduction of first person pronouns (shown in Table 4.1), I propose that first person pronouns in subject/possessor position are reduced via an impoverishment rule that only targets first person arguments. To account for the nominative (and possessors) distribution of the reduced pronouns, I propose that the impoverishment rule is contextualized to only apply to arguments which have been agreed with– correctly not applying to objects, which do not typically

trigger agreement on the verb, shown in Chapter 3. I formalize the “agreed with” condition on the impoverishment rule with a diacritic, F, which is present on features which have been copied to a probe via Agree. First person pronouns with the diacritic F trigger the impoverishment rule, resulting in their realization as reduced pronouns.

The conclusions drawn here for SJA Mam are in line with a body work that has shown that the Agree operation has the ability to not only affect the nature of the probe, but also the goal. More specifically with respect to pronouns, there are a number of analyses that conclude that the syntactic and phonological status of pronouns can be affected by being Agreed with by a functional head (Cardinaletti and Starke, 1999; Nevins, 2011; Kramer, 2014; Stegovec, 2020; Yuan, 2023). Yuan (2023) summarizes this literature in her work on pronominal clitics in San Juan Piñas Mixtec (Tò’ōn Ndā’ví): she assumes that a morphosyntactic clitic is a special form of a pronoun that surfaces only after the pronoun is Agreed with by a functional head F^0 , illustrated in (6).



The same underlying principle illustrated in (6) holds for this analysis, namely that the realization of pronouns is affected by virtue of being Agreed with by a functional head.

A broader conception of this idea is the notion of ‘goal-flagging’ by Deal (2022). Deal discusses the various outcomes of the Agree operation, highlighting that Agree does not only change the state of the probe on the functional head, but it may have an affect on the goal as well. The data in SJA Mam suggest that by comparing un-agreed-with pronouns with agreed-with pronouns, we find a reduction of the latter. Additionally, the reduction is systematic: full pronouns are bimorphemic and we see that one of these sets of morphemes is consistently absent in reduced pronouns. Instead of positing a unique series of ‘clitic’ pronouns for the reduced paradigm, we can capture the exact nature of the reduction with a morphological impoverishment rule which deletes a specific morphosyntactic feature. With the addition of the ‘agreed-with’ diacritic, the rule only applies when the pronoun has been Agreed with. Thus, this work on SJA Mam presents a novel application of previously argued for principles of Agree and impoverishment in the context of the spell out and reduction of pronouns.

4.2 Reduced pronoun position

In this section I provide a syntactic analysis of the SJA Mam subject/possessor pronouns. Within this paradigm, shown in Table 4.2, the second and third person forms are the same as independent pronouns, the first person pronouns are realized differently from the independent pronouns. Of all of the forms in Table 4.2, the enclitic =*i* is found in multiple cells of the paradigm and re-

alizes a complex set of features. While a detailed morphological analysis of this morpheme is given in §4.3.3, I refer to this morpheme as the ‘disagreement enclitic’ alluding to the analysis that it appears when the values for [+/-author] and [+/- participant] disagree. Since it is the only phonologically bound subject/possessor pronoun, this section largely focuses on showing evidence that the disagreement enclitic is a pronoun in argument position, though the pattern holds for *qi* and *qa* as well.

Table 4.2: Subject/possessor pronoun paradigm

	SG	PL
1 EXCL	=i	=i
1 INCL		
2	=i	qi
3		qa

Following assumptions of the forms cognate to =i in other varieties of Mam (England, 1983a; Collins, 2007; Pérez Vail, 2014; England, 2017), I consider =i a morphological enclitic, as it appears phonologically adjacent to a wide variety of categories including nouns, verbs, pronouns, as well as other clitics, including the second position polar question clitic =m, shown in (7). As mentioned in Chapter 2, the allomorph of the enclitic =i after [m] is =ni.

- (7) a. T-aj=i.
A2/3SG-want=DISAGR
‘You want it.’
- b. T-aj=m=ni?
A2/3SG-want=Q=DISAGR
‘Do you want it?’

The forms *qi* (2pl) and *qa* (3pl) are written in the orthography as independent words, though they pattern with =i with respect to word order, co-occurrence with Set A and Set B agreement markers, and use in pronominal contexts, and thus could also be considered enclitics. Their particular status as phonologically independent or dependent is not of great importance to the analysis.

The primary characteristic of subject/possessor pronouns is their nominative alignment. Reduced first person pronouns are used for intransitive subjects, shown in (8-a), and transitive subjects, shown in (8-b), while the full pronoun series is used for transitive objects, illustrated in (8-c).

- (8) Nominative alignment of reduced pronouns

- a. Ma **chin** b’et (=i).
PROX B1SG walk =DISAGR
‘I walked.’

intransitive subject

- b. Ma \emptyset kub' n-tz'ib'-n (=i).
 PROX B2/3SG DIR:down A1SG-write-DS =DISAGR
 'I wrote it down.' *transitive subject*
- c. Ma tz'=ok ky-ke'y-an qa (qini).
 PROX B2/3SG=DIR:in A2/3PL-see-DS PL 1SG
 'They saw me.' *transitive object*

I assume that object pronouns occupy the structural object position and constitute full pronouns from which subject/possessor pronouns reduce. The analysis of how reduced pronouns are derived from full pronouns is given in §4.4.

In addition to their nominative alignment, the other main characteristics of subject/possessor pronouns in SJA Mam are their co-occurrence with Set A and Set B inflection, and their immediately post verbal/nominal position, illustrated above in (8-a) and (8-b). These two characteristics of subject/possessor pronouns identically matches that of lexical third person singular subjects and possessors, which are shown in ?? for comparison.

(9) ??Lexical subjects and possessors

- a. Ma \emptyset b'et (Rebeca).
 PROX B2/3SG walk Rebeca
 'Rebeca walked.'
- b. Ma \emptyset kub' t-tz'ib'-an (Geovany).
 PROX B2/3SG DIR:down A2/3SG-write-DS Geovany
 'Geovany wrote it down.'
- c. t-wi \ddot{x} (Lucrecia)
 A2/3SG-cat Lucrecia
 'Lucrecia's cat'

The complementarity between lexical subjects and the forms in Table 4.2 provides the first clear argument that these subject/possessor ϕ forms are pronominal arguments. In this section, focusing on the =i enclitic, I provide further evidence that subject/possessor pronouns are pronominal arguments occupying the same subject/possessor position that the lexical arguments occupy. I illustrate this in (10-a) and (10-b), which show both the =i enclitic and lexical argument *Rebeca* occupying subject position.

- (10) a. [Ma chin b'et]_V [(=i)]_S.
 [PROX B1SG walk] [=DISAGR]
 'I walked.'
- b. [Ma \emptyset b'et]_V [(Rebeca)]_S.
 [PROX B2/3SG walk] [Rebeca]
 'Rebeca walked.'

Evidence that subject/possessor pronouns are in argument position comes from constructions which displace the subject or possessor from its base position, namely, immediately post verbally for subjects or immediately post nominally for possessives. These constructions in SJA Mam are reflexive constructions, which require VOS word order, focused subject constructions, which require SV word order, emphatic possessor constructions, which require a possessive relational noun and possessor to appear before the possessed noun, and constructions in which the second position clitic used for polar questions, *=m*, intervenes between the relational noun and the possessor.

These constructions provide a good testing ground for whether the subject/possessor pronouns, specifically the phonologically bound disagreement enclitic *=i*,⁴ are verbal agreement morphemes or DP arguments. If the disagreement enclitic *=i* is actually an agreement morpheme, moving the subject should not have an effect on it.

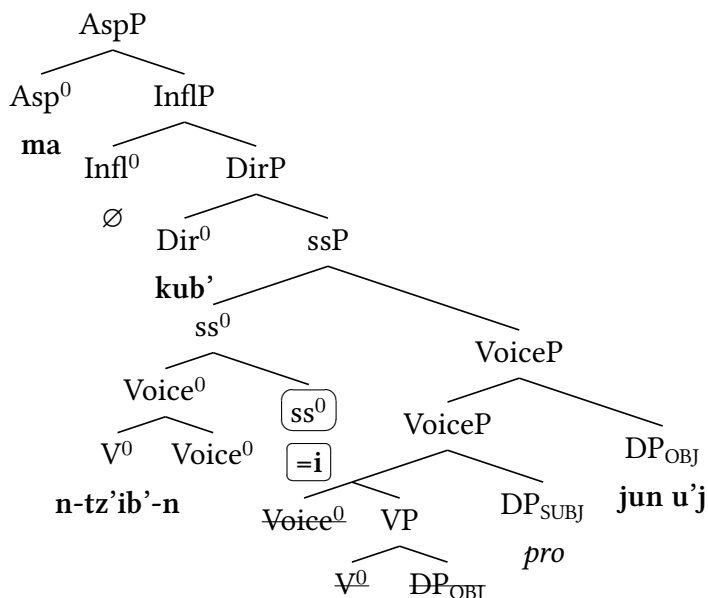
The focus of [Scott 2020b](#), which argues for the agreement analysis, is the morpheme *=a* in Ixtahuacán Mam which is cognate to the disagreement enclitic *=i* in SJA Mam; [Scott 2020b](#) does not address the plural pronouns *qi* (2pl) and *qa* (3pl). Before turning to the evidence, let us examine the predictions of the agreement analysis in [Scott 2020b](#), focusing on the disagreement enclitic *=i*.

In [Scott 2020b](#), I assume that the disagreement enclitic *=i* is actually an agreement morpheme generated by a probe on the status suffix (*ss*) head, the head above VoiceP in SJA Mam (see Chapter 3 §3.2.1 for background on SJA Mam clause structure). The structure of a VSO clause with the disagreement enclitic according to [Scott 2020b](#) is given in (12).

- (11) Ma ∅ kub' n-tz'ib'-n (=i) jun u'j.
 PROX B2/3SG DIR A1SG-write-DS =DISAGR one book
 'I wrote a book.'

⁴Due to the differing views about the nature of the disagreement enclitic *=i* in the present analysis and in [Scott \(2020b\)](#), I refer to the *=i* morpheme using the term 'disagreement enclitic', as it is neutral to the agreement vs. pronoun analysis.

- (12) Disagreement enclitic in ss^0 (Scott, 2020b, 132)

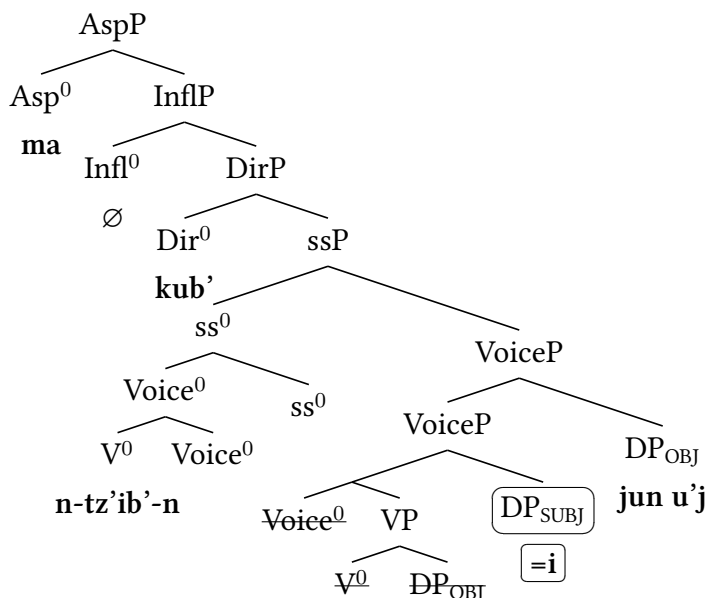


Notice that the disagreement enclitic appears adjacent to the verb in this structure because the verb and enclitic occupy the same head, ss . Meanwhile, the subject is a null *pro* situated in Spec, VoiceP.⁵ Based on this structure, A and \bar{A} movement of the subject should have no effect on the presence of the disagreement enclitic.

Here I argue against the analysis in (12). I propose that the disagreement enclitic (and the other subject/possessor pronouns) are not agreement morphemes on the status suffix head, but rather they are DP pronouns in subject position. This is illustrated in (14) for the disagreement enclitic *=i* referencing the ergative subject in (13). The difference between the structure in (12) and the structure in (14) is that in (14), the disagreement enclitic occupies the subject DP position, and its phonological adjacency to the verb is not due to a tight syntactic adjacency, but rather, because the content below the subject in VoiceP has moved out.

- (13) Ma \emptyset kub' n-tz'ib'-n (=i) jun u'j.
 PROX B2/3SG DIR:down A1SG-write-DS =DISAGR one book
 'I wrote a book.'

⁵I assume the same structure for intransitive clauses, with the omission of the DP object and the subject triggering Set B agreement on Infl, not Set A from Voice.

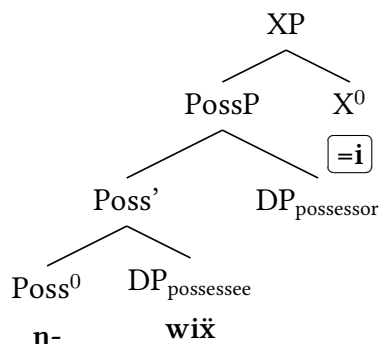
(14) Disagreement enclitic in DP_{SUBJ}

Given the structure in (14), we expect reduced pronouns to behave identically to lexical subjects, modulo the phonological dependency of the clitic status of the disagreement enclitic. This is indeed the case: in the aforementioned subject/possessor displacement constructions (reflexives, focus, emphatic possessives, second position polar question clitic), the subject/possessor pronouns (like lexical subjects) are displaced from the verb/noun and are unable to remain in their post verbal/nominal positions. These data are explored in §4.2.1 – §4.2.3 and support the current analysis that reduced pronouns occupy subject/possessor DP positions.

Lastly, the analysis of the disagreement enclitic as agreement on ss^0 given in Scott 2020b leaves its presence in possessive contexts unexplained. While it is assumed in Scott 2020b that possessive (and relational) noun phrases have an agreement probe that creates the disagreement enclitic, this assumes there to be a functional head hosting such a probe above the possessor in order to account for the Set A - Noun =i order, illustrated in (16). While this does not run into any technical issues, it is unmotivated aside from accounting for the enclitic, and it is unclear what category this head would be.

- (15) n-wiḅ (=i)
 A1SG-cat =DISAGR
 'my cat'

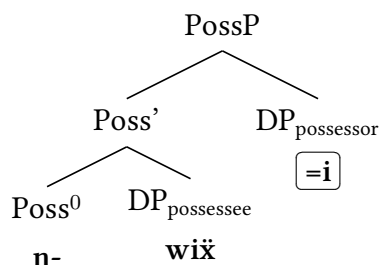
- (16) Disagreement enclitic as agreement (assumed structure based on Scott 2020b)



Accounting for the disagreement enclitic in possessive contexts under the present analysis is straightforward: the disagreement enclitic is a reduced pronoun occupying the DP possessor position in a rightward specifier, illustrated in the structure in (18), representing the example in (17).⁶

- (17) n-wiḫ [=i]
 A1SG-cat =DISAGR
 'my cat'

- (18) Disagreement enclitic as possessor



The rest of this section is organized as follows: in §4.2.1, I present evidence from VOS reflexive constructions that the disagreement enclitic and the rest of the subject pronouns are in fact subjects, showing that the subject pronouns obligatorily appear in final position. In §4.2.2, I show that focus movement requires both lexical subjects and subject pronouns to move to the left periphery, leaving their post verbal position null. Lastly, in §4.2.3, I describe two contexts which separate the possessor from the possessed noun. The first is the emphatic possessor construction in which the possessive relational noun *-e* appears before a possessed noun. While Set A is doubled in these cases— appearing once on the possessed noun and once on the possessive relational noun— both lexical subjects and pronominal subjects only appear once following the possessive relational noun. The second context is in polar questions, which employ a second position clitic

⁶See Ch. 3 section 2.2 for more on the analysis of Set A in possessive contexts.

which intervenes between a possessed noun and its possessor, for both lexical possessors and pronominal possessors.

4.2.1 Reflexives

Recall that in neutral pragmatic contexts, word order in SJA Mam is VS(O), where V stands for a possibly multi-word verbal complex. Reflexive clauses are the only clauses in SJA Mam that require VOS word order, similar to other varieties of Mam (see [England 1983a](#) for Ixtahuacán Mam). Reflexive constructions can be transitive or intransitive, meaning that subjects can trigger ergative (Set A) or absolutive (Set B) agreement on the verb, illustrated in (19) and (20). In both cases, the word order is VOS, and the object is the reflexive/reciprocal relational noun *-ib'*.

- (19) Transitive reflexive
 Ma ∅ kub' t-qes-an t-ib' Henry.
 PROX B2/3SG DIR:down A2/3SG-cut-DS A2/3SG-RN:RR Henry
 'Henry cut himself.'

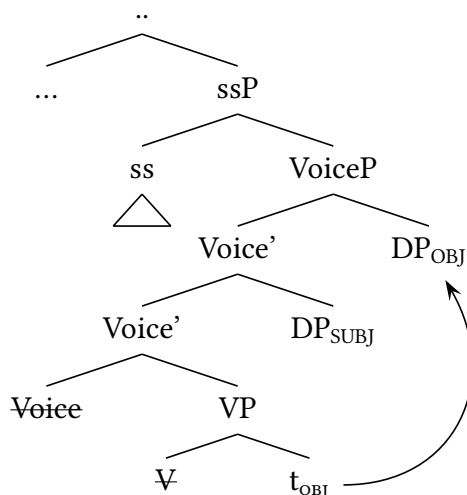
- (20) Intransitive reflexive
 N=∅=ew-an t-ib' Henry.
 IPFV=B2/3SG-hide-AP A1SG-RN:RR Henry
 'Henry is hiding.'

In this section I compare the behavior of lexical third person singular subjects to pronominal subjects, focusing on the disagreement enclitic, =*i*. Both lexical subjects and pronominal subjects in reflexive contexts invert with objects and appear in final position. The parallel between lexical subjects and pronominal subjects provides support for the analysis of pronominal subjects as occupying the subject position in these constructions. The baseline and reflexive word orders are given in (21) and (22), where =*i* represents the paradigm of subject pronouns.

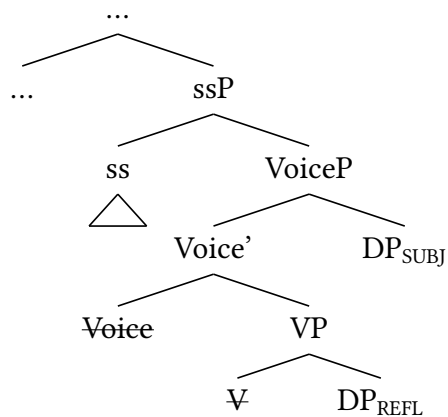
- (21) Baseline word orders:
 a. Lexical subject: V S O
 b. Pronominal subject: V =i O
- (22) Reflexive word orders
 a. Lexical subject: V O S
 b. Pronominal subject: V O =i

I adopt a rightward specifier and object raising view of VSO word order in Mam, illustrated in (23), following [Aissen \(1992\)](#) and [Little \(2020\)](#). Little accounts for VOS reflexives in rigid VSO languages like Mam by positing that instead of undergoing object shift, illustrated in (23), reflexive objects must remain low in order to be bound by the subject, shown in (24). This need for semantic binding by the subject forces the object not to undergo the typical object shift, leaving it in its base generated position. The result is VOS word order.

(23) Baseline VSO: object shift



(24) VOS reflexives: no object shift



This analysis of VOS word order in Mam reflexive constructions, supported by [Royer \(2022\)](#), provides a strong testing ground for whether the disagreement enclitic and the other subject pronouns are in subject position, or whether they are in an agreement position connected to the verb on the status suffix head. Given [Little's](#) analysis, we predict that if the subject pronouns are truly in subject position, they should not surface adjacent to the verb in reflexive constructions, but rather, in final position, which is in fact what we find. In §4.2.1.1, I present the pattern of reflexives for lexical subjects and then in §4.2.1.2, I show that pronominal subjects follow the same pattern.

4.2.1.1 Lexical subjects

Third person lexical subjects in reflexive clauses typically trigger subject agreement on the verb, shown by the Set A agreement on the verb in (25-a). The reflexive object, *ib'* 'self' shows possessive Set A agreement with the same features as the subject. VSO word order in reflexive constructions is ungrammatical, shown in (25-b).

(25) VOS order with *ib'* 'self'

- a. Ma ∅ kub' t-qes-an t-ib' Henry.
 PROX B2/3SG DIR:down A2/3SG-cut-DS A2/3SG-RN:RR Henry
 'Henry cut himself.'
- b. *Ma ∅ kub' t-qes-an Henry t-ib'.
 PROX B2/3SG DIR:down A2/3SG-cut-DS Henry A2/3SG-RN:RR
 Intended: 'Henry cut himself.'

Recall from Chapter 2 §2.5.4.3 that VOS reflexive syntax is not only used for the reflexive/reciprocal relational noun *-ib'* but also for body parts like *q'ab'* 'hand/arm', a construction

referred to as ‘extended reflexives’ (Aissen, 1999) and found in other Mayan languages as well. This can be seen for SJA Mam in (26-a). When VSO order is used, as in (26-b), it is not interpreted as a reflexive action. This shows that whatever is causing VOS word order is not particular to the reflexive object.

(26) VOS with *q’ab’* ‘hand’

- a. O *tz’=ok* *t-jato-’n* *t-q’ab’* **Xwan**.
 CPL B2/3SG=DIR:in A2/3SG-hit-DS A2/3SG-hand Xwan.
 ‘Xwan hit his own hand.’
- b. O *tz’=ok* *t-jato-’n* **Xwan** *t-q’ab’* .
 CPL B2/3SG=DIR:in A2/3SG-hit-DS Xwan A2/3SG-hand .
 ‘Xwan_j hit his_{i/’j}/her hand.’

Adopting Little’s 2020 analysis of VOS reflexives in Mam in (24), the possessor of the reflexive object *tib’* is a null bound *pro* and the name *Henry* is in final subject position.

- (27) Ma ∅ *kub’* *t-qes-an* [*t-ib’* *pro*]_o [**Henry**]_s.
 PROX B2/3SG DIR:down A2/3SG-cut-DS [A2/3SG-RN:RR 3SG] [**Henry**]
 ‘Henry cut himself.’

The surface string ‘*tib’ Henry*’ is compatible with an analysis in which *Henry* is the possessor of *ib’*, controlling Set A agreement on the reflexive object, not the verb, and a null subject controls the Set A agreement on the verb, shown in (28). Royer (2022, 259) argues for the parse in (27) in accounting for Chuj reflexive constructions.

- (28) Ma ∅ *kub’* *t-qes-an* [*t-ib’* **Henry**]_o [*pro*]_s.
 PROX B2/3SG DIR:down A2/3SG-cut-DS [A2/3SG-RN:RR **Henry**] [3SG]
 ‘Henry cut himself.’ (Lit: He cut Henry’s self)

The important take away from the lexical subject reflexive constructions is that VOS word order is obligatory. Next we will see that the same generalization holds for subject pronouns: sentence final subject pronoun order is obligatory in both reflexives and extended reflexives, evidence that these morphemes are in subject position.

4.2.1.2 Pronominal subjects

Pronominal subjects pattern identically to lexical subjects in reflexive constructions. The disagreement enclitic reduced pronoun =*i* for first singular in (29), and the full pronouns *qi* for second plural in (30) and *qa* for third plural in (31), obligatorily appear in final position following the reflexive relational noun object *-ib’*. This is illustrated for intransitive reflexives, and the same pattern holds for transitive reflexives.

- (29) 1SG =i
- a. N=chn=ew-an w-ib' =i.
 IPFV=B1SG-hide-AP A1SG-RN:RR =DISAGR
 'I am hiding.'
- b. *N=chn=ew-n =i w-ib'.
 IPFV=B1SG-hide-AP =DISAGR A1SG-RN:RR
 Intended: 'I am hiding.'

- (30) 2PL qi
- a. N=chj=ew-an ky-ib' qi.
 IPFV=B2/3PL-hide-AP A2/3PL-RN:RR 2PL
 'Y'all are hiding.'
- b. *N=chj=ew-an qi ky-ib'.
 IPFV=B2/3PL-hide-AP 2PL A2/3PL-RN:RR
 Intended: 'Y'all are hiding.'

- (31) 3PL qa
- a. N=chj=ew-an ky-ib' qa.
 IPFV=B2/3PL-hide-AP A2/3PL-RN:RR PL
 'They are hiding.'
- b. *N=chj=ew-an qa ky-ib'.
 IPFV=B2/3PL-hide-AP PL A2/3PL-RN:RR
 Intended: 'They are hiding.'

Recall from (27) that lexical subjects are true subjects following the relational noun *-ib'* and do not form a constituent with the relational noun, whose possessor is null. For pronominal subjects, we expect neither the subject nor the possessor to be null; instead, we expect both the possessor and the subject to surface as an overt pronouns— given that “subject” and “possessor” are the categories represented in the ϕ paradigm from Table 4.2 which are under investigation. This expectation is illustrated by the two stacked enclitics in (32), a hypothetical surface string that is unattested but that I assume underlies the string in (29-a). I assume that a phonological reduction rule, possibly motivated by haplology, reduces two enclitics to one.

- (32) Underlying structure of (29-a)
- N=chn=ew-an [w-ib' =i]_o [=i]_s.
 IPFV=B1SG-hide-AP [A1SG-RN:RR =DISAGR] [=DISAGR]
 'I am hiding.'

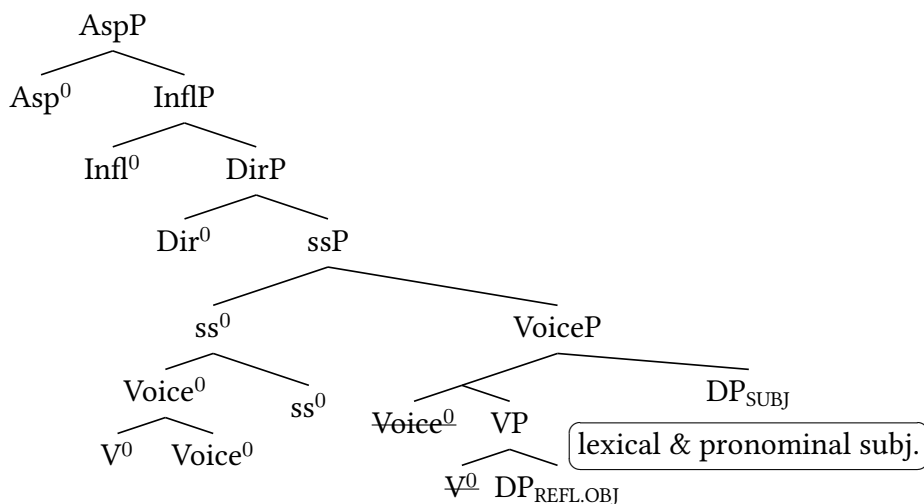
Additionally, just as VOS word order is obligatory for extended reflexive constructions with lexical subjects, VO=i word order is obligatory for extended reflexives with pronominal subjects.

(33) VO=*i* with *q'ab'* 'hand'

- a. O *tz'=ok* *n-jato-'n* *n-q'ab'=i*.
 CPL B2/3SG=DIR:in A1SG-hit-DS A1SG-hand=DISAGR.
 'I hit my own hand.'
- b. *O *tz'=ok* *n-jato-'n=i* *n-q'ab'*.
 CPL B2/3SG=DIR:in A1SG-hit-DS=DISAGR A1SG-hand.
 Intended: 'I hit my own hand.'

The morpheme order facts for pronominal subject pronouns in reflexives and extended reflexives closely aligns with the pattern shown for lexical subjects. Reflexive instances of VOS word order are paralleled with VO=*i* word order, suggesting that lexical and pronominal subjects—even the reduced subject pronoun =*i*—occupy the same structural position; in the case of reflexive constructions, this position is subject position in Spec,VoiceP, schematized in the tree in (34), accounting for the data in (35).

(34) Reduced pronouns in subject position



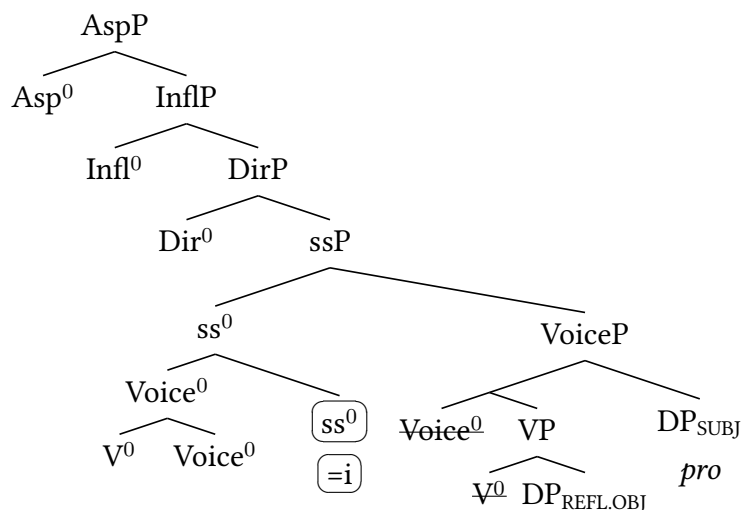
(35) Reduced pronouns are subjects

- a. N=*chn=ew-an* *w-ib'* (=i).
 IPFV=B1SG-hide-AP A1SG-RN:RR =DISAGR
 'I am hiding.'
- b. N=∅=*ew-an* *t-ib'* Lucrecia).
 IPFV=B2/3SG-hide-AP A2/3SG-RN:RR Lucrecia
 'Lucrecia is hiding.'

These facts are not predicted if the reduced first person pronoun (the disagreement enclitic =*i*) is actually an agreement morpheme closely attached to the verb on the *ss* head, as argued for in

Scott 2020b. The agreement analysis predicts that the order of the subject and object can change and the disagreement enclitic would stay the same: the structure of a transitive reflexive clause according to the agreement analysis is given in (36). In these clauses, following Little (2020), the reflexive object remains low and the subject remains in a final specifier position. Under the agreement analysis, the disagreement enclitic should remain on *ss* and attach to the verb, falsely predicting the order in (37).

(36) Disagreement enclitic in *ss*⁰ (Scott, 2020b)



(37) Disagreement enclitic ≠ agreement on *ss*

*N=chn=ew-n (=i) w-ib'.
 IPFV=B1SG-hide-AP =DISAGR A1SG-RN:RR
 Intended: 'I am hiding.'

The reflexive data presented in this section lend direct support for the analysis that the disagreement enclitic– and the full series of subject/possessor pronouns– occupy the same structural position as lexical arguments; in the case of reflexive constructions, that is subject position. Given the analysis of Mayan VOS word order in reflexives from Little (2020), we expect lexical subjects and pronominal subject pronouns to pattern together, appearing in final position, which we indeed find. These facts run counter to the predictions made in Scott 2020b in which the disagreement enclitic is an agreement morphemes on *ss*. In the next section, I provide further support for the argument position analysis of subject/possessor pronouns from intransitive subject focus.

4.2.2 Focused intransitive subjects

The second construction which separates the subject from the verb is focus movement. In this section I focus on intransitive subject focus movement to the exclusion of transitive object and

transitive subject focus. I do this for two reasons: first, transitive objects pronouns appear in their full forms, not reduced forms. Second, transitive subject focus (agent focus/ergative extraction) requires a unique type of clause in SJA Mam and is discussed more in depth in Chapter 2 and Chapter 3. For these reasons, focus movement is limited to intransitive subject focus movement in this section.

In SJA Mam, focused arguments appear in initial position preceded by the determiner *a* and the post verbal subject position is empty. Compare the post verbal position of the lexical subject in (38-a) to the focused preverbal position in (38-b).

- (38) a. Ma tz=ul Henry.
 PROX B2/3SG=arrive.here Henry.
 Henry arrived here.
- b. A Henry ma tz=ul.
 DET Henry PROX B2/3SG=arrive.here
 Henry_{FOC} arrived here.

Focusing the intransitive pronominal subject results in the full pronominal forms in initial position, shown in (39-b). Some full pronouns, like *qin=i* in (39-b), are multimorphemic, made up of a pronominal base morpheme, like *qin*, and the disagreement enclitic, *=i*. I assume that the pronominal base morpheme is required in these contexts due to the focus position being a position specified with some phonological requirement (Landau, 2006, 29). Crucial to the example in (39-b) is that full pronouns appear preverbally and the verb obligatorily appears without a reduced pronoun. This is the case for all of the morphemes in the subject/possessor pronoun series: *=i* in (39), *qi* in (40), and *qa* in (41).

- (39) 1SG focus movement
- a. O chin ta-n (=i).
 PFV B1SG sleep-AP =DISAGR
 I slept.
- b. A qin(=i) o chin ta-n (*=i).
 DET 1SG=DISAGR PFV B1SG sleep-AP (*=DISAGR)
 I_{FOC} slept.
- (40) 2PL focus movement
- a. O chi ta-n (qi).
 PFV B2/3PL sleep-AP 2PL
 Y'all slept.
- b. A (qi) o chi ta-n (*qi).
 DET 2PL PFV B2/3PL sleep-AP (*2PL)
 Y'all_{FOC} slept.

(41) 3PL focus movement

- a. O chi ta-n qa.
 PFV B2/3PL sleep-AP PL
 They slept.
- b. A qa o chi ta-n (*qa).
 DET PL PFV B2/3PL sleep-AP (*PL)
 They_{FOC} slept.

I assume, following Aissen (1992), that focus in Mayan is achieved via movement to a Focus projection in the left periphery of the clause. When the lexical subject moves in (38-b), its base copy is not pronounced. This is paralleled by the pronouns in (39) – (41): the post verbal position of the pronoun (in its reduced form for first person pronouns) is not pronounced. This is predicted if the post verbal pronoun forms are the spell out of the subject itself and not agreement morphemes.

This behavior is not straightforward to account for under an analysis of these subject/possessor ϕ forms as agreement. It raises the question as to what would motivate focus movement to delete the post verbal agreement but not Set B agreement. When both lexical and pronominal subjects undergo focus movement, note that Set B agreement with the subject remains on the verb, highlighted in (42) for the lexical subject *Henry* and in (43) for a 1SG pronominal subject.

(42) Set B in focus contexts: lexical subject

- a. Ma tz=ul Henry.
 PROX B2/3SG=arrive.here Henry.
 Henry arrived here.
- b. A Henry ma tz=ul.
 DET Henry PROX B2/3SG=arrive.here
 Henry_{FOC} arrived here.

(43) Set B in focus contexts: pronominal subject

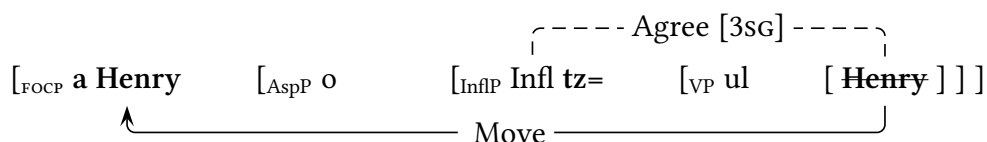
- a. O chin ta-n =i.
 PFV B1SG sleep-AP =DISAGR
 I slept.
- b. A qin=i o chin ta-n (*=i).
 DET 1SG=DISAGR PFV B1SG sleep-AP (*=DISAGR)
 I_{FOC} slept.

I analyze Set B markers as agreement morphemes derived via Agree between the pronoun and Infl (see §4.4.2). If the post verbal pronouns were also agreement, we would have to say that while Set B agreement remains, post verbal agreement is deleted in focus contexts. While this is not impossible to implement with two types of ss heads (one that hosts an agreement probe in non-focus contexts, and one that does not in focus contexts), it is a simpler analysis if the pronominal

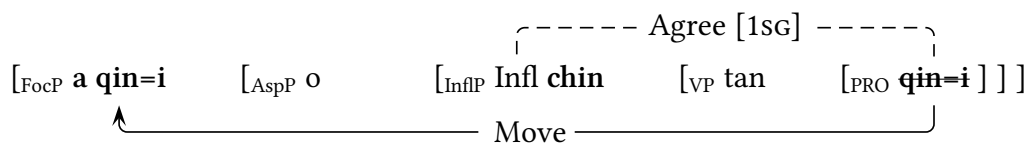
forms simply constitute the base generated subject pronoun. As such, their absence under focus is due to the non-pronunciation of the tail of the \bar{A} chain created through focus movement, in parallel with lexical subjects.

In both baseline and focus constructions, I assume that the probe on Infl Agrees with the subject, copying back its features, which are later spelled out in the morphology with Set B morphemes. Later in the derivation, the subject undergoes focus movement, leaving a lower copy in its base position. Given the copy theory of movement (Chomsky, 1993; Boskovic and Nunes, 2007), and Landau's 2006 theory of chain reduction, namely that a position (in this case, focus) can have a pronunciation requirement, the copy in the focus position is pronounced in full, and the copy at the tail of the chain is deleted. Lexical subject focus in (38-b) is schematized in (44). Pronominal focus in (39-b) is schematized in (45).

(44) Focused lexical subject movement in (38-b)



(45) Focused pronoun movement in (39-b)



This absence of pronominal subjects in the post verbal position when the subject undergoes focus movement is handled straightforwardly if the pronouns are truly in subject position: in non-focus clauses, subject pronouns are realized in-situ, for some as reduced pronouns; in focus constructions, pronouns move to the initial focus position, and their base position is not pronounced. We now turn to §4.2.3, where I present evidence for that the subject/possessor pronouns are true possessors in possessive contexts.

4.2.3 Possessive relational noun

In the last section we saw that in focus constructions, pre-verbal lexical subjects pattern identically to pre-verbal pronominal subjects. So far we have seen data in which the subject/possessor pronouns occupied a subject position. In this section I show that in possessive contexts, these pronouns occupy the same structural position as lexical possessors. I present a pattern of possessive relational nouns in which possessors are dislocated from the possessed noun. In these constructions, we find that lexical possessors and pronominal possessors show the same pattern, supporting the analysis that the subject/possessor pronouns are not agreement, but are themselves pronominal arguments.

In SJA Mam possessive constructions, a Set A marker agreeing with the possessor prefixes to the noun, shown in (46-a). Optionally, these phrases can include the possessive relational noun *-e* before the possessed noun. This relational noun takes the Set A prefix agreeing with the possessor, doubling the Set A prefix on the possessed noun, shown in (46-b). Recall from Chapter 2 §2.3.3 that relational nouns are a special type of formally possessed nouns, meaning that the string in (46-b) consists of two possessed nouns and two sets of possessive (Set A) agreement.

(46) Possessive relational noun

- a. t-wiḿ
A2/3SG-cat
'her cat'
- b. t-e t-wiḿ
A2/3SG-RN:POSS A2/3SG-cat
'her cat'

When a lexical possessor is present, it follows the possessed noun, shown in (47-a). When the possessive relational noun is used, the lexical possessor immediately follows the relational noun, not the possessed noun, shown in (47-b). In (47-b), *Gloria* is surfacing as the possessor of the relational noun *t-e* and not the noun *t-ximtz* 'her thought.'

(47) Lexical possessor

- a. [t-ximtz Gloria]
[A2/3SG-thought Gloria]
'Gloria's thought'
- b. t-e Gloria [t-ximtz (*Gloria)]
A2/3SG-RN:POSS Gloria [A2/3SG-thought Gloria]
'Gloria's thought'

Regardless of the structural analysis of (47-b), what is important about this pattern is that the lexical possessor is restricted to appearing only once after the relational noun, not the content noun, in this example, *ximtz* 'thought.'

Crucially, pronominal possessors follow the same word order as lexical subjects. Like lexical possessors, pronominal possessors typically follow possessed nouns, shown for the reduced pronoun for 1SG (the disagreement enclitic =*i*) in (48-a) and the pronoun *qa* for 3PL in (49-a). Following the same pattern, these pronominal possessors obligatorily surface following the possessive relational noun, shown for 1SG in (48-b) and 3PL in (49-b).

(48) 1SG possessor

- a. [n-ximtz(=i)]
[A1SG-thought=DISAGR]
'my thought'

- b. w-i(=y) [n-ximtz (*=i)]
 A1SG-RN:POSS=DISAGR [A1SG-thought =DISAGR]
 ‘my thought’
- (49) 3PL possessor
- a. [ky-ximtz qa]
 [A2/3PL-thought PL]
 ‘their thought’
- b. ky-e qa [ky-ximtz (*qa)]
 A2/3PL-RN:POSS PL [A2/3PL-thought PL]
 ‘their thought’

With both lexical possessors and pronominal possessors, Set A agreement appears twice: once on the possessed nominal and once on the possessed relational noun. In contrast, the possessor itself can only appear once following the relational noun. This is true of lexical possessors, and also of subject/possessor pronouns. This pattern is directly captured with the analysis that the pronominal possessors occupy the same structural possessor position as lexical possessors. Under the agreement analysis, the pattern would require extra machinery to account for why the extra possessor “agreement” is absent on the possessed nominal in (48-b) and (49-b).

One last piece of evidence that pronominal possessive pronouns are in fact pronouns and not an extra exponent of agreement comes from the placement of the polar question clitic =*m*. I show in Scott (2019) as well as in Chapter 2 §2.7.2 that =*m* can roughly be treated as a second position clitic, and that it intervenes between the possessive relational noun *-e* and the possessor if the relational noun is first in the clause. The relational noun is first in the clause in (50-b) because the relational noun phrase *tem t-txu* ‘to his mother’ is in focus. In (50-a), the relational noun *-e* is formally possessed by *t-txu* ‘his mother’, indicated by the Set A agreement *t-* on *t-e*. In (50-b), when the polar question clitic is inserted, it intervenes between *te* and *t-txu*.

- (50) a. T-e t-txu
 A2/3SG-RN:DAT A2/3SG-mother
 ‘to his mother’
- b. [T-e =*m* t-txu] o txi t-q’o-’n Noah jun
 [A2/3SG-RN:DAT =Q A2/3SG-mother] PFV DIR:go A2/3SG-give-DS Noah one
 ne tal tx’yan?
 CLF:small baby dog
 ‘Did Noah gave a puppy [to his mother]_{FOC}?’

This same pattern is found for pronominal possessors. (51-a) shows that the possessive pronoun attaches directly to the relational noun *-e*. With this particular relational noun, the vowel [e] becomes [i] when followed by the disagreement enclitic =*i*, which becomes =*y* after vowels. (51-b) shows that the polar question clitic still follows the relational noun even though it is in-

serted in the middle of the word. In this example, the vowel quality of the relational noun remains [e] because it is not followed immediately by the =*i* enclitic. Lastly, recall from Chapter 2 §2.7.2 that the disagreement enclitic =*i* becomes =*ni* after =*m*. These data show that, like lexical possessors, illustrated in (50-b), the reduced pronouns =*i*/*y*/*ni* are syntactically independent from the possessive relational noun, suggesting that they are in the same structural position as lexical possessors.

- (51) a. T-i=y
A2/3SG-RN:DAT=DISAGR
'to you'
- b. [T-e=m=ni] o txi t-q'o-'n Noah jun ne tal tx'yan?
[A2/3SG-RN:DAT=Q=DISAGR] PFV DIR:go A2/3SG-give-DS Noah one CLF baby dog
'Did Noah gave a puppy [to you]_{FOC}?'

This section presented four sources of evidence that the subject/possessor series of pronouns (given in Table 4.2) are indeed pronominal arguments in subject/possessor position and not agreement morphemes as argued for in Scott (2020b). Evidence comes from several constructions which dislocate subjects and possessors from verbs and nouns, respectively. We see that the same displacement of lexical subjects/possessors is found for pronominal subject/possessors, and that this lends support to the analysis that these ϕ forms are arguments, not agreement.

The reflexive data in §4.2.1 show that when reflexive objects intervene between the verb and lexical subjects, they also intervene between the verb and subject pronouns. The focus movement data in §4.2.2 show that when lexical subjects undergo focus movement, so do pronominal subjects, both leaving behind unpronounced base positions. In this section, we saw that when possessors are non-adjacent to their possessed noun— with the addition of the possessive relational noun *-e* and with the intervening =*m* polar question clitic— lexical possessors pattern together with pronominal possessors.

These four constructions separating the verb from the lexical subject and the noun from the lexical possessor have created a testing ground for the nature of pronominal forms in SJA Mam. The results strongly support the analysis of subject/possessor pronouns as occupying an argument position, as their linear realization aligns directly with that of lexical arguments, a pattern which is difficult to capture under a view of the enclitic as an agreement morpheme. One consequence of this conclusion for the grammar of SJA Mam is that pronominal subjects and possessors are realized both in their base-generated argument position, as well as through Set A and Set B agreement morphology. This raises the question of why these ϕ features are realized twice in the clause, and whether the full set of the pronouns' features are realized in both places.

In §4.3, I provide a featural analysis of agreement morphology (Set A and B) and pronouns, showing that agreement morphology realizes less features than pronominal morphology, suggesting that the Agree operation that results in Set A and B morphemes does not copy back the full set of pronominal features. This analysis sets up the discussion for the derivation of subject/possessor pronouns, as well as the analysis of first person reduced pronouns in §4.4.

4.3 Featural analysis of agreement and pronouns

Thus far we have established that reduced pronouns are in fact pronominal arguments, and we have seen that for first person arguments only, they represent reduced versions of full pronouns. Before we can understand the nature of the reduction and formalize it in the grammar, the topic of §4.4, it is important to have a full picture of the features of all of the relevant ϕ paradigms in SJA Mam, with a focus on the disagreement enclitic =*i*. For this, I adopt Harbour's 2016 theory of person features, in which languages only reference two person features: [+/-author] and [+/-participant]. In addition to accounting for the crosslinguistic variation in his sample, Harbour shows how his theory can be implemented for the disagreement enclitic in Ixtahuacán Mam based on England 1983a and Noyer 1992. My analysis uses a straightforward application of Harbour's framework, which itself is complex, and thus I take some time to lay out its motivations and mechanics in order to fully appreciate its application to SJA Mam. For this reason, I start this section with an overview of Harbour's theory and how it can account for the pronominal categories in Mam.

With the ontology of person features established, I turn in §4.3.2 and §4.3.3 to morphological analyses of the various ϕ paradigms in SJA Mam: Set A agreement, Set B agreement, independent pronoun forms, and the disagreement enclitic. In §4.3.2, I focus on Set A and Set B agreement, concluding that the morphemes in these paradigms only reference [+/-author] and [+/-singular]. In §4.3.3, I summarize the literature on the disagreement enclitic in Mam, adapting the analyses in Noyer 1992.

4.3.1 Overview of person feature theory

A goal of Harbour's 2016 theory of person and number features is to look broadly at the possible person distinctions across languages and provide a model which predicts all and only the patterns we find cross-linguistically. Instead of examining individual pronominal paradigms, Harbour's first methodological step is to take the compilation of all individual morphological paradigms in a given language to see the full range of distinctions that are underlying in the language. For example, if a language makes a first/non-first distinction in one paradigm and a local/non-local person distinction in another paradigm, Harbour superimposes one paradigm onto another, allowing us to see that the language makes a full three-way person distinction. Harbour calls these superimposed paradigms 'partitions.'

This method allows for a deeper comparison across languages. When comparing partitions, we are comparing all of the possible distinctions in person categories that can be made in a given language instead of the possible manifestations of an individual morphological paradigm. Harbour (2016, 40) shows that of the 15 possible partitions of the four person categories (first inclusive, first exclusive, second, third), only the 5 listed in (52) are attested.

- (52) Attested partitions (Harbour, 2016, 40)
- a. Monopartition one pronoun category
 - b. Author bipartition first / non-first
 - c. Participant bipartition local / non-local
 - d. Tripartition first, second, third
 - e. **Quadripartition** **inclusive, exclusive, second, third**

Mam constitutes an example of the quadripartition, as we have seen that it makes use of the categories inclusive, exclusive, second, and third. Based on the concept of partitions outlined above, Harbour (2016) develops a theory of the ontology of bivalent person features which combine together freely to produce all and only the 5 attested partitions. There are only two person features in his theory: [+/-author] and [+/-participant]. The quadripartition is derived with the combination of features given in Table 4.3.

Table 4.3: Harbour's quadripartition

Category	Features
1 EXCL	+author -participant
1 INCL	+author +participant
2	-author +participant
3	-author -participant

The way that the [+/-participant] feature functions in Harbour's theory is not the same as a simple 'speech act participant' feature, like the [participant] feature in Nevins 2007. Harbour's participant feature functions more like a [+/-hearer] or [+/-addressee] feature like those discussed in Bobaljik 2008. In Harbour's theory, person categories are created by applying functions (features) to the set containing the author (i), the addressee (u) and others (o,o', etc). The [+/-author] function removes or adds (i). The [+/-participant] function removes or adds (i,u).

For example, deriving first person plural exclusive is achieved by first removing the participant set (i,u) [-participant] and then adding back in the author set (i) via [+author]. For full and complete solutions to how the five partitions are derived, I direct the reader to Harbour (2016, 76-97). How these meanings are derived is not central to the arguments presented here, but it is important to note that first person singular and first person plural exclusive are [-participant], and that any theory which assigns categories a negative valued feature such as [-hearer] or [-addressee] will work with the analysis of the disagreement enclitic in SJA Mam presented in §4.3.3.

To account for the singular/plural number distinction in Mam, I adopt the bivalent feature [+/-singular], simply adopting a more familiar label for Harbour's [+/-atomic] feature. With the three bivalent features [+/-author], [+/-participant], and [+/-singular], all of the pronominal categories are accounted for in SJA Mam, shown in Table 4.4. The gap in the left hand column of the table represents the impossible 'first person singular inclusive' category, which I discuss further in §4.3.3.1.

Table 4.4: SJA Mam person features

SG				PL		
1SG	+author	-participant	+singular	1EXCL	+author	-participant -singular
				1INCL	+author	+participant -singular
2SG	-author	+participant	+singular	2PL	-author	+participant -singular
3SG	-author	-participant	+singular	3PL	-author	-participant -singular

4.3.2 Set A, Set B and pronominal bases

Having established the features that underlie each of the four person categories and the two number categories in SJA Mam, in this section, I provide a DM analysis of Set A and Set B agreement in SJA Mam, as well as analyses of the pronominal base morphemes that are found in full pronouns.

Of the four possible person categories in SJA Mam, recall that the morphological paradigms of Set A and Set B only distinguish first from non-first person. This pattern differs from other Mayan languages which typically make a three-way person distinction in Set A and B paradigms. With respect to number, SJA Mam Set A and B paradigms make a simple singular-plural number distinction, illustrated for Set A in Table 4.5 and Set B in Table 4.6.

Table 4.5: SJA Mam Set A

SG		PL	
1SG	n-/w-	1EXCL	q-
		1INCL	q-
2SG	t-	2PL	ky-
3SG	t-	3PL	ky

Table 4.6: SJA Mam Set B

SG		PL	
1SG	chin	1EXCL	qo
		1INCL	qo
2SG	∅	2PL	chi
3SG	∅	3PL	chi

The person features of these paradigms are straightforward to analyze using Harbour's 2016 ontology: each paradigm expresses [+/-author], resulting in only a two-way person distinction in these morphological paradigms. These forms also distinguish singular from plural, for which I adopt the feature [+/-singular]. I derive the difference between the two paradigms in their context for insertion. The context for Set A is either *v* or *n*, which I use to represent either ergative or possessive contexts – *v* standing for Voice and *n* standing for Poss, shown in Table 4.7. The context for Set B is Infl, representing absolutive contexts, shown in Table 4.8.

Table 4.7: SJA Mam Set A vocabulary items

	Set A		VI analysis	Context
1SG	n-	↔	[+auth,+sg]	<i>v/n</i>
2/3SG	t-	↔	[-auth,+sg]	<i>v/n</i>
1PL	q-	↔	[+auth,-sg]	<i>v/n</i>
2/3PL	ky-	↔	[-auth,-sg]	<i>v/n</i>

For the Set B paradigm (setting aside the first person plural *qo* for now), I propose that each morpheme is specified to the context of Infl. As for the 2/3SG forms (\emptyset before consonants and *tz'*= before vowels), I propose that they realize the lack of ϕ features on Infl. In Chapter 3, I argued that these 2/3SG Set B forms are the default agreement forms found in constructions in which Infl fails to agree with transitive objects. For this reason, I propose in Chapter 3 that Set B 2/3SG forms realize the lack of ϕ features on Infl. In Table 4.8, I formalize this insight with \emptyset/tz' = realizing only the context Infl.

Table 4.8: SJA Mam Set B vocabulary items

	Set B (Infl)		VI analysis	Context
1SG	chin	↔	[+auth,+sg]	<i>Infl</i>
2/3SG	\emptyset/tz' =	↔		<i>Infl</i>
1PL	qo	↔	[+auth,-sg]	
2/3PL	chi	↔	[-auth,-sg]	<i>Infl</i>

A note on vocabulary item competition and insertion is needed here. I assume that only one morpheme can be inserted in the Set A and Set B agreement nodes in the morphology. Adopting the Extended Subset Principle (Hankamer and Mikkelsen, 2005), given in (53), which builds on earlier versions of the Subset Principle (Halle, 2000, 128), any vocabulary item with a subset of syntactic features on the terminal node is eligible for insertion, and vocabulary items with more highly specified features *or contexts* will be chosen.

(53) *Extended Subset Principle* (Hankamer and Mikkelsen, 2005, 105)

The phonological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen. If two or more Vocabulary items contain the same features but differ in contextual specification so that the contextual specification of one item is a subset of the contextual specification of another, the item with the more restricted contextual specification must be chosen.

According to (53), the vocabulary items in Table 4.8 with syntactic features in their vocabulary specification will be inserted in nodes that match at least that subset of features in the context of Infl. In these instances, the 2/3SG form will not be inserted even though its specification (just the context Infl) is met by every feature bundle on Infl. This is because the other items match a greater number of features, via (53). The 2/3SG form will only be chosen if [-auth,+sg] is copied back to Infl *or* if no ϕ features are copied back to Infl. This accounts for its use in agreeing 2/3SG contexts as well as in default agreement contexts discussed in Chapter 3.

Turning now to independent pronouns, shown in the right side of Table 4.9, the first thing to notice is that some independent pronouns are bimorphemic. This includes the first person

singular $qin=i$ and the first person plural exclusive $qo'=y$. I analyze the second person plural $q=i$ as bimorphemic as well, parsing the final $=i$ as the disagreement enclitic. I analyze the disagreement enclitic, the second plural pronoun $q=i$, and the third plural pronoun qa in the next section, as these forms constitute the subject/possessor pronoun paradigm (shown in the left side in Table 4.9).

In this section, I focus on the morphemes that are present on independent pronouns but absent on subject/possessor pronouns. I call these ‘pronominal base morphemes,’ and they are highlighted in yellow in Table 4.9.

Table 4.9: Subj/Poss vs. Independent pronouns

Subj/Poss pronouns			Independent pronouns		
	SG	PL		SG	PL
1 EXCL	=i	=i	1 EXCL	$qin=i$	$qo'=y$
1 INCL		∅	1 INCL		qo
2	=i	$q=i$	2	=i	$q=i$
3	∅	qa	3	∅	qa

The second thing to notice about independent pronouns is that the form qo' is used for first person plural.⁷ The form qo is also used in Set B contexts for first person plural. In DM, it is typically assumed that syncretism like this is best analyzed with underspecification of vocabulary items. To account for the distribution of the form qo , I analyze it as the first person plural marker which is underspecified for context, shown in the third row of Table 4.8, and repeated in Table 4.10.

Table 4.10: SJA Mam Pronominal base vocabulary items

	Set B (Infl)	VI analysis	Context
1SG	qin	↔	[+auth,+sg]
2/3SG			
1PL	qo	↔	[+auth,-sg]
2/3PL			

I analyze the pronominal base morpheme qin as also unspecified for context. I assume that the 1SG Set B morpheme $chin$ and the pronominal base morpheme qin realize the same bundle of syntactic features ([+auth,+sg]) and thus compete for insertion. Following the Extended Subset Principle in (53), the Infl context-specified form $chin$ will be chosen in Infl contexts, as it has a more restricted contextual specification. Only the non-context-specific form qin is eligible for insertion in pronominal (non-Infl) contexts since the context for Set B form $chin$, namely, Infl, not present in the morpheme. The vocabulary entries for qin and qo are given in Table 4.10.

⁷I assume the glotalization on qo' for the first person plural exclusive in Table 4.9 is the result of a phonological process due to the presence of the disagreement enclitic, and that the underlying form in the morphology is qo .

In §4.4.1 I provide a detailed analysis for the derivation of independent pronouns, which are made up of pronominal base morphemes and subject/possessor pronouns, resulting in several bimorphemic pronouns. Before providing such an analysis, the next section provides an overview of the literature on the disagreement enclitic across Mam varieties, in which I adopt the analysis originally by Noyer (1992) and further developed by Harbour (2016). With the featural analysis of the disagreement enclitic in hand, we can understand the derivation of full and reduced pronouns in §4.4.

4.3.3 Disagreement enclitic

Though the focus of this chapter is the full series of subject/possessor pronouns, in this section I present analyses of the disagreement enclitic =*i*. This enclitic is used in both independent and subject/possessor pronoun contexts for first and second person singular as well as first person plural exclusive and second person plural, as can be seen in Table 4.9 in the previous section. Table 4.11 presents the distribution of this enclitic alone within the ϕ paradigm in SJA Mam. Recall that the disagreement enclitic combines with Set A and Set B morphemes to distinguish first plural inclusive from exclusive, shown in (54), and second from third singular, shown in (55).

Table 4.11: SJA Mam disagreement enclitic

	SG		PL
1SG	=i	1EXCL	=i
		1INCL	
2SG	=i	2PL	=i
3SG		3PL	

- (54) a. q-wiḿ
A1PL-cat
'our (incl) cat'
- b. q-wiḿ=i
A1PL-cat=**DISAGR**
'our (excl) cat'
- (55) a. t-wiḿ
A2/3SG-cat
'his/her cat'
- b. t-wiḿ=i
A2/3SG-cat=**DISAGR**
'your cat'

In §4.3.3.1, I provide a morphological analysis of =*i*, bringing together past analyses of this enclitic across Mam varieties, showing that it realizes a *mismatch* or *disagreement* in the values

of [+/-author] and [+/-participant]. In §4.3.3.2, I provide a morphological analysis of the SJA Mam plural reduced pronouns *qi* (2pl) and *qa* (3pl), which have not previously received a formal analysis.

4.3.3.1 Previous analyses

Across varieties of Mam, the disagreement enclitic equivalent to =*i* in SJA Mam has puzzled scholars of Mam and theoretical morphology for decades. Providing an analysis of this enclitic is tricky– it seems at first that it encodes something like ‘speech act participant,’ or ‘local person,’ except that it is categorically never used for first person plural inclusive, a category which includes both first and second person participants.

In this section, I provide a summary of the literature on this morpheme, known as the ‘person enclitic’ in England 1983a. I refer to the enclitic as the disagreement enclitic or the disagreement enclitic paradigm, based on the conclusion that this enclitic expresses *disagreeing* values of [+/-author] and [+/-participant].

Some of the first analyses of this enclitic examined the pattern in Ixtahuacán Mam, in which the disagreement enclitic takes the form =*a* and has the same distribution as =*i* in SJA Mam, illustrated in Table 4.12.

Table 4.12: Ixtahuacán Mam person enclitic (England, 2017, 504)

	SG		PL	
1SG	=a	1EXCL	=a	
		1INCL		
2SG	=a	2PL	=a	
3SG		3PL		

This enclitic pattern is unique to Mam within the Mayan languages, and citing personal communication with Terrence Kaufman, England (1976a) suggests that the person system of Mam developed from the system found in Awakatek, a closely related Mayan language, shown in Table 4.13. In Awakatek, the Set A prefixes make a three way (1/2/3) person distinction. Importantly, the 3rd person prefixes can combine with an enclitic, highlighted in yellow, resulting in second person polite forms.

Table 4.13: Awakatek Set A Marking (pre-vocalic) (England, 1976a, 259)

	Set A	enclitic		Set A	enclitic
1SG	w-		1p	q-	
2SG	aw-		2PL	it-	
2SG polite	t-	u	2PL polite	ky-	u
3SG	t-		3PL	ky-	

England (1976a) proposes that Mam adopted the polite forms from Awakatek and subsequently lost the original second person forms, resulting in a substantial restructuring of the morphological person system. Set A came to only differentiate first from non-first person, and the enclitic (originally indicating second person), is now also used for first person exclusive, specifically indicating the *absence* of second person. England (1983b) later rejects the idea that the enclitics in Mam all derived from one enclitic which spread across the paradigm. Based on data from Tacaná Mam (Cojtí and England, 1986) in Table 4.14 where each of the four enclitics are phonologically distinct, England (1983b, 96) concludes that each enclitic has an independent analysis, and that vowel neutralization applied in Ixtahuacán Mam resulting in =a in all four cells (see Table 4.12).⁸

Table 4.14: Tacaná Mam Enclitics (Cojtí and England, 1986)

	SG		PL
1SG	∅	1EXCL	=o'
		1INCL	
2SG	=a	2PL	=e'
3SG		3PL	

Based on the Tacaná Mam data, England (1983b) analyzes the four enclitics in both Tacaná Mam *and* Ixtahuacán Mam as distinct, realizing the absence of second person (−2SG/PL) for first person and realizing the presence of second person (+2SG/PL) for second person, summarized in Table 4.15. While this analysis may be accurate for Tacaná Mam, it treats the four identical enclitics in Ixtahuacán Mam (and SJA Mam) as distinct morphemes in the language, failing to adequately capture the distribution of the single morpheme =a. Under England's analysis, it is a surprising coincidence that the same form is used for these four distinct pronominal categories across different varieties of Mam. Because this form is relatively stable across several varieties, a unified analysis of the form should be preferred.

Table 4.15: Ixtahuacán Mam Enclitic analysis (England, 1983b)

	SG		PL
1SG	=a [−2SG]	1EXCL	=a [−2PL]
		1INCL	
2SG	=a [+2SG]	2PL	=a [+2PL]
3SG		3PL	

Building on this literature, Collins (2007) argues that England's analysis misses an important generalization about the disagreement enclitic. He analyzes this enclitic in Comitancillo Mam (=a in all four cells, the same pattern in Ixtahuacán Mam) as encoding 'the lack of solidarity' between the speaker and their interlocutor— translating to 'me and not you' in the first person and 'you but not me' in the second person (Collins, 2007, 44). Collins arrives at the notion of the lack of

⁸It is unclear how vowel neutralization would apply to the null morpheme for first person singular.

solidarity based on the description of Tacaná Mam in [Godfrey 1981](#) and personal communication with Godfrey, aiming to encompass the seemingly disparate functions of the enclitic in first and second person.

Collins provides further support for the lack-of-solidarity analysis of the enclitic in Comitancillo Mam from a contrast in the language between first person singular usage with and *without* the enclitic, in which the form without the enclitic is interpreted as first person singular inclusive. If it is assumed that the singular forms in Mam constitute true singulars ([+atomic] in [Harbour 2016](#)), then we do not expect first person singular *inclusive* to exist, and thus that it should be impossible to distinguish between an ‘exclusive’ first person singular with an enclitic and an ‘inclusive’ first person singular without the enclitic in Mam. Collins argues, however, that in Comitancillo Mam, this exact contrast is made.

Take for example the noun *xjalil* ‘person/people.’ When possessing *xjalil* with the first person singular Set A prefix *n-*, two options are available: in (56-a), the presence of the enclitic on the noun encodes first person possession to the exclusion of the interlocutor, while in (56-b), the absence of the enclitic encodes first person possession while also including the interlocutor in some way. The context given by [Collins \(2007\)](#) in which (56-a) can be uttered is a school teacher in Comitancillo addressing Collins about her Indigenous students and their families (excluding Collins), while the context in (56-b) is a school teacher in Comitancillo addressing her own people at a town meeting (her people are her addressees).

- (56) Comitancillo Mam ([Collins, 2007](#), 42)
- a. *n-xjalil=a*
‘my people, not yours’
 - b. *n-xjalil*
‘my people, including you’ or
‘my people, which are also your people’

The addition of the first person singular ‘inclusive’ form in (56-b) completes the possible combinations of Set A marking and the disagreement enclitic, filling the seemingly impossible first singular inclusive cell of the person/number paradigm in Comitancillo Mam, illustrated in [Table 4.16](#).

Table 4.16: Comitancillo Mam possessive paradigm for *xjalil* ‘people’ ([Collins, 2007](#), 42)

	SG		PL
1SG EXCL	<i>n-xjalil=a</i>	1PL EXCL	<i>q-xjalil=a</i>
1SG INCL	<i>n-xjalil</i>	1PL INCL	<i>q-xjalil</i>
2SG	<i>t-xjalil=a</i>	2PL	<i>ky-xjalil=a</i>
3SG	<i>t-xjalil</i>	3PL	<i>ky-xjalil</i>

Notice that the first person singular inclusive form *n-xjalil* does not constitute a ‘minimal group’ of the speaker and the hearer– the form in (56-a) can be used in a true singular context,

‘my people, including you’ or a true plural context, ‘my people which are also your (pl) people’. Collins (2007, 44) argues that this form in Comitancillo Mam supports an analysis of the =a enclitic as a marker of the lack of solidarity between speaker and hearer (formally [+speaker, –hearer] and [–speaker, +hearer]) because its absence in these instance is encoding solidarity between speaker and hearer, in that they are both positively referenced.

The idea that the disagreement enclitic in Mam deserves a uniform analysis is also argued for by Noyer (1992), whose analysis of the Ixtahuacán Mam enclitic informs the development of his theory of person and number features. Using only two bivalent person features [+/-I, +/-You]–mapping directly onto the features [+/-author, +/-participant] in Harbour 2016– Noyer analyzes the four person categories in Mam according to Table 4.17.

Table 4.17: Noyer’s 1992 analysis of Ixtahuacán Mam

Noyer’s features	Person category	Enclitic
[+I –You]	1SG/1pl.EXCL	=a
[+I +you]	1pl.INCL	∅
[–I +You]	2SG/PL	=a
[–I –You]	3SG/PL	∅

Noyer (1992) concludes that the best way to capture the distribution of =a without relying on multiple homophonous morphemes is to reference both the positive and negative values of first and second person features.⁹ When the values of [+/-I] and [+/-You] disagree, the enclitic is inserted. Noyer adopts the alpha notation in (57) in which α represents any value of the feature [I] and $\bar{\alpha}$ represents the opposite value of the feature [You]. Under Noyer’s analysis, the disagreement enclitic is inserted if the values of first and second person are opposite.¹⁰

(57) Ixtahuacán Mam enclitic insertion (Noyer, 1992, 159)

- a. =a \leftrightarrow $\alpha I \bar{\alpha} You$
- b. $\emptyset \leftrightarrow$ elsewhere

I adopt the fundamental insight from the ‘lack of solidarity’ analysis in Collins 2007 and Noyer’s [$\alpha I \bar{\alpha} You$] analysis: the disagreement enclitic is used when the first person feature’s value is opposite of the second person feature’s value. Harbour (2016) updates Noyer’s 1992 analysis

⁹This view argues against the view in Zwicky 1977 that the morphology can only see positive (+) values of features. Independent arguments have also been made for the existence of negative values of features (Nevins, 2011; Harbour, 2013; Watanabe, 2013; Little, 2018).

¹⁰Noyer also discusses the analysis in (i) in which the null marking is ‘marked’ and the overt enclitic is the elsewhere case. He does not decide between the null or overt marking being the marked morpheme. For the current analysis of SJA Mam, I adopt the analysis in (57) that =a is not the elsewhere case.

(i) Enclitic is elsewhere (Noyer, 1992, 160)

- a. $\emptyset \leftrightarrow \alpha I \alpha You$
- b. =a \leftrightarrow elsewhere

with the features [author] and [participant]. While not mapping exactly onto the meanings of the features [I] and [You], the values of [author] and [participant] have the same distribution as [I] and [You] in Noyer’s system, shown in Table 4.18. We can substitute in Harbour’s features using the same α notation, shown in (58). Given this analysis of the disagreement enclitic in Ixtahuacán Mam, I analyze the enclitic =i in SJA Mam as DISAGR for *disagreeing person features*, formalized in (59).

Table 4.18: Harbour’s 2016 analysis of Ixtahuacán Mam

features	Person category	Enclitic
[+auth, -part]	1SG/1PL.EXCL	=a
[+auth, +part]	1PL.INCL	∅
[-auth, +part]	2SG/PL	=a
[-auth, -part]	3SG/PL	∅

(58) Ixtahuacán Mam enclitic analysis (Harbour, 2016)

a. =a ↔ [α author $\bar{\alpha}$ participant]

(59) SJA Mam enclitic analysis based on Harbour 2016

a. =i ↔ [α author $\bar{\alpha}$ participant]

This featural analysis of the enclitic in Ixtahuacán Mam can be applied to any variety of Mam in which the enclitic is used for first singular, second singular, first plural exclusive and second plural (1SG, 2SG, 1PL.EXCL, and 2PL), and has the same form for each use. This includes at least Ixtahuacán Mam, Comitancillo Mam, and SJA Mam.

The conclusion that the disagreement enclitic does not realize a particular feature with a particular value, but realizes the disagreement between the values of two features, shows that a language can treat disagreeing features as a natural class. If features are bivalent, we indeed predict that not only can two positive values (++) and two negative values (--) form independent natural classes, but the disagreement between feature values can form a natural class as well (+–, –+). In fact, Despić and Murray (2018) show that in addition to the Mam enclitic pattern, this is indeed the case for Cheyenne plural marking and Serbian gender agreement.

Cheyenne plural marking, given in Table 4.19, shows a very similar distribution to the disagreement enclitic in SJA Mam but only in the plural: [-ma] is used for first person plural inclusive and [-o’o] for third person plural while [-mé] is used for both first person plural exclusive and second plural. Using the features [+/-speaker] and [+/-hearer], [-ma] marks the category with two positive person features (formalized as +/+p in Table 4.19) and [-o’o] marks the category with two negative person features (-/-p). The form [-mé], however, marks a category similar to the =i enclitic in SJA Mam: it excludes the hearer in first person and includes the hearer in second person. In other words, [-mé] marks the categories in which the values for speaker and hearer disagree (+/-p).

Table 4.19: Cheyenne Plural Marking (Despić and Murray, 2018, 227)

	Speaker	Hearer	Singular	Cheyenne	Analysis
1PL INCL	+	+	–	-ma	+/+ p [-sg]
1PL EXCL	+	–	–	-mé	+/-p [-sg]
2PL	–	+	–		
3PL	–	–	–	-o'o	-/-p [-sg]

Despić and Murray (2018) argue that [-mé] cannot be simply analyzed as the ‘elsewhere’ morpheme, as there is a different morpheme that appears in truly disparate environments and is the better candidate for the elsewhere morpheme in the language. They conclude that the data in Cheyenne support the view that disagreeing values of morphological features can constitute a natural class. The authors show further support for this conclusion from Serbian.

An additional recent example of the disagreeing values of two features creating a natural class is found in Ripano. D’Alessandro (2020) shows that Ripano realizes the mismatch in subject and object gender features with a verbal agreement morpheme, *-ə*, which is distinct from feminine gender agreement and masculine gender agreement, shown in (60). This example shows that the disagreeing features can come from separate arguments, in addition to the patterns we see in Mam and Cheyenne in which the disagreeing features come from the same argument.

- (60) Ripano
 Babbu dic-ə l-e vərità.
 dad.SG.M say-3SG.MM the-SG.F truth.SG.F
 ‘Dad tells the truth.’ (D’Alessandro, 2020, 242)

Before turning to the SJA Mam pattern, another analysis of the Mam disagreement enclitic is given in Scott 2020a, in which I analyze the disagreement enclitic as realizing either positive or negative value of [+/-hearer]. This analysis builds on Little (2018), who argues that the category of first person plural inclusive in Ch’ol is really a general first person plural, meaning that it lacks specification of either + or – [hearer], shown in the *General first person* row of Table 4.20.

Table 4.20: Ch’ol ϕ features in Little 2018

	SG		PL	
First person exclusive	[+speaker]	[-hearer]	[+speaker]	[-hearer]
<i>General first person</i>	-		[+speaker]	
Second person	[-speaker]	[+hearer]	[-speaker]	[+hearer]
Third person	[-speaker]	[-hearer]	[-speaker]	[-hearer]

Following Little (2018), the analysis in Scott 2020a assumes that while the first person plural exclusive pronoun in SJA Mam, *qo’y*, is truly specified for [-hearer], the first person plural inclusive pronoun has no hearer feature at all, summarized in (61).

(61) Analysis of Mam (Scott, 2020a)

- a. 1PL EXCL $qo'=y$ [+speaker, -hearer]
 b. 1PL INCL qo [+speaker]

This draws on Little’s 2018 work on clusivity in Mayan, in which she argues that the pattern extends beyond Ch’ol, and that, for some languages, the inclusive plural is the generic first plural marker and is underspecified for hearer. She draws on data from Ch’ol in which the first person plural inclusive form is used in a multitude of contexts that do not explicitly *include* the hearer. She concludes from this that the “inclusive first plural” category is actually the “generic first plural” category, and that these pronouns only express first person and plural features. Crucially under her analysis, the absence of a [hearer] feature in the second line of Table 4.20 can be interpreted as [+hearer] or [–hearer] depending on the context.

The analysis in Scott 2020a adopts the view that third person pronouns in SJA Mam lack person features; the full featural analysis of person categories fro SJA Mam given in Scott 2020a is given in Table 4.21. Under that analysis, the only pronoun categories that bear the feature [+/-hearer] are the same categories that possess the disagreement enclitic =i. The proposed morphological analysis of the disagreement enclitic is that it realizes any value of [+/-hearer], summarized in (62).

Table 4.21: Mam phi features in Scott 2020a

	SG		PL	
First person exclusive	[+speaker]	[–hearer]	[+speaker]	[–hearer]
<i>General first person</i>	-		[+speaker]	
Second person	[–speaker]	[+hearer]	[–speaker]	[+hearer]
Third person				

(62) Analysis of SJA Mam enclitic (Scott, 2020a)

- =i ↔ [+/-hearer]

The major fault of the analysis in Table 4.21 is that is inconsistent in how it treats the absence of a feature. For first person plural inclusive, the absence of the feature [hearer] can be interpreted as [+hearer] or [–hearer]. Given this interpretation of absent features on a bivalent person theory, the analysis in Table 4.21 falsely predicts that since third person lacks [speaker] and [hearer] features, those features can be interpreted as + or –, meaning that any third person agreement in the language can be interpreted as first person (inclusive or exclusive), second person, or third person. In order to prevent these false predictions, third person must be specified with negative values of first and second person features. If that were to be the case, the analysis of the disagreement enclitic in (62) would no longer capture the data, since third person arguments—which are never realized with the disagreement enclitic— would have a [hearer] feature. While Little’s analysis captures the pattern of clusivity in Ch’ol, the extension of the analysis for SJA

Mam in Scott 2020a using the lack of features to capture third person cannot adequately account for the full distribution of the disagreement enclitic.

4.3.3.2 2nd/3rd plural pronouns in SJA Mam

Adopting the disagreement analysis for the enclitic =i in SJA Mam, I now turn to the rest of the pronominal forms found in the subject/possessor pronoun series: *qi* (2pl) and *qa* (3pl), highlighted in yellow in Table 4.22, which require further analysis. Recall the subject/possessor paradigm in SJA Mam, repeated in Table 4.22: in addition to the distribution of =i in the disagreeing person categories, *qa* is used for third person plural and *qi* is used for second person plural. Also recall that *qi* and *qa* are not reduced pronouns– these forms appear in full pronoun contexts as well.

Table 4.22: SJA Mam subject/possessor pronouns

	SG		PL
1SG	=i	1EXCL	=i
		1INCL	
2SG	=i	2PL	q=i
3SG		3PL	qa

To begin looking at these two pronouns, we start with the third plural morpheme *qa*, which is actually the generic plural marker in the language: it can combine with any countable noun to indicate plurality, shown with *qa xjal* ‘people’ in (63) and *qa b’ech* ‘flowers’ in (64). I analyze *qa* as realizing [–singular] with no context specification, summarized in (65).

- | | | | | | |
|------|----|----------------------------------|------|----|------------------------------------|
| (63) | a. | xjal
person
‘person’ | (64) | a. | b’ech
flower
‘flower’ |
| | b. | qa xjal
PL person
‘people’ | | b. | qa b’ech
PL flower
‘flowers’ |

- (65) Plural marker
qa ↔ [–singular]

The second plural pronoun, *q=i*, is bimorphemic: I propose that the initial *q* is separable from the disagreement =i enclitic, and I analyze the *q* as [–singular] in the context of second person ([–author, +participant]). The analysis for each of the two morphemes in *q=i* is given in (66).

- (66) Second person plural pronoun (bimorphemic)
- a. =i ↔ [αauthor, ᾱparticipant]
 - b. q ↔ [–singular] / [–author, +participant]

The analysis of *qa* and *qi* presented here has implications for the rest of the subject/possessor pronoun paradigm. Take the second person plural pronoun *qi* for example. This pronoun is in its full form, both in the phonological sense and the featural sense; in other words, it is not reduced in any way. This is summarized in (67), which shows that the full, independent pronoun *q=i* appears as a subject pronoun.

- (67) a. $\boxed{q=i}$
 2PL=DISAGR
 ‘y’all’
- b. O chi tan $\boxed{q=i}$.
 PFV B2/3PL sleep 2PL=DISAGR
 ‘You all slept.’

This pattern of full realization of subject pronouns is not found for first person pronouns. Recall that the first person subject/possessor pronouns are reduced to the disagreement enclitic *=i*. This is illustrated for the first person plural inclusive pronoun *qo’y* in (68).

- (68) a. $\boxed{qo’y}$
 1PL=DISAGR
 ‘us (exclusive)’
- b. O qo tan $\boxed{=i}$.
 PFV B1PL sleep =DISAGR
 ‘We (exclusive) slept.’

If the subject position triggers spell-out of full pronouns for second and third person plural, something must explain the absence of full first person pronouns in subject position. I argue that the best way to capture this pattern is with an impoverishment rule which deletes number features in the context of first person. §4.4 formalizes the impoverishment rule and provides more evidence in its favor.

4.4 Derivation of reduced pronouns

4.4.1 Full pronouns and multiple insertion

The focus of this section is the process of reduction that first person pronouns undergo in subject/possessor position. It is necessary to discuss the morphological analysis of full pronominal forms before we can understand how they are reduced. Recall that full pronouns are used in object position and in non-verbal predicate constructions, shown in (69).

(69) Full pronouns: objects and subjects of non-verbal predicates

- a. Ma tz'=ok ky-ke'y-an qa qin=i.
 PROX B2/3SG=DIR:in A2/3PL-see-DS PL 1SG=DISAGR
 'They saw me.'
- b. Ajxnaq'tzal qin=i.
 teacher 1SG=DISAGR
 'I am a teacher.'

These two paradigms are given in Table 4.23. The only difference between the two paradigms is found in the second person singular in which transitive objects are realized as $a=y$ while non-verbal predicate subjects are realized as $=i$. The a in the pronoun $a=y$ is likely the determiner a which can appear before all pronominal forms in certain object focus contexts. For second person singular, a is always present on object pronouns.

Table 4.23: Full pronouns: objects vs NVP subjects

Object pronouns			NVP subj pronouns		
	SG	PL	SG	PL	
1 EXCL	qin=i	qo=y	1 EXCL	qin=i	qo=y
1 INCL		qo	1 INCL		qo
2	a=y	q=i	2	=i	q=i
3		qa	3		qa

I attribute the difference between ay and $=i$ to phonology, explained by the fact that object pronouns are required to stand alone as words, while non-verbal predicate subjects can lean on their predicates. This is shown in (70-a) for the second singular object $a=y$ and (70-b) for the second singular non-verbal predicate subject $=i$.

- (70) a. Ma tz'=ok n-ke'y-n=i a=y.
 PROX B2/3SG-DIR:in A1SG-see-DS=DISAGR DET=DISAGR
 'I saw you.'
- b. Ajxnaq'tzal =i.
 teacher=DISAGR
 'You are a teacher.'

The important point about full pronouns in SJA Mam is that for many of the forms, two morphemes are inserted. One way to capture this would be to posit a fission rule to split the pronouns terminal node into two. However, this analysis is untenable due to the fact that in bimorphemic pronouns, the two morphemes realize an overlapping set of features. Thus, a fission rule that separates any of the three pronominal features would fail to account for the two morphemes.

Take the first singular pronoun $qin=i$ as an example. Recall the features that qin and $=i$ realize, repeated in (71).

- (71) 1SG *qin=i*
- a. *qin* ↔ [+author,+singular]
 - b. *=i* ↔ [α author, $\bar{\alpha}$ participant]

Both of the morphemes in (71) realize [+author], and a fission rule separating the features of the pronoun into one node with [author] and [singular] and one node with [participant] would not predict the insertion of both morphemes in (71). Alternatively, if the fission rule copies all of the features onto both of the two resulting nodes, it is unclear what would govern the insertion of one over the other for either of the nodes.

Instead of a fission rule, I assume that any number of vocabulary items eligible for insertion can be inserted for a pronoun. It happens to be that in SJA Mam, the vocabulary item specifications are such that only a maximum of two vocabulary items may apply at once, and when they do, both are inserted.

The ability for multiple morphemes to be inserted for a single pronoun does not only occur in the independent pronoun series. bimorphemic pronouns are found in the subject/possessor paradigm as well, repeated in 4.24.

Table 4.24: SJA Mam subject/possessor pronouns

	SG		PL
1SG	<i>=i</i>	1EXCL	<i>=i</i>
		1INCL	
2SG	<i>=i</i>	2PL	<i>q=i</i>
3SG		3PL	<i>qa</i>

The second person plural pronoun includes the plural morpheme *q* and the disagreement enclitic *=i*; the rules for inserting these morphemes are repeated below from §4.3.3.2.

- (72) Second person plural vocabulary items
- a. *=i* ↔ [α author, $\bar{\alpha}$ participant]
 - b. *q* ↔ [-singular] / [-author, +participant]

Now that we have seen how full pronouns are realized, we turn to how full pronouns undergo reduction resulting in the subject/possessor paradigm in Table 4.24. In §4.4.2, I provide an account of how the features of pronouns are copied via Agree, and in §4.4.3, I propose an impoverishment rule to capture the nature of the reduction of pronouns in subject/possessor position.

4.4.2 Feature copying

What we have seen so far is that there are two loci of person and number agreement (Set A and Set B), and that there are two types of pronominal forms: full pronouns, and reduced pronouns. In §4.2 I argued that the reduced pronouns have the same distribution as lexical subjects/possessors and thus occupy an argument position in the clause. First person subject/possessor pronouns

stand out in that they are realized in a reduced way. In this section I propose an impoverishment rule to account for the reduced first person subject/possessor pronouns. We start with assumptions about the mechanics of the Agree operation which copies features of pronouns to functional heads resulting in Set A/B agreement.

The phonological status of both Set A and Set B markers as affixes or clitics varies in the descriptions of Mayan languages (see Coon 2016, 528 for an overview). However, with respect to their syntactic status, and for concreteness, I follow Coon (2017) and assume that Set A morphemes represent agreement between a functional head (Voice or Poss) and its specifier. For Set B morphemes, I assume that they also reflect agreement between a functional head (Infl) and a DP goal. See Chapter 3 §3.2.2 and 3.2.3 for more background on Set A and B markers.

I adopt the interaction/satisfaction model of Agree (Deal, 2015, 2021), as detailed in Chapter 3. Starting with Set B, recall from Chapter 3 that these morphemes are derived via agreement with a probe on Infl, whose specifications are repeated in (73).

- (73) Probe on Infl:
- a. Interaction: [author, singular]
 - b. Satisfaction: [ϕ or Voice_{TRANS}]

Here, we are not concerned with what makes the probe stop probing, i.e. its satisfaction features,¹¹ but with what features the probe copies back (its interaction features). As discussed in §4.3.2 of this chapter, this probe copies back [author] and [singular] features.

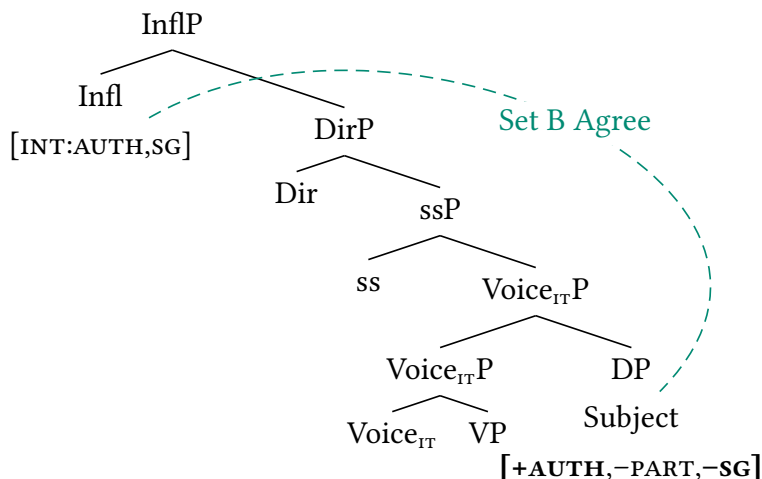
Given that the Set B morphemes themselves do not make reference to [participant] features (see Table 4.8), it is possible that the probe on Infl in fact also copies [participant], but that this feature is simply ignored in the morphology. Nothing in the present analysis prohibits this; however, the vocabulary entry for the disagreement enclitic =*i* in Table 4.22 would need to be altered to include [D], as to ensure that it is not inserted in Set A or Set B contexts.

The following example illustrates the derivation of a Set B agreement morpheme in the syntax and morphology, repeated from Chapter 3. First the probe on Infl searches its domain and finds the intransitive subject, copying back its [author] and [singular] features. In the morphology, those features are realized as a Set B morpheme, in this case first person plural *qo*, summarized in (76). In the base position of the pronoun, only the disagreement enclitic =*i* is inserted, realizing [+author, -participant], summarized in (77).

- (74) Ma qo b'et=i.
 PROX B1PL walk=DISAGR
 'We (exclusive) walked.'

¹¹Though not relevant to the present discussion, and as discussed in Chapter 3 §3.4.2, this probe is satisfied by ϕ , meaning any DP argument, or Voice_{TRANS}, accounting for its ability to agree with intransitive subjects but not transitive objects.

(75) Intransitive subject agreement



(76) Infl

Features copied back: [+author][−sg]

Morpheme: **qo** ↔ [+author,−sg]

(77) DP subject

Morpheme: =i ↔ [+author,−participant]

Notice that the first person plural *qo* is not inserted in the subject position of the pronoun. However, given its features, this is unexpected. Recall that the first person plural exclusive independent pronoun has two morphemes: *qo* (1pl) and the disagreement enclitic =*i* (written as <y> in the orthography after vowels).

If we maintain the analysis of *qo* as ‘context-less,’[] i.e. that it realizes [+author,−sg] without specifying Infl or Voice or D, nothing blocks its insertion in subject position in (74). In the pronoun’s immediately post verbal base position, the context for insertion of *qo* is met, yet it is absent. (78) shows that *qo* is ungrammatical in subject/possessor position when it triggers Set A or Set B agreement.

- (78) a. Ma qo b’et *qo=y.
 PROX B1PL walk 1PL=DISAGR
 ‘We (exclusive) walked.’
- b. Ma ∅ kub’ q-tz’ib’-an *qo=y.
 PROX B2/3SG DIR:down A1PL-write-DS 1PL=DISAGR
 ‘We (exclusive) wrote it down.’
- c. q-lan *qo=y
 A1PL-wool.thread 1PL=DISAGR
 ‘our (exclusive) wool thread’

However, *qo* is possible in subject position if no agreement occurred, shown in (79). The generalization regarding when *qo* is inserted depends on whether the pronoun triggered agreement, suggesting that a rule accounting for the ungrammaticality of (78) must rely on whether the pronoun triggered (Set A or Set B) agreement.

- (79) B'et **qo**'=y.
 walk 1PL=DISAGR
 'We (exclusive) walked.'

In §4.4.3 I propose that *qo* is absent in the subject position because the feature [+/-singular] is deleted on first person arguments (both singular and plural) which have undergone agreement. I propose a technical implementation of this via an impoverishment rule in §4.4.3.2.

4.4.3 Impoverishment

In this section I provide an analysis for the reduction of first person pronouns in subject/possessor position. I argue that the reason why we do not see the full first person independent pronouns in this position is due to an impoverishment rule. Impoverishment rules are applied at the morphological level and remove syntactic features (Noyer 1992; Halle and Marantz 1993; see Keine 2010 and Baier 2018 for overviews of impoverishment operations). In this section, I show that the reduction of pronouns only applies to *first person* pronouns, and further, only applies when a pronoun has been agreed with.

4.4.3.1 First person reduced pronouns

I assume that pronouns in subject/possessor positions start the derivation with fully specified ϕ features, thus leading us to expect the forms on right side of Table 4.25. However, for the first person pronouns, their pronominal base morphemes *qin* for first singular, and *qo* for first plural, (both boxed in the table) are categorically absent from the reduced pronouns in subject/possessor position.

Table 4.25: Subj/Poss vs. Independent pronouns

Subj/poss pronouns			Independent pronouns		
	SG	PL		SG	PL
1 EXCL	=i	=i	1 EXCL	qin =i	qo =i
1 INCL			1 INCL		qo
2	=i	qi	2	=i	qi
3	∅	qa	3	∅	qa

Unlike first person pronouns, non-first person forms are identical in the independent pronoun paradigm and subject/possessor paradigm, indicating no featural reduction. The reduction in

pronouns only applies to first person pronouns. We must account for the absence of *qin* for first person singular and *qo* for first person plural in subject/possessor position.

Recall that *qin* realizes [+author,+singular] and *qo* realizes [+author,-singular]. Their absence can be captured with the following impoverishment rule:

- (80) First person pronoun impoverishment rule (*version1*)
 [+/-singular] → ∅ / [+author]

The result of deleting the feature [+/-singular] is that the features needed for insertion of *qin* and *qo*, repeated in (81), are no longer present and thus they cannot be inserted via the Extended Subset Principle in (53). We can now explain why full first person pronouns are not used in subject position: impoverishment bleeds *qin* and *qo* insertion, whose vocabulary insertion rules are repeated in (81):

- (81) a. *qin* ↔ [+author,+singular]
 b. *qo* ↔ [+author,-singular]

The impoverishment rule in (80) accounts for the fact that deletion of [singular] only applies to first person forms. Crucially, it does not delete [singular] in non-first person forms. This accurately accounts for the forms *q=i* (second person plural) and *qa* (third person plural) in both paradigms, which both realize [-singular].

- (82) a. *q* ↔ [-author,+participant-singular]
 b. *=i* ↔ [α author, $\bar{\alpha}$ participant]
 c. *qa* ↔ [-singular]

The problem with the rule in (80) is that it over-predicts the deletion of the first person morphemes *qin* and *qo*. The rule in (80) *always* deletes number features on first person pronouns. This would wrongly predict the deletion of [singular] in Set A, Set B, and independent pronoun contexts as well.

The impoverishment rule in Mam must only apply to subjects and possessors, and crucially not Set A and B agreement or independent pronouns. We can capture this distribution with the generalization that only subjects and possessors trigger Set A or Set B agreement morphemes.¹² In §4.4.3.2, I propose a novel way to implement this condition into the impoverishment rule by proposing that agreement probes give their category feature to the ϕ features they copy via Agree, leaving a diacritic indicating that a feature has been agreed with.

¹²Recall that transitive objects sometimes trigger verbal Set B agreement in SJA Mam, though it is not as common, and it may reflect a formal/standardized version of the language, as discussed in Chapter 3. When objects trigger Set B agreement, no pronoun (reduced or full) appears in object position, which is unpredicted given the analysis here. However, the agreeing pattern represents a separate grammar, and that pattern is less understood for speakers of SJA Mam. Looking to varieties that consistently mark objects with agreeing Set B morphology, we actually find restrictions on subject/object combinations based on the presence of the disagreement enclitic (reduced pronoun) (England, 1983b; Pérez Vail, 2014). More research into this pattern in SJA Mam is needed to develop an analysis of agreeing object pronouns.

4.4.3.2 Agreed-with condition

The goal of this section is to formalize the generalization that first person pronouns in SJA Mam are reduced via the impoverishment rule in (80) only when the pronoun has been agreed with.

I have shown that only subject pronouns (both transitive and intransitive subjects) undergo reduction, which I capture an impoverishment rule that only applies to ‘agreed-with’ arguments. I formalize this property of the impoverishment rule by proposing that it only applies in the context of $[+author]^F$ where F indicates that the $[+author]$ feature has been agreed with.

I implement this condition of the impoverishment rule by assuming that when a probe agrees with a goal, it not only copies the features of the goal, but the probe also gives its category feature to the goal, following insights by Clem (2019). This property of probes, namely that they can have an effect on the goals they Agree with, is given the term ‘goal flagging’ by Deal (2022), and constitutes one of the structural outcomes of Agree, among others such as the copying of features to probes and the possible movement of goals.

Concretely, I propose that when agreement probes in SJA Mam agree with a goal– i.e. copy back its features– the probe also gives a copy of its category feature to the goal. I implement this on the featural level: a probe can give a copy of its category feature to an individual feature, differentiating a ‘non-agreed with’ feature from an ‘agreed with’ feature with a diacritic indicating the functional head of the probe. In the example below, a hypothetical probe on Infl with $[INT: author]$ copies back $[+author]$ from a goal, leaving the instance of $[+author]$ on the goal with the diacritic “Infl”.

(83) Bidirectional feature copying

- a. $[_{INFL} \quad Infl \quad [[+author]]]$
- {----- Agree -----}
- b. $[_{INFL} \quad Infl [+author] \quad [[+author]^{Infl}]]$

Notice that Infl gives its category feature to the copy of the goal feature only in its base position. The instance of the feature that is copied to the probe does not have the diacritic. The only feature with a diacritic is the feature on the goal after it has been copied. These facts are summarized in Table 4.26.

Table 4.26: Category diacritic on ‘agreed-with’ feature

Feature on goal when merged:	$[+author]$
Feature on goal once agreed with by Infl:	$[+author]^{Infl}$
Feature on Infl after Agree:	$[+author]$

I propose that the impoverishment rule in SJA Mam applies to $[+author]^F$ where F is a feature which encompasses all functional category features. Recall that the impoverishment rule does not only apply to pronouns which have been agreed with by Infl (triggering Set B), but also pronouns which have been agreed with by Voice and Poss (triggering Set A). These are the only

ϕ agreement operations in the language, and the abstraction of the feature F covers both Set A and Set B agreement contexts.

This proposal builds on and is inspired by Clem's 2019 analysis of case marking in Amahuaca. Her analysis assumes that the copying of features is bidirectional, i.e. – that not only are ϕ features copied to probes on functional heads, but the category of those heads can be copied back onto the ϕ bearing goal. Clem accounts for abstract accusative case in Amahuaca by positing that when v_{TR} (transitive v) agrees with its DP complement, it gives a copy of its v_{TR} feature to the DP. In the morphology, DPs with a $[\phi, v_{TR}]$ feature bundle are assigned accusative case.

For SJA Mam, I propose that the logic of bidirectional feature exchange can be applied in a new context. Specifically, the result of a probe copying its category feature onto a goal need not result in a sequence of features on the goal, such as $[\phi, v]$, but can result in the category feature modifying the goal's features directly, such as $[\phi^v]$. This new application allows the differentiation between the instance of the goal's features (ϕ in this case) on the goal and the instance of the goal's features on the probe.

This effect, which we might call feature modifying, also allows rules in the morphology to target individual features differently depending on whether the instance of that feature has been copied via Agree or not. This analysis thus accounts for the spell out of SJA Mam pronouns: first person pronouns (specifically, [+author] features) which have been copied by an Agree probe ([+author^F]) are subject to the following impoverishment rule:

- (84) First person pronoun impoverishment rule (*final*)
 $[+/-singular] \rightarrow \emptyset / [+author]^F$

The final impoverishment rule in (84) explains why we do not see full first person pronouns in subject and possessor positions (i.e. positions which trigger Set A or B agreement). Because the [+/-singular] feature is no longer present in these positions, their 'pronominal base' morphemes *qin* (1sg) and *qo* (1pl) cannot be inserted, since they spell out [+singular] and [-singular], respectively. Thus, (84) captures the ungrammaticality of the first person *qin* in subj/poss position in (85).

- (85) 1sg: ***qin**
- a. Ma chin b'et ***qin**=i.
 PROX B1SG walk 1SG=DISAGR
 'I walked.'
- b. Ma \emptyset kub' n-tz'ib'-an ***qin**=i.
 PROX B2/3SG DIR:down A1SG-write-DS 1SG=DISAGR
 'I wrote it down.'
- c. n-lan ***qin**=i
 A1SG-wool.thread 1SG=DISAGR
 'my wool thread'

The impoverishment rule in (84) above also accounts for why we do see full second and third person pronouns in subject and possessor position, because the rule only targets [+author]. The [+/-singular] feature on second and third person pronouns is indeed realized in these positions, shown in (86) and (87).

(86) 2pl: full pronouns

- a. Ma chi b'et \sqrt{q} =i.
 PROX B2/3PL walk 2PL=DISAGR
 'Y'all walked.'
- b. Ma \emptyset kub' ky-tz'ib'-an \sqrt{q} =i.
 PROX B2/3SG DIR:down A2/3PL-write-DS 2PL=DISAGR
 'Y'all wrote it down.'
- c. ky-lan \sqrt{q} =i
 A2/3PL-wool.thread 2PL=DISAGR
 'y'all's wool thread'

(87) 3pl: full pronouns

- a. Ma chi b'et \sqrt{qa} .
 PROX B2/3PL walk PL
 'They walked.'
- b. Ma \emptyset kub' ky-tz'ib'-an \sqrt{qa} .
 PROX B2/3SG DIR:down A2/3PL-write-DS PL
 'They wrote it down.'
- c. ky-lan \sqrt{qa}
 A2/3PL-wool.thread PL
 'their wool thread'

Lastly, the impoverishment rule in (84) also accounts for why we see full pronouns for all pronominal categories in contexts without ϕ agreement, such as subjects of non-verbal predicates, shown in (88). These pronouns have not been agreed with by any functional head, and thus do not have the F diacritic which would trigger the impoverishment rule in (84).

(88) Full pronouns without agreement

- a. B'et **qo'**=y.
 walk 1PL=DISAGR
 'We (exclusive) walked.'
- b. B'et **qin**=i.
 walk 1SG=DISAGR
 'I walked.'

- c. B'et q=i.
walk 2PL=DISAGR
'Y'all walked.'
- d. B'et qa.
walk PL
'They walked.'

4.4.3.3 Optional 2PL reduction

Further evidence that the reduction of pronouns is sensitive to whether the pronoun triggered agreement comes from the optional reduction of the second person plural pronoun $q=i$ to the disagreement enclitic pronoun, $=i$, shown in (89-b).

- (89) Optional reduction of 2PL qi
- a. ky-ja q=i
A2/3PL-house 2PL=DISAGR
'y'all's house'
- b. ky-ja=y
A2/3PL-house=DISAGR
'y'all's house'

Interestingly, this optional reduction is only possible in Set A agreement contexts, shown with a Set A possessor in (89) and a Set A subject in (90).

- (90) Set A: optional 2PL reduction
- a. Ma \emptyset tzaj ky-q'ama-'n q=i w-i=y.
PROX B2/3SG DIR:come A2/3PL-tell-DS 2PL=DISAGR A1SG-RN:DAT=DISAGR
'Y'all told me.'
- b. Ma \emptyset tzaj ky-q'ama-'n=i w-i=y.
PROX B2/3SG DIR:come A2/3PL-tell-DS=DISAGR A1SG-RN:DAT=DISAGR
'Y'all told me.'

In Set B contexts, optional reduction of $q=i$ to $=i$ not available, shown in (91-b). This is plausibly functionally because the second plural Set B marker, *chi*, is virtually identical to the first person singular Set B marker, *chin*, which often drops the final nasal in fast speech, shown in (92).

- (91) Set B: prohibited 2PL reduction
- a. Ma chi b'ix-an q=i.
PROX B2/3PL dance-DS A2PL=DISAGR
'Y'all danced.'

- b. #Ma chi b'ix-n=i.
 PROX B2/3PL dance-DS=DISAGR
 #‘Y’all danced.’
 Interpreted as: ‘I danced.’
- (92) Ma chi(n) b'ix-n=i.
 PROX B1SG dance-DS=DISAGR
 ‘I danced.’

The optional reduction of the second person plural pronoun $q=i$ to $=i$ in Set A contexts suggests that the pronominal impoverishment rule optionally applies to second person arguments as well. We can formalize this with an additional impoverishment rule targeting [+participant] that is optionally added to the grammar. To account for it only applying in Set A contexts, we can specify the value of the category feature present on the feature; for Set A, that’s v/n , capturing its ergative/genitive distribution.

- (93) Second person reduced pronoun impoverishment rule (*optional*)
 $[+/-singular] \rightarrow \emptyset / [+participant]^{v/n}$

This pattern provides support for the impoverishment rule for first person pronouns in (84) because it shows concrete evidence that the process of reducing pronouns is sensitive to which functional head agrees with them. When v/n agrees with second plural (creating Set A markers), the impoverishment rule in (93) optionally applies. However, when Infl agrees with second plural (creating Set B markers), the pronoun must be realized as its full form, $q=i$.

In conclusion, the realization of reduced pronouns in SJA Mam suggest that the spell out of pronouns– in particular, the application of specific impoverishment rules– is sensitive to whether or not the pronoun has been agreed with. Even further, the impoverishment rule can be sensitive to which probe agreed with the pronoun, also providing further examples of ‘goal flagging’ from Deal (2022).

4.4.4 Consequences of the analysis

4.4.4.1 Outcomes of Agree: ϕ agreement vs. movement

In Chapter 3, I argue that transitive objects, which do not typically trigger agreeing Set B morphology on verbs and appear as full pronouns in SJA Mam, are licensed low in the clause by $v/Voice$. This conclusion means objects in SJA Mam are ‘agreed-with’ just like subjects and possessors, and thus the impoverishment rule in (84) should apply to objects as well. However, object pronouns in these constructions do not undergo reduction in SJA Mam. Recall from Chapter 3 §3.5 that this type of Agree has different outcomes than subject and possessor Agreement. While subject and possessor agreement results in ϕ morphemes, the outcome of Agree between Voice and objects is not morphological ϕ agreement, but rather, movement.

These two possible outcomes of Agree, namely, movement and morphological agreement, are consistently found on distinct Agree probes in SJA Mam. Recall that most Agree operations in the

language result in morphological ϕ agreement: when Voice Agrees with transitive subjects, when Infl Agrees with intransitive subjects, and when Poss Agrees with possessors, these operations result in morphological ϕ agreement (Set A or Set B morphemes). Contrast this pattern to what happens when Voice Agrees with objects: the result is movement, not morphological agreement.

In this way, subjects and possessors behave distinctly from objects in SJA Mam. Their differences are reflected in the outcomes of Agree (Agree with subjects and possessors results in ϕ agreement while Agree with objects results in movement). As I have shown throughout this chapter, these two categories of pronouns also behave distinctly with respect to whether the pronouns undergo reduction (subjects and possessors reduce while objects do not). I suggest that the differences in outcomes of Agree are the cause of the difference in pronominal reduction.

For a formal implementation, recall the impoverishment rule proposed in §4.4.3.2 to capture the first person pronouns reduction, repeated in (94). This rule results in the reduction of first person pronouns that have been Agreed with by any functional head, indicated with the F diacritic.

- (94) First person pronoun impoverishment rule (*final*)
 [+/-singular] $\rightarrow \emptyset$ / [+author]^F

While this rule applies to subjects and possessors, it possibly over-applies to transitive objects, given that Voice must Agree with transitive objects to trigger object movement. One way to maintain the difference between subjects/possessors and objects is to say that, at least in SJA Mam, only probes which result in morphological ϕ agreement give a copy of their category feature to their goals. Thus, it is only probes that copy back features of goals (via the interaction condition) that likewise give a copy of their category feature to the goal. This contrasts with probes that only result in movement of the goal: these probes do not copy features of the goal (an example of *pure* satisfaction (Deal, 2021)), and thus do not give a copy of their category feature to the goal. With this, the impoverishment rule in (94) correctly only applies to subjects and possessors. Although objects are Agreed with by Voice, they do not bear the category feature of Voice because Voice did not copy back the features of the object.

4.4.4.2 Agreement beyond Set A and Set B in Mayan

As alluded to in the introduction to this chapter, there are Mayan languages which index features of subjects in objects on the verb with additional paradigms beyond typical Set A and Set B. Below I briefly discuss a few of these examples and highlight that they are distinct from what we see in SJA Mam.

First, the analysis for SJA Mam in §4.2 of this chapter is that the disagreement enclitic and the other subj/poss pronouns are not agreement, but pronouns which are phonologically small and may lean on the verb/noun. Other Mayan languages which show multiple instances of ϕ features on the verb seem to display patterns more aligned with an agreement analysis. The generalization among these languages is that in cases that Set A and B paradigms do not mark number, a distinct set of number affixes co-occur with Set A or Set B which.

We can see this most clearly for Ch’ol, in (95) (Coon, 2016, 528). In these examples, you can see that the Set A and Set B morphemes only express person features; it is the suffix *-ob* which provides number features of either the subject or the object.

- (95) a. Tyi y-il-ä-y-ety-**ob**.
 ASP A3-see-TV-EP-B2-PL
 ‘They saw you.’ Ch’ol (Coon, 2016, 528)
- b. Tyi aw-il-ä-y-**ob**.
 ASP A2-see-TV-EP-PL
 ‘You saw **them**.’ Ch’ol (Coon, 2016, 528)

Another language in which we see multiple loci of agreement for one argument is **Tzotzil** (Aissen, 1987), which has been described as having a high and low series of Set B markers, shows in (96). Similarly to Ch’ol, the high Set B markers in Tzotzil only show person distinctions, while the low Set B markers also make number distinctions.¹³

- (96) L- i- s- pet -**otik**.
 CP B1 A3 carry -1PLINC
 He carried us (inclusive). Tzotzil (Aissen, 1987, 1)

Preminger (2014) provides an analysis of the pattern in Kaqchikel which is similar to the number agreement pattern in Ch’ol. Based on the generalization that the extra agreement marker agrees with either the subject or the object, Preminger proposes that a separate number head sits above both arguments, and can reach both arguments, copying back plural features when present. It is this characteristic of the extra agreement morphemes that suggests they be analyzed via Agree— an operation which can locate and establish relationship with multiple goals. In this way, the patterns we see in Ch’ol, Tzotzil, and Kaqchikel, are distinct from what we see in SJA Mam. As I argued for in §4.2, while the disagreement enclitic and other subj/poss pronouns are small and sometimes phonologically dependent, they are indeed syntactically independent pronouns, not agreement.

4.5 Summary

In this chapter, I presented the paradigm of subject/possessor pronouns in SJA Mam. I argued that these pronominal forms are not derived via Agree, as I argued in Scott 2020b, but instead are pronouns in subject/possessor position. Evidence for this structural analysis comes from constructions in which lexical subjects and possessors are dislocated from their immediately post verbal and post-nominal positions (reflexives, focus movement, possessor movement, and polar questions). In all of these constructions, the subject/possessor pronouns follow the same word order pattern as lexical subjects, a pattern not predicted under the Scott 2020b analysis of reduced

¹³The high and low Set B markers sometimes co-occur while sometimes occur independently. Woolford (2011) shows phonological factors that influence their distribution.

pronouns as agreement morphemes, but which is accounted for naturally if the pronouns are in argument position.

In §4.3, I provided a morphological analysis of the various ϕ paradigms in SJA Mam, including Set A and Set B agreement, independent pronouns, and subject/possessor pronouns. Of the subject/possessor pronouns, of particular interest is the disagreement enclitic, =*i*. I situated the pattern of =*i* in SJA Mam within the broader literature on this morpheme across other varieties of Mam. With respect to the disagreement enclitic in other varieties, the pattern in SJA Mam is similar to that of Ixtahuacán Mam and Comitancillo Mam, wherein a single enclitic, =*i* in SJA Mam, is used for first and second singular, first plural exclusive, and second plural pronouns. I summarized the literature on this morpheme in Mam, adapting the analysis shared by Noyer (1992): the enclitic =*i* in SJA Mam realizes the disagreeing values of the person features [+/-author] and [+/-participant].

Lastly, the distribution of the disagreement enclitic reveals that first person subject/possessor pronouns are reduced versions of full independent pronouns. I account for the reduction pattern with an impoverishment rule which deletes features on first person pronouns in subject/possessor contexts. Specifically, these are contexts in which the pronouns have been agreed with. To account for this, I propose that when an agreement probe in SJA Mam copies a feature of a goal, the probe also gives a copy of its category feature to that goal, and that the impoverishment rule which reduces first person pronouns, is sensitive to these probe category features. The result of this analysis is that morpheme insertion rules or impoverishment rules at PF can be sensitive to whether a goal has been agreed with.

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Appendix A

Abbreviation guide

A.1 Introduction¹

Without a recent and in-depth experience studying linguistics, it can be hard to read a linguistics paper. This is because linguistics papers are written with only a linguistically trained audience in mind. However, in the Mam language and culture classes, discussed more in depth in Chapter 1 and Appendix B, there have been countless people interested in learning about the Mam language that do not have a linguistics background. For this reason, Samba Kane, my co-author on this guide, and I wanted to provide an aid to make this dissertation useful to such an audience. We want to help those learning Mam to have a deeper understanding of the language by being able to understand the examples in this dissertation.

The purpose of this guide is to aid the reader in understanding the linguistic examples presented in this dissertation. Specifically, this guide is for readers who are curious about learning Mam, and are interested in learning Mam from the individual example words and sentences. This guide provides easy to understand definitions of symbols, abbreviations, and terms found specifically in the Mam examples in this dissertation that have at least three lines, like the following example in (1):

- (1) *qa xjal* ← Mam
 PL person ← Gloss
 ‘people’ ← English

In the example above, the top line is in the Mam language. It gives the example in the orthography (writing system) adopted by Mam speakers. The bottom line gives an English translation of the Mam words/sentence. In (1), we can see that *qa xjal* means “people.” The middle line is the “gloss” line– it provides a break down of the meaning of all of the parts of the words, phrases, or sentences. In (1), we can see that *xjal* means “person” on its own, and the word *qa* means “PL,” an abbreviation for “plural,” meaning “more than one.”

¹This guide was co-written and co-designed by Samba Kane, graduate of UC Berkeley linguistics undergraduate program and rising first year PhD student in linguistics at Stanford.

In this guide, all abbreviations used in the gloss lines in this dissertation are presented in alphabetical order and defined. It is important to clarify that the definitions provided in this guide are intended to be as understandable, accessible, and non-technical as possible, and are specific to this dissertation. The terms in this guide may have broader definitions in other contexts, but we have done our best to strike a balance between complete technical accuracy and understandability. We hope that by using this guide, readers of various backgrounds and goals will be able to learn something from this dissertation.

A.2 Symbols

Symbol	Term	Definition/Meaning
*	Asterisk	The asterisk indicates that a sentence is ungrammatical or unacceptable to native speakers. A sentence can be ungrammatical because the words are not in the correct order, a prefix is used incorrectly, or countless other reasons.
-	Dash	The dash indicates a separation between morphemes. Morphemes are the units of language that carry meaning; they can be words, roots, suffixes, and prefixes. Some words only have one morpheme. If a word has more than one morpheme, the dash separates the two. For example, “cats” in English has two morphemes: “cat” and “s” (plural) so we’d write it as “cat-s.”
=	Equal Sign	The equal sign indicates that a morpheme is a clitic. Clitics are pieces of words that can be separated from the base word; in this way they are similar to prefixes and suffixes. ² Clitics can be divided into two categories: proclitics and enclitics. Proclitics occur before the words they are attached to while enclitics appear after the word they attach to. Clitics cannot stand on their own; they need to attach to a word in order to be pronounced.

²The difference between clitics and affixes (prefixes and suffixes) is technically complex and not crucial to understanding the Mam examples.

Symbol	Term	Definition/Meaning
∅	Null Sign	The null sign is used to indicate that a morpheme is not pronounced. In these cases, silence in a sentence is associated with a specific meaning. For example, in Mam, the null morpheme ∅ (B2/3SG) can tell us about the features of the subject (see the pronoun section below for more on pronoun features).
()	Parentheses	Parentheses indicate optional words, morphemes, or phrases. In certain contexts, some words or morphemes can be removed without changing the meaning of the sentence. The parentheses indicate that the sentence is acceptable both with and without the content in the parentheses. The combination *(...) means that removing what is inside the parentheses is unacceptable. The combination (*...) means that including what is inside the parentheses is unacceptable.
#	Pound sign	The pound sign indicates that a sentence is infelicitous or anomalous. A sentence that is infelicitous is grammatical but is not used in the appropriate context. An example of an infelicitous sentence in English is “Please don’t touch that stove” said in the context of a solo hike in the mountains with no stoves around. A sentence that is semantically anomalous is also grammatical but somewhat meaningless; that is, it does not really make sense without picturing a fictional or imaginary context. An example of a semantically anomalous sentence in English is “The worried tissue box ate the idea.”
?	Question Mark	The question mark at the beginning of a sentence is used to indicate that the sentence is not completely grammatical or acceptable to native Mam speakers. The sentence, for some reason, has something off about it that makes it neither perfectly acceptable nor completely unacceptable.

Symbol	Term	Definition/Meaning
/	Slash	The slash is used to indicate that the morpheme has more than one use. If a morpheme is used in context X and context Y, the gloss may be written as X/Y. For example, the abbreviation 2/3 means that the morpheme is used for second person and third person.
[]	Square Brackets	Square brackets are used to indicate that what comes between them is a constituent. Constituents are groups of words that can function as single units. They can usually be moved around together or replaced by a single word. See, for example the bracketed words in English: “She washed [the big cat]. She washed [it].”

A.3 Abbreviations

A.3.1 Pronouns

One of the main themes of this dissertation is the structure, meaning, and use of pronouns in Mam. Pronouns carry a lot of information, and when describing a single pronoun, many of its features are referenced at once. For these reasons, before diving into the definitions of all of the linguistic abbreviations used in this dissertation, we start with pronouns. This section looks at the various features of pronouns— and of course, their terminology and abbreviations— and how they combine in various ways.

We start with person and number features, before turning to case features and their many labels. Person features are those that tell us whether we are talking about me, you, or someone else. You may have heard of these three categories called first person, second person, and third person. Number features are those that tell us how many people are being referenced: one person (singular) or many people (plural). Case features are features that tell us about the role that a noun or pronoun takes on in the sentence that it is in. In English, we only see case features on pronouns. Think of the pronoun “I.” “I” can be the subject of a sentence (I saw Lorianne) but it cannot be the object (*Lorianne saw I). Instead, “me” is used for objects (Lorianne saw me). “I” and “me” mean the same thing, but differ in case.

After providing more in-depth explanation of the various person, number, and case features used in this dissertation, at the end of this section we provide three example pronoun glosses— with multiple features abbreviated at once— and explain what they mean.

A.3.1.1 Person and number features

Abbreviation	Definition
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1,2,3	1 = first person 2 = second person 3 = third person
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The numbers 1, 2, and 3 refer to first, second, and third person. **First person** refers to the speaker, found in the meanings of the words “me, my,” and “I” in English. **Second person** refers to who the speaker is talking to (the listener), found in the meanings of the words “you,” and “your” in English. **Third person** refers to someone else, like “he/him/his, she/her/hers,” and “they/them/theirs” in English.

INCL,EXCL	INCL = inclusive EXCL = exclusive
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When talking about myself and others, in English we say “we,” the first person plural pronoun. In Mam, there are two types of first person plural: **inclusive** and **exclusive**. **Inclusive** refers to myself (the speaker) and you (the listener). For example, I look to you, my friend sitting next to me and say, “What should we do today?” **Exclusive** refers to myself and someone else, specifically not you, the listener. For example, I am asking a friend for advice about what my mother and I should do while in Berkeley, “Should we see Dwinelle? What do you recommend?”

English speakers strive to make this distinction between **inclusive** and **exclusive** “we,” but we need to use other strategies to make it clear, since we only have one word for both. We can see how English speakers try to make this distinction by looking at examples in television, such as: *New Girl* (2011) S1:E4 00:00:11 – 00:00:22, S6:E1 00:05:18 – 00:05:34, *The Graham Norton Show* S25:E08 (Taylor Swift album announcement), *Friends* (1994) S1:E14, and S2:E11. These clips can be found in the Mam language and culture course materials in the presentation titled “qo and qo’y: four examples in English.”

Abbreviation	Definition
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SG,PL	SG = singular PL = plural
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Singular refers to an individual person or thing, while **plural** refers to more than one person or thing (a group). In English, the first person singular pronouns are “I/me” and the first person plural pronouns are “we/us.” Third person singular pronouns are “he/him/she/her/it” and singular “they/them” whereas the third person plural pronouns are the plural “they/them.”

A.3.1.2 Case features

Abbreviation	Definition
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ERG,ABS	ERG = ergative ABS = absolutive
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Ergative is a term used to describe subjects of transitive verbs in certain languages. To understand this, we need to know the difference between transitive and intransitive verbs.

Intransitive verbs have a subject but no object, for example, “I slept” or “I jumped.” Transitive verbs have a subject and an object, for example, “I bought an apple” or “We saw a bird.” In English, subjects of both types of verbs have the same type of pronoun. For first person singular, that’s “I.”

In Mam, and other Mayan languages, intransitive and transitive subjects are not the same. The term **ergative** is reserved only for subjects of transitive verbs.

Absolutive refers to subjects of intransitive verbs and objects of transitive verbs. In English, these two categories are distinct when it comes to pronouns.

For example in English, the first person singular pronoun “I” is used for subjects of intransitive verbs, such as “I slept,” while “me” is used for objects of transitive verbs, such as “Cristina saw **me**.”

In many Mayan languages, these two categories have the same pronoun. In many varieties of Mam, both the “I” and “me” described above for English have the form: *chin*. In Mam, *chin* is considered an absolutive pronoun. These new labels (**ergative** and **absolutive**) are needed because in languages like Mam, pronouns do not correspond exactly to “subject” and “object.”

A,B

A = Set A

B = Set B

Set A and **Set B** are terms created for Mayan languages to refer to the sets of prefixes/suffixes that are found on verbs that tell us information about the subject and object. These terms are widely used in describing many different Mayan languages, not just Mam.

Set A refers to the prefixes on the verb that tell us about the ergative subject, translating to pronouns like “I” and “We”. **Set A** prefixes are also found on nouns, and in this context, they tell us about the possessor of the noun, translating to pronouns like “my” and “our.” **Set A** prefixes are called **red pronouns** in the Mam language and culture class materials.

Set B refers to the morphemes on the verb that tell us about the absolutive element. Sometimes **Set B** morphemes are prefixes, and sometimes they are independent words. **Set B** morphemes are called **blue pronouns** in the Mam language and culture class materials.

A.3.1.3 Examples

Abbreviation	Definition
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A1SG	A1SG = Set A First Person Singular
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This is a **first person singular** pronoun in a **Set A** context. If this prefix appears on a verb, it is referencing the ergative subject, “I.” If it is found on a noun, it is referencing the possessor “my.”

3ERG	3ERG = Third Person Ergative
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This is a **third person ergative** pronoun. Notice that this pronoun does not indicate singular or plural, so it refers to either singular (he/she/it/they) or plural (they). This pronoun is likely the subject of a transitive verb.

B2/3PL	B2/3PL = Set B Second and Third Person Plural
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This is a **second or third person plural** pronoun in a **Set B** context. In Mam, the Set A and Set B markers for second and third person are not distinct; there is only one that encompasses both meanings, abbreviated as 2/3. This pronoun is likely the subject of an intransitive verb like “walk.” Looking at only this **Set B** marker, “B2/3PL,” it is unclear whether the subject is “y’all” (second person plural) or “they” (third person plural). Other information is needed to know which subject it is. (See the disagreement enclitic below.)

A.3.2 All terms

Abbrev.	Term	Definition/meaning
1/2/3	1st/2nd/3rd Person	See §A.3.1
A	Set A	See §A.3.1
ABS	Absolutive	See §A.3.1
AF	Agent Focus	Agent focus refers to a type of sentence in which the agent (the doer of the action) is the main focus and appears at the beginning of the sentence.
AGT	Agent	Agent refers to the doer of an action; an agent intentionally does something. In Mam, agents are sometimes indicated with a specific relational noun .
AP	Antipassive	The antipassive is used with many verbs that describe a simple action like “I sang,” or “I slept.” Verbs with the antipassive may or may not have an object . Subjects of antipassive verbs in Mam are usually Set B (absolutive/blue pronouns).
ASP	Aspect	Aspect words and prefixes tell us <i>when</i> the sentence took place. Aspect words in Mam do not neatly match the English tenses (past, present, future). To find the meaning of the different aspects in Mam, see “ proximate, distal, perfective, potential, and imperfective. ”
ATT	Attenuator	The attenuator in Mam reduces the strength of the word it attaches to. Sometimes it can be interpreted as “somewhat” or “a little” (This analysis is based on England 1983b , 128).
B	Set B	See §A.3.1

Abbrev.	Term	Definition/meaning
CLF	Classifier	Classifiers are words that provide additional information about people, animals, or things. Classifiers can combine with a noun to give information about the gender and approximate age of a person. Classifiers can also be used without nouns and have meanings similar to English pronouns like “she” or “it,” for example.
COM	Commitative	Commitative refers to when someone does an action <i>with</i> someone or something else. In Mam, commitative is indicated with a specific relational noun .
COMP	Complementizer	Complementizers are words that connect clauses. For example in the English sentence “I wish that you would sing.” The word <i>that</i> is a complementizer because it connects the clause “I wish” to the clause “You would sing.”
COMPL	Complete	Complete is a type of directional which is used for actions that have been completely finished. The complete directional can also mean “die” or “happen” in some cases.
COND	Conditional	Conditional describes a type of situation that might or might not happen; situations that “would” happen, given some other fact or event. In Mam, conditionals often describes hopes and wishes.
DAT	Dative	Dative refers to a type of object. Dative objects often receive something in a sentence, for example: “Lucrecia gave the book to Samba.” The dative object in this sentence is Samba: the person who received the book. In Mam, dative is indicated with a specific relational noun .
DEM	Demonstrative	Demonstratives are used to point to people or things, for example, “this, these, that, those” in addition to words like “here” and “there.”

Abbrev.	Term	Definition/meaning
DEP	Dependent Clause	A dependent clause is a sentence that cannot stand on its own, for example, "...that you can sing." Alone, a dependent clause is missing information. On the other hand, a clause like "I sing" is complete as it is, and it represents an independent clause.
DET	Determiner	Determiners are words that indicate that nouns are specific or nonspecific, like the articles "the" and "a" in English.
DIR	Directional	Directionals are a type of verb in Mam that indicate the direction of movement of an action. A different directional is used when a person enters or leaves a location, walks up or down a mountain, or moves towards or away from the speaker, for example. However, when a directional combines with a verb, their combined meaning is not always straightforwardly understandable.
DISAGR	Disagreement Enclitic	The disagreement enclitic in San Juan Atitán Mam is =i. This enclitic appears on verbs when the subject is 1SG (I), 2SG (you), 1PL EXCL (we - not you), and 2PL (y'all). This enclitic appears of nouns when the possessor is one of the categories just listed. This enclitic is called the "person enclitic" in England (1983b) . The reason for calling it the "disagreement enclitic" is that it is used when the values of "me" and "you" are opposite (me not you, you not me, us not you, and y'all not me). For more, we direct the reader to Chapter 4 which provides a detailed analysis of this morpheme.
DIST	Distal	Distal aspect is used to describe actions that happened earlier today but not recent to the present moment. See Appendix C §C.2.1 "Nchin txolb'ani nq'iji'" for an example of how to use this aspect, and how it is different from proximate aspect .
DS	Directional suffix	In Mam, the directional suffix is used on transitive verbs when there is a directional before the verb.

Abbrev.	Term	Definition/meaning
EMPH	Emphatic	Emphatic is used to indicate a high degree of something or put more emphasis on something, like the word “very” in English. An emphatic version of “It was red” could be “It was very red.”
EP	Epenthetic	Epenthetic means that a sound has been added to make the pronunciation of a word easier. To avoid having to pronounce a difficult combination of sounds, an epenthetic consonant can be inserted between two vowels. This abbreviation is used in Tojolobal examples by Curiel Ramírez del Prado (2017) .
ERG	Ergative	See §A.3.1
EXCL	Exclusive	See §A.3.1
EXIST	Existential	Existentials are used to say that a person or a thing exists or is present. For example, the existential “ <i>at</i> ” in Mam: <i>At jun wič̣.</i> “There is a cat.”
FOC	Focus	Focus happens when a speaker gives more emphasis to a particular part of a sentence. In Mayan languages like Mam, you can give focus to something by moving it at the beginning of a sentence. An example in English might be “It was the cat who ate my food,” where, “the cat” is in focus.
IMP	Imperative	Imperative is the form of the verb that is used for requests, commands, or instructions.
INC	Incompletive	Incompletive aspect indicates that an action or event is ongoing, or is “incomplete.” Pérez Vail (2014) uses this to describe the same category as imperfective in Mam.
INCL	Inclusive	See §A.3.1
INST	Instrument	An instrument is something in a sentence that is being used, for example, a tool. In Mam, instruments are indicated with a specific relational noun .

Abbrev.	Term	Definition/meaning
INT	Interrogative	Interrogative is a sentence type that expresses questions.
IPFV	Imperfective	Imperfective aspect is used to indicate that an action or event is ongoing. In Mam, it is used to mean the present progressive “I am eating,” the past progressive, “I was eating” and the habitual, “I eat every day.”
ITV	Intransitive	Intransitive verbs do not have objects ; they indicate simple actions like “We danced,” and “They ate.” Subjects of intransitive verbs in Mam are usually Set B (absolute/“ blue pronouns ”). Some verbs have an intransitive verb suffix, indicating that the verb is intransitive . This abbreviation is used in Q’anjob’al examples by Coon et al. (2014) .
LOC	Locative	Locative is used to indicate a particular location or place. Existential locative words are used to say that a person or a thing is located at a particular place. On the other hand, negative locative words are used to say that a person or thing is <i>not</i> located somewhere.
MAL	Malefactive	Malefactive describes a person or thing in a sentence that is harmed or that the situation is in some way bad for them. In Mam, malefactives are indicated with a specific relational noun .
NEG	Negation	Negation refers to words with the equivalent meaning of “not” or “no” in English. Different negation words are used in Mam to say that a something does not exist, that an action will not happen, or that someone cannot do something.
NF	Non-finite	Non-finite refers to the infinitive form of a verb . It is used when a verb is not conjugated like “to be” or “to dance.”

Abbrev.	Term	Definition/meaning
NML	Nominalizer	The nominalizer suffix is used to change a word into a noun. For example, in English, the verb “connect” can be changed into the noun “connection” with the nominalizer suffix “tion.”
NP	Noun Phrase	A noun phrase refers to a noun and all of the words that describe it. For example, “cat” is a noun and “big fluffy cat of mine” is a noun phrase .
O	Object	The object of a verb is often the person or thing that is affected by the action of the verb . Consider the sentence, “She washed the cat.” “The cat” is the object of the verb “wash.” In acronyms like VSO and VOS, the O stands for object .
PASS	Passive	Passive voice is used when the subject of a sentence is the one receiving the action of the verb , for example, “The mouse was eaten by the cat.” The subject (the mouse) receives the action.
PAT	Patient	A patient is a person, an animal, or a thing that is affected by an action. A horse that is washed by its owner is a patient . Patients usually do not have direct control on what is happening to them. In Mam, patients are sometimes indicated with a specific relational noun .
PFV	Perfective	Perfective aspect is used to say that a thing happened and was completed in the past, and for Mam it means that it did not happen within the same day that the speaker is talking.
PL	Plural	See §A.3.1

Abbrev.	Term	Definition/meaning
POSS	Possessive	Possessive roughly means “ownership.” A possessor is someone who owns or, more commonly, “has” something. In Mam, possessors are indicated with Set A prefixes (“ red pronouns ”) and sometimes an additional specific relational noun .
POT	Potential	Potential aspect indicates a similar meaning to “future” in English: it means that something has the potential to happen. In Mam, sometimes the proximate aspect is used to mean immediate future, so not all “future” sentences have potential prefixes and suffixes.
PROG	Progressive	Progressive means that an action is currently ongoing, for example “I am eating” in English is progressive . This abbreviation is used in Q’anjob’al examples by Coon et al. (2014) .
PROX	Proximate	Proximate aspect is used to describe actions that happened recently today, and sometimes for actions that are in progress or are about to happen.
Q	Question	Question markers are words or suffixes that specifically indicate that the sentence is a question.
REAS	Reason	Reason is a type of relational noun in Mam that is found at the beginning of a sentence or clause. It indicates that what follows is the reason for something. This is similar to “because” in English. For example, “I drank water because I was thirsty.”
REL	Relative Clause	A relative clause is a clause that describes a noun; for example: “the book that I read.” In English, “that” is the relative clause marker.
REM	Remote	When remote is used to describe a type of perfective aspect , it means that the event occurred at a time far in the past, or a remote time.

Abbrev.	Term	Definition/meaning
RN	Relational Noun	Relational nouns carry meanings like prepositions in English, for example, “to, for, by, with,” but in Mam they are a special type of noun. For example, the phrase “with Gloria” in Mam is “ <i>tuk’l</i> Gloria” where “ <i>tuk’l</i> ” is the relational noun meaning “with.” Some relational nouns are dative, patient, agent, commitative and malefactive , which are all defined in this guide.
RR	Reflexive Reciprocal	Reflexives are actions that a person does to themselves, for example, “I saw myself.” The term reciprocal describes an action that people do to each other, for example, “We helped each other.”
S	Subject	Most of the time, the subject of a sentence is the person or thing that is doing the action of the verb . In acronyms like VSO and VOS, the S stands for subject .
SAP	Speech Act Participant	A speech act participant is someone who is directly involved in a conversation: either the speaker or the listener. This category usually refers to first and second person, but not third.
SG	Singular	See §A.3.1
SS	Status Suffix	In many Mayan languages, certain verb suffixes tell us about the type of verb it is. For example, whether the verb usually has an object or not (i.e. – whether the verb is transitive or intransitive). Mam does not have status suffixes . This abbreviation is used in many Mayan language examples (Curiel Ramírez del Prado 2017, Coon et al. 2014, Coon et al. 2021).
TOP	Topic	The topic of a sentence is the thing that the sentence is about. This abbreviation is used in Tojolobal examples by Curiel Ramírez del Prado (2017, 571).

Abbrev.	Term	Definition/meaning
TR	Transitive	Transitive verbs have an agent (someone who does the action) and an object (something that is affected by the action). Subjects of transitive verbs in Mam are usually Set A (ergative/“red pronouns”) .
TV	Transitive Verb Suffix	A transitive verb suffix appears on verbs and indicates that the verb is transitive (has an agent and an object). This abbreviation is used in Q’anjob’al examples by Coon et al. (2014, 193) .
UNPOSS	Unpossessive	Some nouns in Mam have the special unpossessive suffix <i>-b’j</i> when they are not possessed. These nouns often refer to body parts, clothing, or food.
v	Verb	The verb is a word that describes the action in a sentence. In acronyms like VSO and VOS, the V stands for verb .

Appendix B

Mam language and culture classes: technology and Indigenous language teaching

B.1 Introduction¹

Throughout the course of four years, from 2019 – 2022, a group of instructors consisting of myself (Tessa Scott), Henry Sales, Silvia Lucrecia Carrillo Godínez, and Cristina Méndez, organized, designed, and taught Mam language and culture courses. The purpose of this guide is to provide a detailed description of the tools, strategies, and methods we utilized, in order to demystify the process of implementing a language course independently—that is, without the infrastructure of an online language course provider—in order to add to current conversations about the impacts of technology on teaching Indigenous languages online. In this way, this appendix is meant to complement the discussion of these courses in Chapter 1 §1.4.

The Mam language and culture classes welcomed students of all ages and backgrounds to join together to learn Mam. The classes evolved greatly over the course of four years, and as instructors, we evolved with them. We built these classes from scratch, designing semester long curriculum, individual lessons, and virtually all of the learning materials ourselves. Along the way we learned what worked best for us and what was most effective for teaching Mam. The goal of this guide is to share our experiences teaching Mam, focusing on the technological tools that helped us organize our classes, design our materials, and develop practice tools. By sharing our experiences, we hope to inspire others to teach Indigenous language classes and to provide practical and useful strategies for those already teaching a language and culture class.

This guide is inspired by [Chew \(2022\)](#), “Learning in Relation: A guide to creating online Indigenous language course that center Indigenous ways of knowing and being.” [Chew \(2022\)](#) is a guidebook on creating online Indigenous language courses, drawing on features of current

¹This learning guide was co-written and co-designed in collaboration with UC Berkeley undergraduate linguistics student Lorianne Fan through the Linguistic Research Apprentice Practicum (LRAP) program.

and past language courses from Indigenous communities and educational organizations. [Chew \(2022\)](#) starts by providing an overview of pre-existing popular online course providers, such as 7000 Languages and Duolingo, comparing their features and capabilities.

The authors discuss factors that should be considered when choosing a platform, such as the budget, scale of the course, and features of the platform. [Chew's](#) guidebook presents research and reviews of the strengths and weaknesses of a number of online language courses, having conducted interviews and virtual gatherings with course developers and organizations; the guide provides detailed examples of audio, image, video, and text-based instructions used in various online language courses. Each method is assessed on a historical and practical scale, as well as through a culturally ethical lens. Overall, this guidebook provides an informative stance on how to make online language courses not only effective learning tools, but tools rooted in relationality, drawing from notable features of pre-existing platforms and providing ample sources for readers to reference.

We hope our guide adds to this conversation by providing detailed descriptions of the technological aspects of running an Indigenous language course independently. Some of these steps are overlooked in descriptions of language classes, but they can also be some of the hardest challenges and barriers to implementing an Indigenous language course. Additionally, the wide range of technologies used in these courses also highlights the fact that the courses require students to have internet access, as well as proficiency in, and access to these various platforms and technologies. We offer this guide as an example of the processes, tools, and strategies that we used in our classes. This guide does not take a deeply analytical perspective on relevant aspects of the classes, nor does it make an argument for or against certain technologies or teaching methods. Instead, it is a description of our strategies for both the administrative side and the pedagogical side of teaching Mam language and culture classes.

This guide is organized into two sections. [§B.2](#) looks at the technological tools used for class logistics, such as planning, communicating with students, and meeting online. [§B.3](#) describes the technology used both in and out of class to learn and practice Mam.

B.2 Class logistics

Unlike the courses discussed in [Chew 2022](#), our courses were not hosted and sponsored by an online language course technology provider. Because of this, we have pieced together strategies for handling the logistics of managing student registration, class communications, and advertisements. This section details how we organized and planned for semester-long language courses, given that we were not partnered with a large language education technology provider. From student registration to semester planning, this section provides the tools and strategies that we used to run our courses.

B.2.1 Website: www.mamclass.com

One important aspect of our classes is having a central hub of all information, announcements, and materials. For this purpose, we use a class website. We use the site for many purposes, including posting announcements and events, providing links to weekly lessons, as well as directing students to various study tools.

Google Sites

We built our site using **Google Sites**, a free tool that allows website building with pre-existing templates. We mainly use our website as a class homepage where students can access new lessons every week, links to recordings of previous weeks' lessons, and extra material to study with in between classes. The example in Figure B.1 shows the home page of our website from September 19th, 2022, which has previews and links to our lessons for that week.

Week 2: September 19th

Beginner Lesson of the week



Intermediate Lesson of the week:

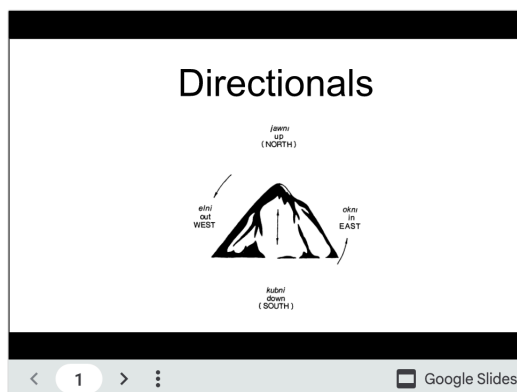


Figure B.1: Website homepage linking to lessons of the week

B.2.2 Communication

Throughout our classes, we made it a point to communicate with our students frequently and through many different channels. This level of communication helped ensure that students had all of the information they needed to be successful in our classes.

Google Groups

The first strategy for communicating is having a list of all of our students. For this, we used Google Groups. In this software, individuals are added by email to a list that the administrator creates. Once a group is created, emails can be sent to everyone in the group simultaneously.

We use the Google Group lists to accomplish two main communication tasks: 1) announcing the start of each semester and 2) sending weekly emails with details about class that week.

Two types of Google Groups:

Interest group 'announcement list'

One of the first things we did as we began developing our courses was create a Google Group for those interested in our classes. Every semester, as more people reach out with interest, they are added to the 'announcement list.' We only use this list at the beginning of each semester to send one announcement email to the entire group with our class flyer and all necessary details about registering for the upcoming semester. At the end of every semester, we add any new emails that registered in that semester to the large group.

Semester group

As each semester began, everyone who registered (see **registration** below) was added to a new group specific to that semester. Each week, we send a reminder email to this group about the upcoming classes, including Zoom links, event announcements, and links to the weekly lessons.

Other communication

Gmail

In addition to Google Groups, we created a Gmail account specifically for our class, accessible to all teachers. This email is used to host the Google Groups and ideally is the host of all our Google Workspace content (including Docs, Sites, and Forms).

We listed this email on our website as the main contact source in which people should reach out to with any questions, concerns, or ideas. This centralized email creates an archive of communications, which future teachers of the classes can reference.

WhatsApp

For more informal communication, we created a **WhatsApp** group. WhatsApp is a free, cross-platform messaging software that allows users of Apple, Android, and PC to communicate globally, regardless of device or service. Students from the class self-selected to opt in to the WhatsApp group. Students and teachers alike use the group for a multitude of reasons, from asking general questions about Mam to planning travel to Guatemala.

B.2.3 Registration

Before the start of each semester, we announced our classes on our website, with a flier distributed by email, and with an email to our announcement list which included a link for students to register.

Google Forms

Registration was achieved using Google Forms. The responses of the form are automatically populated into a Google Sheet for an easier way to look at the responses.

The three main purposes of the registration form were:

- To gauge class size
- To collect email addresses in order to create the semester group in Google Groups for sending weekly emails, as discussed in §B.2.2
- To collect general demographic information about our students

In addition to asking for email and name, we asked where people live. With our classes fully online, we attracted students from far outside Oakland and all around the world, and thus we wanted to keep a record of the extent of our reach geographically. We also asked students the question “Why are you taking this Mam class?” This was an important question, because it allowed us to get a sense of the significance of this class for our students. For a discussion of the responses to this question, see Chapter 1, §1.4.4.

B.2.4 Meeting

For our online classes, we met synchronously through Zoom, a video conferencing software. The main benefit of holding these meetings with video conferencing is to allow students from all over the country and all over the world to join. In the Zoom meeting room, everyone can see each other as we are learning in real time.

Zoom

In addition to using these spaces to have conversations, the functions of Zoom we most utilized were:

- **Screen-sharing**– to present our Google Slides lessons or other media, such as pictures, video, and audio
- **Breakout rooms**– to allow us, the teachers, to put students into small groups for a more intimate practice space
- **Chat**– for students to type out Mam words and phrases, as well as write any questions they have
- **Recording**– for students to re-watch our classes at a later date

Classes were recorded directly through Zoom and then uploaded to a Google Drive folder that only students had access to. The recordings of the class were a great resource for students who needed to miss a class or wanted to follow along with the class completely asynchronously.

B.3 Learning Materials

This section focuses on how we implemented teaching strategies using technology. In §B.3.1, I discuss learning materials that were presented and practiced in class: from using Google Slides for presenting new vocabulary and grammar, to using Kahoot! to review weather terms. §B.3.2 gives examples of ways that students studied Mam outside of the classroom, including examples of our Quizlet vocabulary decks as well as the outstanding and creative student-created work.

B.3.1 Lessons in class

B.3.1.1 Vocabulary and grammar presentation

Many of our lessons included the presentation of new Mam vocabulary or grammar concepts. We aim to present these concepts in way that is visually stimulating, as well as in a way that is easily digestible, and helps create new connections (between things/events in the real world and new words/phrases) for the learners.

Google Slides

We used Google Slides to create our lessons. Slides is similar to Microsoft PowerPoint, but since it is in the Google Workspace, it can be edited by anyone with access. This allowed all of our teaching team to contribute to the material.

An example use of Slides is shown in Figure B.2. On this slide, we are introducing possessive morphology, i.e. the prefix and suffix combinations that indicate who owns or possesses something. In this slide, and on as many slides as we can, we use relevant images, as well as add color to better break down the complex morphology, making it easier for students to grasp. Here, both the **n-** prefix and **-i** suffix translate to ‘my’ in English, and thus are all colored red. The same is true for the **t-** and **-i** translating to ‘your’.

wix̃



n wix̃ i	my cat
t wix̃ i	your cat

Figure B.2: Slide teaching possessive morphology

While many of our images were found on the internet, like the one in Figure B.2, we also incorporated culturally relevant images, especially when teaching vocabulary specific to Mam culture. These images are drawn from two Mam language books published in Guatemala. The first is *Qo xnaq'tzan tuj tzalajb'il tu'ntzan tjaw qch'i qchwinqlal*, published by The National Literacy Committee in Guatemala (Comité Nacional de Alfabetización) (CONALFA 2015).

chmol	
nchin chmoni	I am weaving
nchmoni	You are weaving
nchmon txin	He is weaving
nqo chmoni	We (excl) are weaving
nqo chmon	We (incl) are weaving
nchi chmon qi	You all are weaving
nchi chmon qa	They are weaving

Figure B.3: Slide with full conjugation of the word *chmol* ‘to weave’
Image from CONALFA (2015)

The second is *Nchin u’jne ex nchin tz’ib’ine* published by the Guatemalan Ministry of Education (Ministerio de Educación) (Mineduc 2019). Figure B.3 shows a slide from one of our lessons introducing the verb *chmol* ‘to weave’ using an image from CONALFA (2015) of a man and woman weaving. Both individuals depicted are from San Juan Atitán, Guatemala, as indicated by their clothing. Figure B.4 shows a slide from the following lesson in which we practice both conjugating the verb and recognizing the noun *xuj* ‘woman’; for this slide we use an image of a woman weaving from Mineduc (2019).

Tijil nb’aj te xuj?

What is the woman doing?



Figure B.4: Slide practicing *chmol* ‘to weave’ and *xuj* ‘woman’
Image from Mineduc (2019)

B.3.1.2 Lesson objectives

The topics and objectives of the lessons themselves evolved throughout the course of each semester. Our largest audience was professionals seeking to work with the Mam community across institutional contexts (legal, medical, educational, and others). Given this, we sought to focus our curriculum on teaching useful conversational skills.

For example, in the beginner level, we focus on question and answer pairs commonly used in conversations between people who have just met. This includes simple greetings, introductions, weather, and questions about work, home, and family. To illustrate, (1) shows an example list of objectives for a lesson on weather:

(1) **Weather.** In this lesson you will:

- Learn about the typical weather in the mountains of San Juan Atitán.
- Learn commonly used weather terms corresponding to hot, cold, rainy, windy in English.
- Learn how to state what the weather is and is not, as well as learn how to express the differences between ‘cold’ ‘very cold’ and ‘a little cold,’ for example.
- Learn multiple different ways to ask someone how the weather is, as if you were on the phone or meeting online.
- Learn how to recognize questions about the weather and respond.
- Practice having small conversations about the weather in small groups.

Since the goal with a lesson plan like (1) is for the students to be able to engage in conversations about the weather, we would begin the following class by greeting each student and asking them about the weather. For each lesson which focused on an aspect of conversation making, we would incorporate those conversational prompts into our greetings the following class session.

B.3.1.3 Text-based learning

While introducing vocabulary and grammar constitute one of the core lesson types in our classes, we supplemented this with Mam texts, including prayers, stories, and conversational videos. Prayers, also referred to as invocations or *Pkab'* or *Nab'l* in Mam, were presented at the beginning of many classes; they were read by one the teachers and sometimes followed by students reading aloud to practice their reading and pronunciation skills. The prayers are short enough to be read at the start of every class, which we often did, allowing students to practice pronunciation and reading of the same material week after week, enabling them to see their progress and improvements over time.

Stories

Our native Mam language teachers, Sales and Carrillo Godínez, also wrote several stories for our class in Mam and translated them to Spanish and English. One of these stories, *Tz'anum*, “Hummingbird,” translated to Mam by Silvia Lucrecia Carrillo Godínez, tells the story of how *Ajaw* ‘Creator’ made the first hummingbird. It ends with the wisdom that if you see a hummingbird, it means that someone is thinking about you, whether on this earth or beyond. With this story, we used images from CONALFA (2015) and arranged them with the text from the story to create a story book. Figure B.5 shows the first two pages of *Tz'anum*.

When teaching this story, we read three to four lines per week throughout the semester, reaching the end of the story at the end of the semester. The goals of this exercise were similar to that of reading the prayers, though, for more intermediate students, we asked them to engage with the story in small groups. Prompts for the more intimate group work included: i) coming up with the English translation on your own, ii) breaking down the words into their pieces, explaining each one to each other, and iii) predicting what happens next.

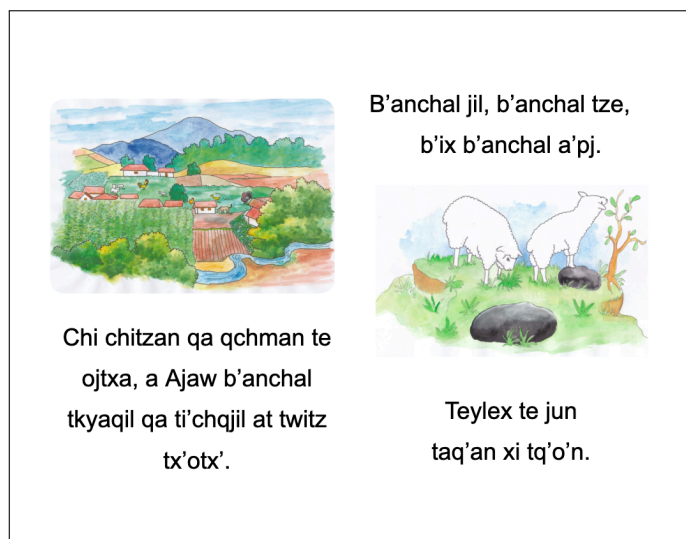


Figure B.5: *Tz'anum* story book
Images from CONALFA (2015)

Conversations

In addition to these written texts, which provided reading and comprehension practices, Sales and Carrillo Godínez recorded themselves having short, easy-to-follow conversations that we watched and discussed in class. These videos consisted of short conversations lasting anywhere between one to three minutes, with topics including extended greetings, family, counting, and weather. The videos were recorded using Zoom and the transcripts were typed into a Google Docs file.

In class, the videos were played first without their transcripts, allowing the students to practice listening. After one or two times playing the video, we then played the audio a third time with the Mam transcript and the English and Spanish translations on the screen for students to follow along while they listen. From there, we would spend a few minutes discussing what the

conversation was about, and explain any new vocabulary or grammar. Figure B.6 shows stills from a conversation video along with the Mam transcript and English translation.

Qa quk'l tuj ja - Family - with English



	<i>Mam</i>	<i>English</i>
L	Je'y Henry ti' ta'y? Ti' ta q'ij tuk'li?	Hey Henry, how are you? How is the weather for you?
H	Je'y Lucrecia, b'a'n ta' qini, yan tiy? Tzluw at nim cho'w, yan tuk'li?	Hey Lucrecia, I'm good, and you? Here it's very cold, and for you?
L	B'a'n ta' qini b'ix qa'san ta' cho'w tzluw.	I'm good and it's very cold here.
H	B'a'n.. a'l tuk'li naj jan?	Good. Who do you live with?
L	Naj qini tuk' ntxuy, qa ntzikiy b'ix witz'ni. Yan tiy?	I live with my mother, my older siblings and my younger sibling. And you?
H	Naj qini tuk' ntxuy, nmani, nxu'li b'ix nmeli	I live with my mother, my father, my wife, and my daughter.
L	B'an ta' ajxnaq'tzal, atm talmaji?	That's great, teacher, do you have pets?
H	Nti' walmaji. Yan tiy?	I don't have pets. And you?
L	At kab' ntx'ya'ni b'ix jun nwiixi. Qini ke'ynx tib'i.	I have two dogs and one cat. Bye, take care.
H	Ke'ynx tib'i. B'an qyolan.	Take care. Talk later.

Figure B.6: Conversational video and transcripts about family.
Carrillo Godínez (top) and Sales (bottom)

B.3.1.4 Practice

We executed a number of strategies to practice the grammar, vocabulary, and other concepts introduced in class. In this section, I illustrate the following activities that we implemented in our online classes for practicing language:

- Describing the image
- “Popcorn” style group conversations
- Creating a dialogue

Describing the image

The first activity involves describing an image using the Mam language. This activity was primarily used after two important primer lessons. The first was a lesson on weather terms and the second was a lesson on how to make ‘simple’ sentences using the existential construction: *At kab’ xjal*. ‘There are two people.’ To learn how to make these sentences, we first taught students the existential predicate *at* meaning ‘there is,’ which is used for weather descriptions like *At cho’w*. ‘It’s cold.’ (lit. there is cold). We also learned simple nouns like *tze* ‘tree,’ and *xjal* ‘person,’ and the numbers one through ten.

To practice creating these sentences, we displayed an image on the screen that had many people, plants, and animals; an example is shown in Figure B.7. We prompted the students to describe the weather in the image, as well as the people and objects using *at* ‘there is’ sentences. Once students came up with their sentences, they were typed them in the Zoom chat, and a few students would read their sentences out loud. This activity allowed students to practice describing the world using Mam only (without translating from English), reading aloud, and listening and comprehending other students’ descriptions.

Ti’ ta’ q’ij? Tijil at jken?

how is the weather? what is there?



Figure B.7: Slide eliciting descriptive language
Image from CONALFA (2015)

“Popcorn” style group conversations

In the next two activities, students practiced having conversations in a group. Students would “popcorn” (i.e. choose) other students by asking and answering the question *Tijil nb’aj tiy?* ‘What are you doing?’ (see Somme 2011 for a background on “popcorn” style reading activities). The goal of this activity is to familiarize themselves with new verbs, as well as conjugate them for different subjects. In this activity, Figure B.8 was displayed for all students to see. One student, S1, names another student, S2, and asks them the question in purple. S2 answers with one of the forms on the left— the “I” conjugation. S1 then repeats S2’s answer in the “you” conjugation with a confirmation or surprised tone and then thanks S2. S2 then chooses another student to ask the question to. This series of interaction is repeated until everyone in the class has participated.

Tijil nb'aj tiy? (What are you doing?)	
I....	
Nchin xnaq'tzani	I am studying
Nchin sch'ini	I am reading
Nchin b'eti	I am walking
Nchin wani	I am eating
Nchin b'ini	I am listening
Nchin ximni	I am thinking
Nchin tani	I am sleeping
Nchin yolni	I am speaking
Nchin kapeyni	I am drinking coffee
Nchin chmoni	I am weaving
You ...	
Nxnaq'tzani	You are studying
Nsch'ini	You are reading
Nb'eti	You are walking
Nwani	You are eating
Nb'ini	You are listening
Nximni	You are thinking
Ntani	You are sleeping
Nyolni	You are speaking
Nkapeyni	You are drinking coffee
Nchmoni	You are weaving

Figure B.8: “Popcorn” style conversation example

Another version of the question/answer activity is one where students would ask and answer the question, *Jatum ma txyi?* ‘Where are you going?’ The premise and the structure of the game are extremely similar, but the topic focuses on practicing verbs of motion in Mam, with answers equivalent to ‘I’m going to school’ and ‘I’m returning home.’

Creating a dialogue

Lastly, a common activity for practicing using the Mam language consists of students creating a dialogue in pairs. For this activity, we made breakout rooms on Zoom and hand-picked pairs of students on similar skill levels (or sometimes different skill levels so that they could help each other) to work together to write a dialogue in Mam. We encouraged them to start with greetings, since most conversations in real life begin with greetings, and to incorporate as much of the grammar and vocabulary that we learned in the class up to that point. Sometimes, we would provide a sample dialogue, as illustrated in Figure B.9.

Ti' ta' q'ij tuk'li ja'l?
How's the weather for you today?

At nim q'ij tzluw. Nti' jb'al.
It's very sunny here. It's not rainy.

Yan jan?
And there?

Tzluw, at nim cho'w ex at nim kyq'i'.
Here it's very cold and very windy.

Atm jb'al?
Is it raining?

Nti' jb'al ja'l.
No it's not raining today.

Figure B.9: Sample dialogue given to students as an example

While the students were in breakout rooms writing their dialogues, the teachers would visit each breakout room to answer any questions. After each group made a short dialogue, all of the groups would reconvene in the main Zoom room. From there, each group would read their dialogue out loud to the class. An example of a student-created dialogue is given in Figure B.10.²

Break out room 3

Jey, Ti'tb'iy?

A wiy n'bi Kenny. Yan tiy? Ti' tb'iy?

A wiy n'bi Kate. Te jatum mat tzaji?

Naj qini tuj Berkeley. Yan tiy? A'l naj tuk'li?

Kyju'x wiy naj qini tuj Berkeley. Naj qini tuk'l nchmili. Yan tiy?

Naj qini tuk' kab' wuk'li. Atm talmaji?

N'ti. N'ti walmaji. N'ti wali. Qini. Ke'ynx tibi'i.

Ke'ynx tib'i.

Figure B.10: Student-created dialogue

²Translation of the dialogue into English: Hey, What is your name? \ My name is Kenny. And you? What is your name? \ My name is Kate. Where are you from? \ I live in Berkeley. And you? Who lives with you? \ Me too, I live in Berkeley. I live with my husband. And you? \ I live with two friends of mine. Do you have pets? \ No. I don't have pets. I don't have children either. Bye. Take care. \ Take care.

The dialogue activity encouraged students to imagine themselves as Mam speakers, having a conversation outside of the classroom with other Mam speakers. It allowed them to practice referencing previous material for vocabulary and conjugations, as well as to be creative, and collaborate with other learners. Finally, reading aloud fostered further pronunciation (and listening) practice, as well as acquainted the students with the feeling of having a conversation in Mam in a more linguistically organic environment.

B.3.1.5 Review

In addition to learning new vocabulary and grammar, we used fun and engaging tools to practice, review, and reaffirm the lessons. The challenge was finding engaging tools that we could use on Zoom and that were accessible to everyone. The main tool we used for in-class review was Kahoot!

Kahoot!

Kahoot! is a game-based learning platform that tests users' knowledge of concepts they learned in class. Users can host live class quizzes via video conferencing and assign student-paced challenges for homework/lessons, including both individual and team activities.

We used Kahoot! to solidify relationships between concepts (presented with images) and Mam words or sentences without the need for English translations, achieving so through the medium of a competitive and colorful game. Figure B.11 illustrates one of the questions of a Kahoot! that was used to review and practice weather terms.

In this example, a stock image of rain appears with the English prompt, "Which sentence best describes the weather?" The options for answers are given in Mam and translate to ▲ It's raining a lot, ◆ It's very sunny, ● It's very hot, and ■ It's very cold. The image, prompt, and possible answers were projected to the students using Zoom, and each student has the Kahoot! game pulled up on their own devices, where they choose what they think is the correct answer. Using Kahoot! was an entertaining and effective way to push our students to think quickly and recall Mam terms and sentences without translating from English.

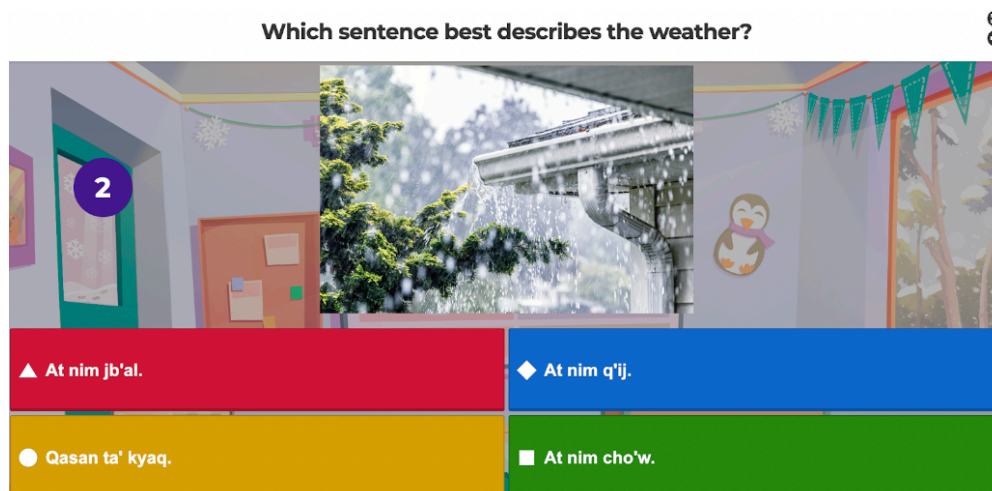


Figure B.11: Kahoot! example question

In addition to doing a Kahoot! to practice weather terms, we created our own quiz using Google Slides: one image was presented along with the word *at* 'there is' at the top, and two weather terms at the bottom. Students were asked to choose the term that best describes the weather in the image and put their answers in the Zoom chat. Once they made their selection, we would reveal the correct answer by clicking to the next slide, which had the correct answer in a different color. This is illustrated in Figure B.12. On the left is the slide which presents in image of trees the terms *jb'al* 'rain' and *kyq'i* 'wind'. The slide on the right reveals that the correct answer is *kyq'i* 'wind' by displaying it in green.



Figure B.12: Weather quiz using Google Slides question for class (left) and the answer (right)

B.3.2 Studying Outside of Class

B.3.2.1 Vocabulary and Listening

Quizlet https://quizlet.com/qyol_mam

For our classes, we created a Quizlet account—our handle is qyol_mam (meaning ‘the Mam language’)— and made study materials using the site’s functions. Quizlet is a web-based software that uses a variety of study modes tailored to different learning habits. Language learners can study through flashcards, quizzes, and booklets that contain definitions for key concepts and terms. Users can access flashcards that contain language vocabulary and utilize them for a review of the basic materials learned in class. Flashcards can also be organized into folders and shared with other users.

Using Quizlet, we made flashcards with vocabulary terms from class. One side of the card has the term in Mam, and the other side has its English counterpart, shown in Figure B.13, in which we added a picture along with the English translation. To study this flashcard deck, students can translate from Mam to English or vice versa, by clicking on the card to turn it over. In total, we created 33 decks of flashcards, each with a different topic, some of which are: family terms, animals, question words, weaving, clothing, weather, and various verb conjugation decks.

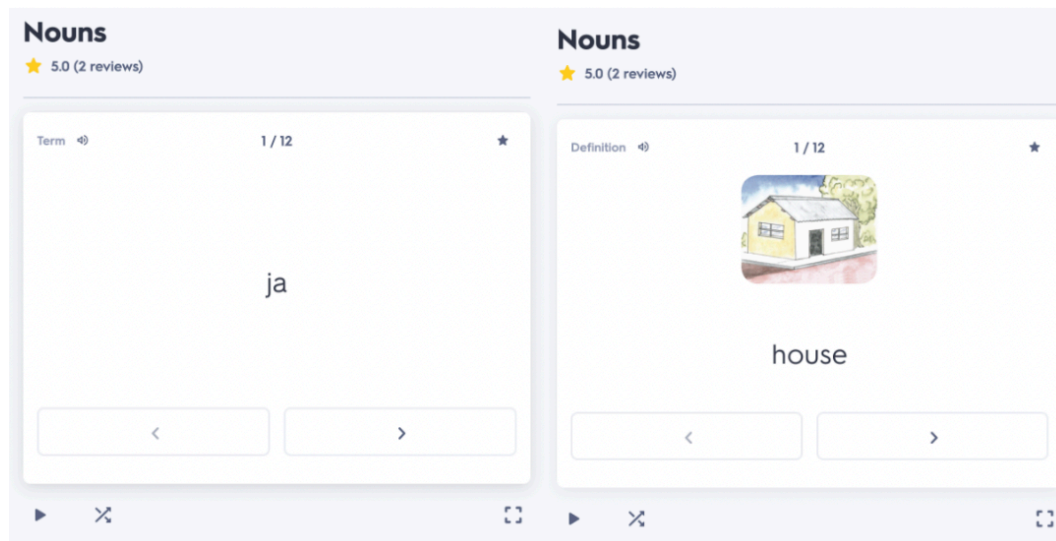


Figure B.13: Example Quizlet flashcard
Image from CONALFA (2015)

Images

Another feature of Quizlet is its ability to illustrate terms with images instead of written definitions (in the case of our class, English translations). This is important because many Mam words describe the unique aspects of Mam life, such as clothing culture, that English translations do not accurately capture. Figure B.14 illustrates one way that students can learn the terms for Mam clothing. The blue circles indicate places the students can click to learn the name of that clothing item.

One last feature of Quizlet that was very impactful for our class is the ability to record audio for each vocabulary item. We utilized this feature to teach the complex sound system of Mam— even outside of class— using a Quizlet deck for the alphabet. Each card in these decks has the letter of the alphabet on one side, as shown in Figure B.15. For this side of the card, the learner can click on the speaker icon in the top left corner to hear the sound that the letter makes, recorded by one of our instructors.

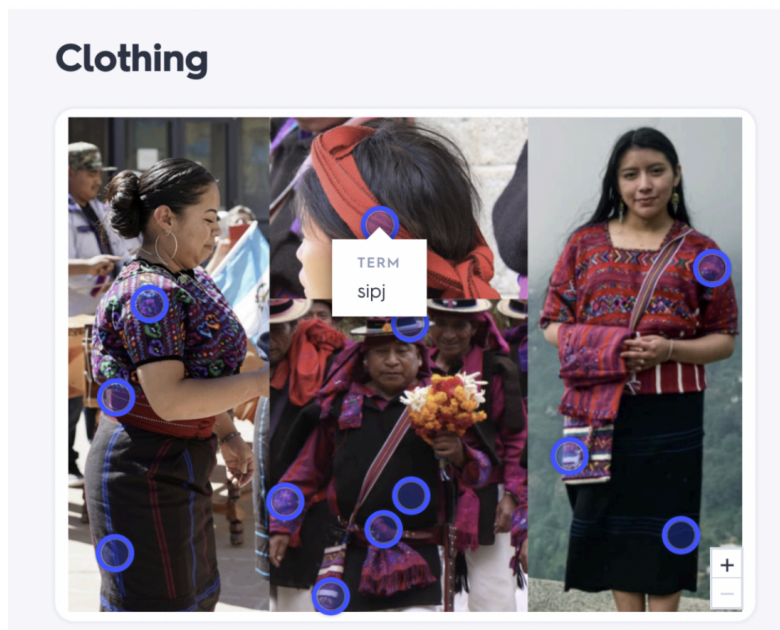


Figure B.14: Quizlet “Clothing” deck image

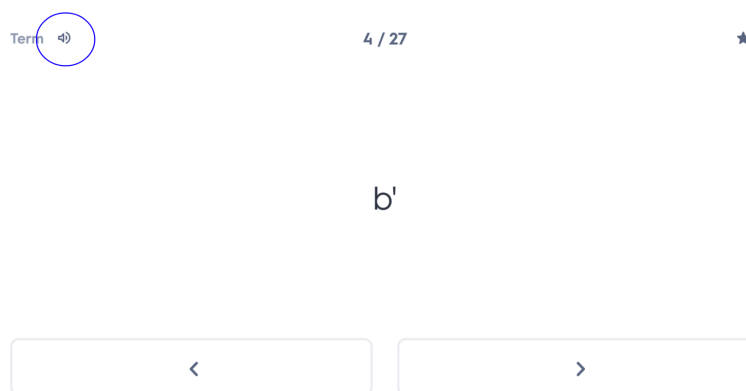


Figure B.15: Quizlet flashcard (term) with letter of the alphabet

On the other side of the flashcard, the definition side, are four example words and their definitions, along with an image representing one of the words, shown in Figure B.16. For this side of the card, the learner can click on the speaker icon in the top left corner of the card and hear how each word is pronounced, recorded by one of our instructors.

Many students have reported that having the audio feature on the Quizlet

cards was extremely helpful when studying Mam on their own, especially towards the beginning of their learning journey. They told us that while studying on their own helps with the associations between the written Mam words and English concepts, they would often practice without remembering how the words are pronounced. Thus, studying with audio for each word was extremely useful for learning how to speak Mam, as well as how to read and write in the language. Lastly, Quizlet also offers an app for mobile devices, making studying Mam easy and accessible even without a computer.

B.3.2.2 Student Work Creation

There is not enough space here to show all of the amazing student-created work from our classes, though I wish there was. In this section, I provide three examples of final projects produced by students. For some semesters, the prompt for the final project was open ended, while in others, we gave a specific prompt. For the three works discussed here, the prompt was open– we asked students to create something that was of interest to them and showcased what they have learned in the class. Some of the most incredible projects were created in semesters in which we gave an open prompt. The three projects discussed below are 1) the creation of Mam study cards, 2) a joint video project, and 3) an illustrated original story.



Figure B.16: Quizlet flashcard (definition) with letter of the alphabet and example words
Image from CONALFA (2015)

Example 1: Study cards

One student, Julia Aguilar Jerez, created a set of study cards for her final project in the Spring 2022 semester. She created 13 cards using Canva, a free graphic design tool for building flyers, presentations, posters, logos and more. Figure B.17 shows one of the study cards which provides a number of useful phrases in Mam, each phrase including an image along with the English translation. The full set of 13+ study cards can be found at <https://sites.google.com/berkeley.edu/maminoakland/learn-mam/study-cards>



Figure B.17: Study card example from Julia Aguilar Jerez

Example 2: Joint video

Two students, Linda Oglesbee and Colin McCormick, living in the same city, teamed up for a joint video project in the Spring 2022 semester. They recorded themselves performing daily tasks such as making coffee, calling each other to meet up, having lunch together, visiting landmarks in their city and talking to each other in person about their day. They produced a final video which included subtitles in Mam, Spanish, and English. Two stills from their project are shown in figure B.18. Their full video can be found on YouTube at https://www.youtube.com/watch?v=aCOZt4BX_14.

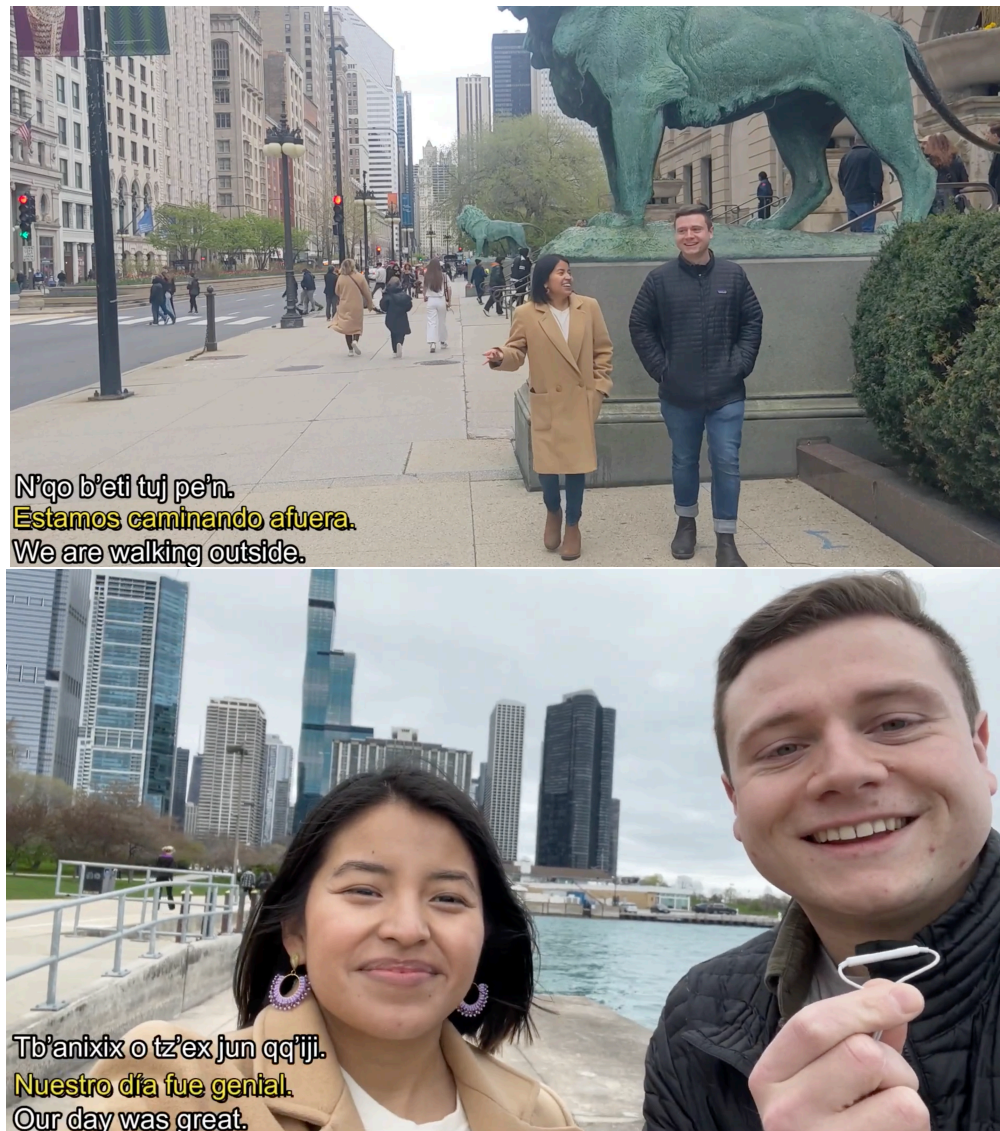


Figure B.18: Stills from Linda and Colin's joint video project

Example 3: Original story

In this last example, Benjamin “Mincho” Ruiz Rosado wrote an original story called *Tzluw b’ix Jan* “Here and There” about a Quetzal³ named Santi who talks with his grandmother about belonging and the meaning of home. Santi encounters other birds who look different from him, and he begins to question his identity, where he is truly from, and whether he belongs anywhere. His grandmother teaches Santi that home can be found anywhere. Home is family, friends, nature, love. The student who wrote this moving story, Mincho, has Mayan heritage thought did not learn a Mayan language growing up. This is a story about the feelings of searching for and connecting with one’s own heritage and roots, and it was a deeply personal and uplifting story, connecting Mincho’s personal experiences and his heritage. Overall, this project was an impressive showcase of his skills in writing and reading in Mam, as well as the ability to express complex and emotional ideas in Mam. Mincho’s full presentation can be found here: <https://sites.google.com/berkeley.edu/maminoakland/student-work>.

Tzluw islan ch’it naj kyxol qa tze.
Muchos pájaros viven aquí en el bosque.
Many birds live here in this forest.

J’al at ch’in muj b’ix at jb’al.
Hoy hay un poco de neblina y lluvia.
It is a little foggy and rainy today.

Jun chtal ch’it, Santi, naj kyxol qa tze tuk’l t-txu q’a b’ix t-man q’a.
Un pájaro joven, Santi, vive en el bosque con su mamá y papá.
One young bird, Santi, lives in the forest with his mom and dad.

Quetzal kykyaqil qa.
Ellos son Quetzales.
They are Quetzales.

1 / 13

Figure B.19: Slide from Mincho’s presentation

Other project ideas that students created with an open prompt were translated children’s books, original stories, original poetry and translated poetry, descriptions of family, and descriptions of themselves. One final project involved a video diary of a trip to the zoo with Mam speaking middle school students narrating their experience and observations. In addition to the open prompt, one of our final projects for intermediate students involved each student interviewing

³A Quetzal is a type of bird with multicolored feathers native to Mesoamerica. It is the national bird of Guatemala and the namesake for Guatemalan currency.

a native Mam speaker about their life. They conducted the interviews in Mam either on Zoom or in person. For their presentations to the class, students used pictures and information they gathered to present the life of the person they interviewed. The creativity and heart revealed in all of these projects were undoubtedly impressive and inspiring, as well as illustrative of the use of technology to not only learn and study Mam, but to create art and use Mam as a medium of self-expression.

Appendix C

Glossed Texts

C.1 Introduction

This appendix contains 10 texts produced by native speakers of San Juan Atitán Mam. I recorded these texts between June 2022 and February 2023. All texts were transcribed by Silvia Lucrecia Carrillo Godínez, translated by Carrillo Godínez and myself, and glossed by me. Metadata for each text is provided, including the name of the speaker, the date, the location, and a short explanation of the text. All recordings are archived in the California Language Archive (CLA) in the collection “Documentary Materials on Mam” (CLA 2020-15) (Carrillo Godínez et al., 2023). In this appendix, I provide the location of each text in the collection and a list of accompanying materials, which include video and audio recordings. Kenneth Gallanosa, my collaborator and UC Berkeley undergraduate linguistics student, has produced subtitled videos for many of these recordings, with all subtitles in Mam, English, and Spanish. These subtitled videos can also be found in the Documentary Materials on Mam CLA collection, [CLA 2020-15](#).

Following the metadata, description, and CLA location, each text is given in paragraph format, first in Mam (*Qyol Mam*), then in English, then Spanish. Following these three translations for each text is a line-by-line gloss with the English translation.

Glossed data are presented in four lines. The top line is given in the Mam orthography; the second line uses the same alphabet as the Mam orthography, but has the addition of morpheme breaks, null morphemes, and instances where two underlying morphemes become one on the surface (see the distal $x=$ aspect morpheme in §C.2.1). The third line is the gloss line, and the fourth line is the English translation.

C.2 Texts illustrating grammar

The texts in this section were provided by Silvia Lucrecia Carrillo Godínez in order to illustrate the use of a particular morpheme or syntactic construction. Many of these texts were produced in response to questions such as “What is the difference in meaning between $x=$ and *ma* (both aspect

markers)?” or “How does one give instructions in Mam?” The answers given were illustrations of these grammatical concepts, and these illustrations comprise the texts in this section.

C.2.1 Nchin txolb’ani nq’iji (I am describing my day)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: June 20, 2022

Place: San Juan Atitán, Huehuetenango, Guatemala

Silvia Lucrecia Carrillo Godínez provided this story to explain the use of the distal *x=* aspect marker as distinct from the proximate *ma* aspect marker. She comments that while both are used to describe events that took place within the same day, *x=* is used for events a bit earlier in the day.

Location in the CLA archive:

- [CLA 2020-15.050](#)

Accompanying material:

- Subtitled audio recording with image

Qyol Mam: Nchin txolb’ani nq’iji

Xle’ tximaky’ ĩin jaw we’y. ĩin jaw we’y so’k nxb’alni. ĩin wani tuk’l ntxuy. ĩixi tuj tnam. Taj ĩin poni tuj tnam, xqwo’kxi tuj tja qman tuk’l Glendy, mi cuñada. B’ix taj xqo poni, npon Geovany. Taj xpon Geovany, nqwa’i yol, nqwa’i q’olb’el qib’i. B’ix xi qq’ama’ni “qo’! qo’ tuj tja xnaq’tzb’il.” Taj ĩin poni, so’k nke’yni ak’j ajxnaq’tzanjtz. Ma chin tzalji, ĩin yolni. Taj ĩna’jtzi, ĩin kb’uli tuj campo. Lu Alex nyon wiy. Ma qo’x aji tuk’l jun xin no’k tb’i te Seplush Jose Jacinto. Ma qo yolni. Ma chna’jtzi. Ma chnu’li njay b’ix ma chin b’aj wani.

English translation: Describing my day

I got up this morning. I got up and I put on my clothes. I ate with my mom. I went to town. When I arrived down town, we entered the church with Glendy, my sister-in-law. And when we arrived, Geovany arrived. When Geovany arrived, we started to talk and greet each other. And we said “Let’s go! Let’s go to the school.” When I arrived, I met the new students. I felt happy and I spoke. When I returned, I went down to the basketball court. And Alex was waiting for me. I went with a man named Seplush Jose Jacinto. We talked. I returned. I came home and I ate.

Spanish translation: Describiendo mi día

Me levanté hoy en la mañana. Me levanté, me puse mi ropa. Comí con mi mamá. Fui al pueblo. Cuando llegué al pueblo, entramos a la iglesia con Glendy, mi cuñada. Y cuando llegamos, llegó Geovany. Cuando llegó Geovany, empezamos a hablar y saludarnos y dijimos “Vamos. Vamos a la escuela.” Cuando llegué, conocí a los nuevos estudiantes. Me sentí feliz y hablé. Cuando

regresé, bajé en el campo. Y Alex me estaba esperando. Fui con un señor que se llama Seplush Jose Jacinto. Hablamos. Regresé. Vine a mi casa y comí.

Nchin txolb'ani nq'iji

- (1) *Xle' tximaky' x̄in jaw we'y.*
 Xle' tximaky' x=chin jaw we'=y.
 morning while.ago DIST-B1SG DIR:up stop=DISAGR
 I got up this morning.
- (2) *X̄in jaw we'y, so'k nxb'alni.*
 X=chin jaw we'=y, x=tz'=ok n-xb'al-n=i.
 DIST=B1SG DIR:up stop=DISAGR DIST=B2/3SG=DIR:in A1SG-clothe-DS=DISAGR
 'I got up and I put on my clothes.'
- (3) *X̄in wani tuk'l ntxuy.*
 X=chin wa-n=i t-uk'l n-txu=y.
 DIST=B1SG eat-AP=DISAGR A2/3SG-RN:COM A1SG-mother=DISAGR
 'I ate with my mom.'
- (4) *X̄ixi tuj tnam.*
 X=chi=x=i t-uj tnam.
 DIST=B1SG=DIR:go=DISAGR A2/3SG-RN:in town
 'I went to town.'
- (5) *Taj x̄in poni tuj tnam,*
 Taj x=chin pon=i t-uj tnam,
 when DIST=B1SG arrive.there=DISAGR A2/3SG-RN:in town
 'When I arrived down town,'
- (6) *xqwo'kxi tuj tja qman tuk'l Glendy, mi cuñada.*
 x=qw=o'k=x=i t-uj t-ja q-man
 DIST=B1PL=DIR:in=DIR:go=DISAGR A2/3SG-RN:in A2/3SG-house A1PL-father
 t-uk'l Glendy, mi cuñada.
 A2/3SG-RN:COM Glendy my sister.in.law
 'we entered the church with Glendy, my sister-in-law.'
- (7) *B'ix taj xqo poni, npon Geovany.*
 B'ix taj x=qo pon=i, n=pon Geovany.
 and whe DIST=B1PL arrive.there=DISAGR IPFV=arrive.there Geovany
 'And when we arrived, Geovany arrived.'

- (8) *Taj xpon Geovany, nqwa'i yol, nqwa'i q'olb'el qib'i.*
 Taj x=Ø=pon Geovany, n=qw=a'=i yo-l,
 when DIST=B2/3SG=arrive.there Geovany. IPFV=B1PL=start=DISAGR speak-NF
 n=qw=a'=i q'olb'e-l q=ib'=i.
 IPFV=B1PL=start=DISAGR greet-NF A1PL-RN:RR=DISAGR
 'When Geovany arrived, we started to talk and greet each other.'
- (9) *B'ix xi qq'ama'ni "qo'! qo' tuj tja xnaq'tzb'il."*
 b'ix xi q-q'ama-'n=i qo' qo' t-uj t-ja
 and DIR:go A1PL-say-DS=DISAGR 1PL.EMPH 1PL.EMPH A2/3SG-RN:IN A2/3SG-house
 xnaq'tz-b'il
 learn-NML
 'And we said "Let's go. Let's go to the school."'
- (10) *Taj xin poni, so'k nke'yni ak'j ajxnaq'tzanjtz.*
 Taj x=chin pon=i, x=tz'=ok n-ke'y-n=i ak'j
 when DIST=B1SG arrive.there=DISAGR DIST=B2/3SG=DIR:in A1SG-see-DS=DISAGR new
 ajxnaq'tzanjtz.
 student
 'When I arrived, I met the new students.'
- (11) *Ma chin tzalji, xin yolni.*
 Ma chin tzalj=i, x=chin yol-n=i
 PROX B1SG happy=DISAGR DIST=B1SG speak-AP=DISAGR
 'I felt happy and I spoke.'
- (12) *Taj xna'jtzi, xin kb'uli tuj campo.*
 Taj x=chn=a'j=tz=i, x=chin
 when DIST=B1SG=DIR:return=DIR:come=DISAGR DIST=B1SG
 kb'=ul=i t-uj campo
 DIR:down=DIR:arrive.here=DISAGR A2/3SG-RN:in court
 'When I returned, I went down to the basketball court.'
- (13) *Lu Alex nyon wiy.*
 Lu Alex n=yo-n w-i=y.
 DEM Alex IPFV-wait-AP A1SG-RN:DAT=DISAGR
 'And Alex was waiting for me.'

- (14) *Ma qo'x aji tuk'l jun xin no'k tb'i te Seplush Jose Jacinto.*
 Ma qo'=x aj=i t-uk'l jun xin n=Ø=o'k
 PROX B1PL=DIR:go DIR:return=DISAGR A2/3SG-RN:COM one man IPFV=B2/3SG=DIR:in
 t-b'i t-e Seplush Jose Jacinto.
 A2/3SG-name A2/3SG-RN:POSS Seplush Jose Jacinto
 'I went with a man named Seplush Jose Jacinto.'
- (15) *Ma qo yolni.*
 Ma qo yol-n=i.
 PROX B1PL speak-AP=DISAGR
 'We talked.'
- (16) *Ma chna'jtzi.*
 Ma chn=a'j=tz=i.
 PROX B1SG=DIR:return=DIR:come=DISAGR
 'I returned.'
- (17) *Ma chnu'li njay b'ix ma chin b'aj wani.*
 Ma chn=u'l=i n-ja=y b'ix ma chin b'aj
 PROX B1SG=DIR:arrive.here=DISAGR A1SG-house=DISAGR and PROX B1SG DIR:COMPL
 wa-n=i.
 eat-AP=DISAGR
 'I came home and I ate.'

C.2.2 Tq'ij q'a Geovany (Geovany's day)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: June 13, 2022

Place: San Juan Atitán, Huehuetenango, Guatemala

Silvia Lucrecia Carrillo Godínez provided this story to explain the use of the classifier *q'a* 'boy,' showing that it can be used anaphorically to reference the main subject of the story.

Location in the CLA archive:

- [CLA 2020-15.047](#)

Accompanying material:

- Subtitled audio recording with image

Qyol Mam: Tq'ij q'a Geovany

Xle' wen taj tjaw we' q'a Geovany. Nxi' q'a aq'nal. Taj tpon q'a, na' q'a b'anchalta tkyaqil. Yajxa tb'ant tkyaqil taq'an q'a. At nim cement okx tuj t-txan q'a. At xkutxamb'j ti'j q'a ja'l. Ya tpon

meltz'j tja q'a. Las cuatro pon meltz'ji tjay ew, Geovany? Las cuatro pon meltz'j q'a tja q'a. Ya tajtzan tpon q'a, matzan a' q'a tal. Ya ja'l ma jaw we' q'a. Yab' ch'in q'a ja'l.

English translation: Geovany's day

It was early morning when Geovany got up. He went to work. When he arrived, he started to do everything. He took a long time to do his work. He got a lot of cement in his nose. Now he has the flu. Then, he returned home. At four you arrived at your home yesterday, Geovany? He returned home at four. And once he got there, he went to sleep. So today he got up, and he is a little sick.

Spanish translation: El día de Geovany

Era muy temprano cuando Geovany se levantó. Él se va a trabajar. Cuando él llegó, él empezó a hacer todo. Él se tardó mucho en hacer su trabajo. Se le metió mucho cemento en la nariz. Él tiene gripe ahora. Entonces él regresó a su casa. A las cuatro llegaste a tu casa ayer, Geovany? Él regresó a las cuatro a su casa. Entonces, hasta que él llegó a su casa, él empezó a dormir. Entonces hoy él se levanto y él está un poco enfermo.

Tq'ij q'a Geovany

(18) *Xle' wen taj tjaw we' q'a Geovany.*

Xle' wen taj t-jaw we' q'a Geovany.
morning early when A2/3SG-DIR:up stop CLF:boy Geovany
'It was early morning when Geovany got up.'

(19) *Nxi' q'a aq'nal.*

N=∅=xi' q'a aq'n-al.
IPFV=B2/3SG=DIR:go CLF:boy work-NF
'He went to work.'

(20) *Taj tpon q'a, na' q'a b'anchalta tkyaqil.*

Taj t-pon q'a, n=a' q'a b'ancha-l-ta tkyaqil.
when A2/3SG-arrive.there CLF:boy IPFV=start CLF:boy do-NF-ta everything
'When he arrived, he started to do everything.'

(21) *Yajxa tb'ant tkyaqil taq'an q'a*

Yaj=xa t-b'ant tkyaqil t-aq'an q'a
late=EMPH A2/3SG-do all A2/3SG-work CLF:boy
'He took a long time to do his work.'

(22) *At nim cement okx tuj t-txan q'a.*

At nim cement ok=x t-uj t-txan q'a.
EXIST a.lot cement DIR:in=DIR:go A2/3SG-RN:in A2/3SG-nose CLF:boy
'He got a lot of cement in his nose.'

- (23) *At xkutxamb'j ti'j q'a ja'l.*
 At xkutxamb'j t-i'j q'a ja'l.
 EXIST flu A2/3SG-RN:MAL CLF:boy today
 'Now he has the flu.'
- (24) *Ya tpon meltz'j tja q'a.*
 Ya t-pon meltz'j q'a t-ja q'a.
 then A2/3SG-arrive.there return CLF:boy A2/3SG-house CLF:boy
 'Then he returned home.'
- (25) *Las cuatro pon meltz'ji tjay ew, Geovany?*
 Las cuatro pon meltz'j=i t-ja=y ew, Geovany?
 the four arrive.there return=DISAGR A2/3SG-house=DISAGR yesterday Geovany
 'At four you arrived at your home yesterday, Geovany?'
- (26) *Las cuatro pon meltz'j q'a tja q'a.*
 Las cuatro pon meltz'j q'a t-ja q'a.
 the four arrive.there return CLF:boy A2/3SG-house CLF:boy
 'He returned home at four.'
- (27) *Ya tajtzan tpon q'a, matzan a' q'a tal.*
 Ya taj=tzan t-pon q'a, matzan a' q'a ta-l.
 then when=well A2/3SG-arrive.there CLF:boy until start CLF:boy sleep-NF
 'And once he got there, he went to sleep.'
- (28) *Ya ja'l ma jaw we' q'a.*
 Ya ja'l ma jaw we' q'a.
 then today PROX DIR:up stop CLF:boy
 'So today he got up.'
- (29) *Yab' ch'in q'a ja'l.*
 Yab' ch'in q'a ja'l.
 sick a.litte CLF:boy today
 'And he is a little sick.'

C.2.3 Jil Koda (Koda)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: February 16, 2022 (Zoom)

Silvia Lucrecia Carrillo Godínez provided this story to explain the use of the classifier *jil* ‘animal,’ showing that it can be used anaphorically to reference the main subject of the story. The story is about my cat, Koda.

Location in the CLA archive:

- [CLA 2020-15.057](#)

Accompanying material:

- Zoom video recording, time stamp: [00:25:57 – 00:29:00]

Jil Koda

(30) *Ntan jil Koda twi' watb'l*

N=tan jil Koda t-wi' wat=b'l
 IPFV=sleep CLF Koda A2/3SG-RN:ON bed-NML
 ‘Koda (the cat) was sleeping on the bed’

(31) *taj sul tna'b'l jil.*

taj x=tz=ul t-na-b'l jil.
 when DIST=B2/3SG=arrive.here A2/3SG-consciousness-NML CLF,
 ‘when she woke up.’

(32) *Xjaw we' jil*

X=∅=jaw we' jil
 DIST=B2/3SG=DIR:up stop CLF
 ‘She got up’

(33) *b'ix se'tz tz'aq jil t-txa'n watb'l.*

b'ix x=tz'=e=tz tz'aq jil t-txa'n wat-b'l.
 and DIST=B2/3SG=DIR:OUT=DIR:come fall CLF A2/3SG-edge bed-NML
 ‘and fell off the edge of the bed.’

C.2.4 Ne xkul (The baby)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: February 16, 2022 (Zoom)

Silvia Lucrecia Carrillo Godínez provided this story to explain the use of the classifier *ne* ‘small, innocent,’ showing that it can be used anaphorically to reference the main subject of the story.

Location in the CLA archive:

- [CLA 2020-15.057](#)

Accompanying material:

- Zoom video recording, time stamp: [00:29:10 – 00:34:40]

Ne xkul

- (34) *Nsch'an ne xkul t-txa'n pe'n.*
 N=sch'a-n ne xkul t-txa'n pe'n.
 IPFV=play-AP CLF baby A2/3SG-edge outside
 ‘The baby was playing on the patio.’
- (35) *Saj weky'j ti'j ne*
 X=tzaj weky'j t-i'j ne
 DIST=come hunger A2/3SG-RN:MAL CLF
 ‘She got hungry.’
- (36) *sa' ne o'-al.*
 x=tz=a' ne o'-al.
 DIST=B2/3SG=start CLF cry-NF
 ‘and she started to cry.’
- (37) *Xpon t-txu ne ti'j ne b'ix*
 X=∅=pon t-txu ne t-i'j ne b'ix
 DIST=B2/3SG=arrive.there A2/3SG-mother CLF A2/3SG-RN CLF and
 ‘Her mother arrived for her and’
- (38) *xi' tq'o'n t-txu ne te ne jun tlo' ne.*
 x=xi' t-q'o'n t-txu ne t-e ne jun t-lo'
 DIST=B2/3SG=DIR:go A2/3SG-give-DS A2/3SG-mother CLF A2/3SG-DAT CLF one A2/3SG-fruit
 ne.
 CLF
 ‘her mother gave her a fruit.’

C.2.5 Nlo'y tla'san (My peach)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: February 16, 2022 (Zoom)

Silvia Lucrecia Carrillo Godínez provided this story to explain the use of the classifier *nlo'y* 'my fruit' (from *lob'j* 'fruit'), showing that it can be used anaphorically to reference the main subject of the story, *nlo'y tla'san* 'my peach.'

Location in the CLA archive:

- [CLA 2020-15.057](#)

Accompanying material:

- Zoom video recording, time stamp: [00:35:25 – 00:41:14]

Nlo'y tla'san

(39) *Āix aji laq'ol jun nlo'y tla'san.*

X=chi=x aj=i laq'o-l jun n-lo'=y tla'san.
 DIST=B1SG=DIR:go return=DISAGR buy-NF one A1SG-fruit=DISAGR peach
 'I went to buy a peach.'

(40) *Se'l nsuni ti'j nlo'y.*

X=tz'=el n-su-n=i t-i'j n-lo'=y.
 DIST=B1SG=DIR:out A1SG-clean-DS=DISAGR A2/3SG-RN:PAT A1SG-fruit=DISAGR
 'I wiped it off.'

(41) *Noqsan xeq nlo'y.*

Noq=san xeq n-lo'=y.
 only=EMPH red A1SG-fruit=DISAGR
 'It was so red.'

(42) *Se'l tz'aq n-lo'=y.*

X=tz'=el tz'aq n-lo'=y.
 DIST=B2/3SG=DIR:out fall A1SG-fruit=DISAGR
 'Then it fell.'

(43) *Ayx nlo'y!*

Ay=x n-lo'=y!
 EXCLAMATION=EMPH A1SG-fruit=DISAGR
 'Oh no, my fruit!'

C.2.6 Chemj (Weaving)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: July 3, 2022

Place: San Juan Atitán, Huehuetenango, Guatemala

Silvia Lucrecia Carrillo Godínez provided this narrative to explain how to give instructions in Mam. She holds up a *k'alb'l* and explains the process of weaving it.

Location in the CLA archive:

- [CLA 2020-15.052](#)

Accompanying material:

- Subtitled video recording
- Non-subtitled video recording

Qyol Mam: Chemj

Jun chemj, jun k'alb'l. Atzan jun k'al jken. Tnel, ntzaj q'laq'o'n lan. Junt njaw qq'ano'n. Junt qa at tlani, njaw t-xk'lo'xni. Junt nxi tchmo'ni ti'j. Aj tb'ant, nxi tkyji'ni t-txa'n.

English translation: Weaving

A textile, a k'al. This is a k'al. First, we buy wool thread. Next, we organize the thread. Next, if you have wool thread, you wrap it into small balls. Next, you start to weave it. When it's finished, you twist the ends.

Spanish translation: Tejido

Un tejido, un pañuelo. Este es un pañuelo. Primero, compramos el hilo. Despues, lo hurdimos. Despues, si tienes hilo, lo puedes envolver para hacer bolitas. Despues, empezas a tejerlo. Cuando esta terminado, empeizas a trenzar las puntas.

Chemj

- (44) *Jun chemj, jun k'alb'l*
 Jun chemj, jun k'al-b'l.
 one textile one k'al=NML.
 'A textile, a k'al.'¹

¹The best translation for *k'alb'l* may be *pañuelo* or *rebozo* in Spanish or 'shawl' in English. It is a type of woven textile that is more square than a *rebozo*, worn by men on the shoulder, as well as by women around the torso.

- (45) *Atzan jun k'al jken.*
 A=tzan jun k'al jken.
 DET=well one k'al DEM
 'This is a k'al.'
- (46) *Tnel, ntzaj qlaq'o'n lan.*
 Tnel, n=∅=tzaj q-laq'o-'n lan.
 first, IPFV=B2/3SG=DIR:come A1PL-buy-DS wool.thread
 'First, we buy wool thread.'
- (47) *Junt, njaw q-q'ano'n.*
 Junt, n=∅=jaw q-q'ano-'n.
 next IPFV=B2/3SG=DIR:up A1PL-organize.thread-DS
 'Next, we organize the thread.'
- (48) *Junt, qa at tlani, njaw t-xk'lo'xni.*
 Junt, qa at t-lan=i, n=∅=jaw t-xk'lo'x-n=i.
 next if EXIST A2/3SG-wool.thread=DISAGR IPFV=B2/3SG=DIR:up A2/3SG-wrap-DS=DISAGR
 'Next, if you have wool thread, you wrap it into small balls.'
- (49) *Junt, nxi tchmo'ni ti'j.*
 Junt, n=∅=xi t-chmo-'n=i t-i'j.
 next IPFV=B2/3SG=DIR:go A2/3SG-weave-DS=DISAGR A2/3SG-RN:PAT
 'Next, you start to weave it.'
- (50) *Aj tb'ant, tkyji'ni t-txa'n.*
 Aj t-b'ant, n=∅=xi t-kyji-'n=i t-txa'n.
 when A2/3SG-done IPFV=B2/3SG=DIR:go A2/3SG-twist-DS=DISAGR A2/3SG-nose
 'When it's finished, you twist the ends.'

C.2.7 Dos maneras de dar instrucciones (Two ways to give instructions)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: July 3, 2022

Place: San Juan Atitán, Huehuetenango, Guatemala

Silvia Lucrecia Carrillo Godínez provided this narrative to explain that there are two ways to give instructions depending on if you are talking to one person (in which case, second person singular is used), or multiple people (in which case, first person plural inclusive is used). In this narration, he holds up a *k'alb'l* and explains the process of weaving it.

Location in the CLA archive:

- [CLA 2020-15.052](#)

Accompanying material:

- Subtitled video recording
- Non-subtitled video recording

Qyol Mam: Dos maneras de dar instrucciones

Dos maneras de dar instrucciones Podemos dar... “Ntzaj qin lan. Njaw qq’ano’n. Nxi qchmo’n. Njaw qxk’lo’xan.” Per at junt te jun xjal: “Tnel, ntzaj tini lan. Njaw t-xk’lo’xni. Ajtzan tb’aj t-xk’lo’xni, njaw tq’ano’ni. Aj ne’l tchemji...” At kab’ Jun de nosotros: ‘a qo.’ B’ix at jun te ay. *Tessa: Alkye mās na’jb’an?* Lucrecia: Tka’pl! Qa jun xjal: “Nej tzaji tzluw. Tnel, ktzal tini jken,” qa jun xjal. Qa at ox, kyaj xjal, jwe’ xjal, es ‘a qo,’ nosotros.

English translation: Two ways to give instructions

Two ways to give instructions. We can give... “We bring the wool thread. We organize it. We weave it. We wrap it up into little balls.” But, there’s another way for one person: “First, you bring wool thread. You wrap the thread up into little balls. When you finish wrapping, you organize the thread. When you finish the textile...” There are two. One for us: “a qo.” And there is one for you. *Tessa: Which one is used more?* Lucrecia: Both! If one person: “Wait, come here. First, you will bring this,” if one person. If there are three, four people, five people, it’s “a qo”, us.

Spanish translation: Dos maneras de dar instrucciones

Dos maneras de dar instrucciones Podemos dar... “Traemos el hilo Lo urdimos. Lo tejemos. Envolvemos el hilo para hacer bolitas.” Pero, hay otra forma para solo una persona: “Primero, traes el hilo Envuelves el hilo para hacer bolitas Cuando termines de elvolerlo, lo empiezas a urdir. Cuando terminas el tejido...” Hay dos formas. Uno de nosotros “a qo.” Y hay uno de tú. *Tessa: ¿Cuál se usa más?* Lucrecia: ¡Ambos! Si es una persona, “Espera, ven aca. Primero, traes esto,” si es una persona. Si tres, cuatro, o cinco personas, es “a qo,” nosotros.

Dos maneras de dar instrucciones

- (51) Dos maneras de dar instrucciones.
‘Two ways to give instructions.’
- (52) Podemos dar ...
‘We can give...’
- (53) “Ntzaj qin lan.
N=∅=tzaj q-i-n lan.
IPFV=B2/3SG=DIR:come A1PL-bring-DS wool.thread
“‘We bring the wool thread.’

- (54) *Njaw q-q'ano'n.*
 N=∅=jaw q-q'ano-'n.
 IPFV=B2/3SG=DIR:up A1PL-organize.thread-DS
 'We organize it.'
- (55) *Nxi qchmo'n.*
 N=∅=xi q-chmo-'n.
 IPFV=B2/3SG=DIR:go A1PL-weave-DS
 'We weave it.'
- (56) *Njaw qxk'lo'xan."*
 N=∅=jaw q-xk'lo'x-an.
 IPFV=B2/3SG=DIR:up A1PL-wrap-DS
 'We wrap it up into little balls.'
- (57) *Pet at junt te jun xjal:*
 Per at junt t-e jun xjal:
 but EXIST another A2/3SG-RN:PAT one person
 'But, there's another way, for one person.'
- (58) *"Tnel, ntzaj tini lan.*
 Tnel, n=∅=tzaj t-i-n=i lan.
 first, IPFV=B2/3SG=DIR:come A2/3SG-bring-DS=DISAGR wool.thread
 "First, you bring wool thread.'
- (59) *Njaw t-xk'lo'xni.*
 N=∅=jaw t-xk'lo'x-n=i.
 IPFV=B2/3SG=DIR:up A2/3SG-wrap-DS=DISAGR
 'You wrap the thread up into little balls.'
- (60) *Ajtzan tb'aj txk'lo'xni,*
 Aj=tzan t-b'aj t-xk'lo'x-n=i,
 when=EMP A2/3SG-DIR:COMPL A2/3SG-wrap-DS=DISAGR
 'When you finish wrapping.'
- (61) *njaw tq'ano'ni.*
 n=∅=jaw t-q'ano-'n=i.
 IPFV=B2/3SG=DIR:up A2/3SG-organize.thread-DS=DISAGR
 'you organize the thread.'
- (62) *Aj ne'l tchemji..."*
 Aj n=e'l t-chemj=i...
 when IPFV=B2/3SG=DIR:out A2/3SG-textile=DISAGR
 'When you finish the textile...'

- (63) *At kab'. Jun de nosotros: 'a qo.'*
 At kab'. Jun de nosotros: a qo.
 EXIST two one of us DET 1PL
 'There are two. One for us: "a qo."'
- (64) *B'ix at jun te ay.*
 B'ix at jun t-e a=y.
 and EXIST one A2/3SG-RN:pat DET=DISAGR
 'And there is one for you.'

Tessa:

- (65) *Alkye mas na'b'lan?*
 Alkye mäs n=Ø=a'jb'l-an?
 which more IPFV=B2/3SG=use-AP
 'Which one is used more?'

Lucrecia:

- (66) *Tka'pl!*
 T-ka'pl!
 A2/3SG-both
 'Both!'
- (67) *Qa jun xjal: "Nej, tzaji tzluw.*
 Qa jun xjal: Nej, tzaj=i tzluw.
 if one person wait DIR:come=DISAGR here
 'If one person: "Wait, come here.'
- (68) *Tnel, ktzal tini jken," qa jun xjal.*
 Tnel, Ø k=tza-l t-i-n=i jken, qa jun xjal.
 first B2/3SG POT=DIR:come-POT A2/3SG-bring-DS=DISAGR DEM if one person
 'First, you bring this," if one person.'
- (69) *Qa at ox, kyaj xjal, jwe' xjal, ex 'a qo' nosotros.*
 Qa at ox kyaj xjal, jwe' xjal, es a qo, nosotros.
 if EXIST three four person five person it.is DET 1PL
 'if there are three, four or five people, it's "a qo," us.'

C.3 Working the land

Both of the texts in this section were recorded on the same day in T-xe Ma'tx, San Juan Atitán, a valley between the Ma'tx mountain and the Q'o' mountain. Both speakers explain one way in which they engage with the land while they perform the action they are describing. Both texts have accompanying subtitled videos in the CLA.

C.3.1 Qa'wal (Our crop)

Speaker: Geovany Aguilar García

Date recorded: June 10th, 2022

Place: T-xe Ma'tx, San Juan Atitán, Huehuetenango, Guatemala

Geovany Aguilar García explains the process of cleaning the land by removing brush, weeds, and other growth to clear out space to plant new crops. In the accompanying video, between lines (78) and (79), Geovany spends three to four minutes clearing out the brush.

Location in the CLA archive:

- [CLA 2020-15.044](#)

Accompanying material:

- Subtitled video recording
- Non-subtitled video recording

Qyol Mam: Qa'wal

Je'y qi wuk'l. Lutzan qin ma chin kb'u'l ken. Twitz jun piñ ne nkojb'li max T-xe Ma'tx. Muj ta' ch'in twitz kya'j ken. Per mixt tzaj jb'al chiwt. Waji ku'x kab' wi' wa'wali tzluw. O'kx ch'in nim k'ul ti'j. Matz kjawl nsanti. Kjawal nsani k'ul tu'n tku'x kab' wi' wa'wali tuj. [video] Ma chin sikyti. *Tessa: Q'amantzi qiy. Tijil ma b'ant tu'ni?* Geovany: Ma tz'ex nsani tja' k'ul ken. Ma b'aj nsani ku'l tu'n tku'x wa'wali. Atzan til tu'n ma jaw b'aj. Ma jaw q'it k'ul tu'n... tu'n tb'ant qa'wan, tu'n tb'ant qb'et t-xol, tu'n t-xi qke'yan niky'pon t-xol qa'wal tu'n tku'x, B'ix tu'n t-tzaj naj ch'iy qa'wal. Tu'n me'n ax tkub' kyim, tkub' tzqij qa'wal tja' k'ul.

English translation: Our crop

Hello my friends. I've come down here. In front of a piece of my land, T-xe Ma'tx. It's a little cloudy here. But I hope it doesn't rain. I want to plant something here. It's just that there is a lot of brush. So now I'm going to cut them. I'm going to cut the brush in order to plant something here. [video] I am tired. *Tessa: Tell us. What did you do?* Geovany: I just cleaned out the brush here. I finished clearing it in order to plant here. For this reason, it was cut. It was cleared so that... so that we can plant, so that we can walk between them, so that we can calculate how much space we must leave between each plant, and so that our plants can grow quickly. So that our plants do not die or dry out under the brush.

Spanish translation: Nuestra tierra

Hola mis amigos. Estoy aquí. He bajado. Ante un pedazo de mi tierra para cultivar en T-xe Ma'tx. Está un poco nublado aquí. Pero ojala no llueva Quiero sembrar algo aquí Solo que hay mucho monte Ahorita voy a cortarlos Voy a cortar el monte para sembrar algo allí. [video] Estoy cansado. *Tessa: Dinos. ¿Qué hiciste?* Geovany: Acabo de limpiar el monte aquí. Terminé de limpiar para

sembrar aqui. Por eso, fue cortado. Fue limpiado para... para que podamos sembrar, para que podamos caminar entre ellos para que podamos calcular cuanto espacio debemos de dejar dentro de cada uno, para que nuestras plantas puedan crecer luego. Para que nuestras plantas no se mueran, no se sequen, debajo de monte.

Qa'wal

- (70) *Je'y qi wuk'l.*
 Je'y q=i w-uk'l.
 hello 2PL=DISAGR A1SG-RN:COM
 'Hello my friends.'
- (71) *Lutzan qin ma chin kb'u'l ken.*
 Lu=tzan qin ma chin kb'=u'l ken.
 DEM=well B1SG PROX B1SG DIR:down=DIR:arrive.here DEM
 'I've come down here.'
- (72) *Twitz jun piḡ ne nkojb'li max T-xe Ma'tx.*
 T-witz jun piḡ ne n-kojb'l=i max T-xe Ma'tx.
 A2/3SG-RN:front one piece CLF:small A1SG-land=DISAGR DEM T-xe Ma'tx
 'In front of a piece of my land, T-xe Ma'tx.'
- (73) *Muj ta' ch'in twitz kya'j ken.*
 Muj ta' ch'in t-witz kya'j ken.
 clouds be a.litte A2/3SG-RN:front sky DEM
 'It's a little cloudy here.'
- (74) *Per mixt tzaj jb'al chiwt.*
 Per mix=t tzaj jb'al chi=wt.
 but NEG=COND DIR:come rain be=COND
 'But I hope it doesn't rain.'
- (75) *Waji ku'x kab' wi' wa'wali tzluw.*
 W-aj=i ku'=x kab' wi' w-a'wal=i tzluw.
 A1SG-want=DISAGR DIR:down=DIR:go two CLF:alive A1SG-crop=DISAGR here
 'I want to plant something here here.'
- (76) *O'kx ch'in nim k'ul ti'j.*
 O'kx ch'in nim k'ul t-i'j.
 only a.litte a.lot plant A2/3SG-RN:theme
 'It's just that there is a lot of brush.'

(77) *Matz kjawal nsanti.*

Ma=tz Ø k-jaw-l n-sa-n-t=i
 PROX=tz B2/3SG POT-DIR:up=POT A1SG-cut-DS-t=DISAGR
 ‘So now I’m going to cut them.’

(78) *Kjawal nsani k’ul tu’n tku’x kab’ wi’ wa’wali tuj.*

Ø k-jaw-l n-sa-n=i k’ul t-u’n
 B2/3SG POT-DIR:up=POT A1SG-cut-DS=DISAGR plant A2/3SG-RN:PURP
 t-ku’=x kab’ wi’ w-a’wal=i t-uj.
 A2/3SG-DIR:down=DIR:go two alive A1SG-crop=DISAGR A2/3SG-RN:in
 ‘I’m going to cut the brush in order to plant something here.’

[In the video, Geovany clears out the brush with his machete.]

Geovany:

(79) *Ma chin sikyti*

Ma chin sikyt=i.
 PROX B1SG tired=DISAGR
 ‘I am tired.’

Tessa:

(80) *Q’amantzi qiy. Tijil ma b’ant tu’ni?*

Q’ama-n=tz=i q-i=y. Tijil ma Ø b’ant
 tell-IMP=DIR:come=DISAGR A1PL-RN:DAT=DISAGR what PROX B2/3SG done
 t-u’n=i?
 A2/3SG-RN:AGT=DISAGR
 ‘Tell us. What did you do?’

Geovany:

(81) *Ma tz’ex nsani tja’ k’ul ken.*

Ma tz’=e=x n-sa-n=i t-ja’ k’ul ken.
 PROX B2/3SG=DIR:out=DIR:go A1SG-cut-DS=DISAGR A2/3SG-RN:below plant DEM
 ‘I just cleaned out the brush here.’

(82) *Ma b’aj nsani ku’l tu’n tku’x wa’wali.*

Ma Ø b’aj n-sa-n=i k’ul t-u’n
 PROX B2/3SG DIR:down A1SG-cut-DS=DISAGR plan A2/3SG-RN:PURP
 t-ku’=x w-a’wal=i.
 A2/3SG-DIR:down=DIR:go A1SG-crop=DISAGR
 ‘I finished clearing it in order to plant here.’

- (83) *Atzan til tu'n ma jaw b'aj.*
 A=tzan t-il t-u'n ma Ø jaw b'aj.
 DET=well A2/3SG-matter A2/3SG-RN:REAS PROX B2/3SG DIR:up DIR:COMPL
 'For this reason, it was cut.'
- (84) *Ma jaw q'it k'ul tu'n ...*
 Ma Ø jaw q'i-t k'ul t-u'n...
 PROX B2/3SG DIR:up take-ITV plant A2/3SG-RN:PURP
 'It was cleared so that...'
- (85) *tu'n tb'an qa'wan, tu'n tb'ant qb'et t-xol,*
 t-u'n t-b'ant q-a'wa-n, t-u'n t-b'ant q-b'et
 A2/3SG-RN:PURP A2/3SG-be.able A1PL-plant-DS A2/3SG-RN:PURP A2/3SG-be.able A1PL-walk
 t-xol,
 A2/3SG-RN:between
 'so that we can plant, so that we can walk between them,'
- (86) *tu'n t-xi qke'yan niky'pon t-xol qa'wal tu'n tku'x,*
 t-u'n t-xi q-ke'y-an niky'pon t-xol q-a'wal
 A2/3SG-RN:PURP A2/3SG-DIR:go A1PL-see-DS how.much A2/3SG-RN:between A1PL-crop
 t-u'n t-ku'=x,
 A2/3SG-RN:PURP A2/3SG-DIR:down=DIR:go
 'so that we can calculate how much space we must leave between each plant,'
- (87) *b'ix tu'n t-tzaj naj ch'iy qa'wal.*
 b'ix t-u'n t-tzaj naj ch'iy q-a'wal.
 and A2/3SG-RN:PURP A2/3SG-DIR:come quickly grow A1PL-crop
 'and so that our crop grows quickly.'
- (88) *Tu'n me'n ax tkub' kyim, tkub' tzqij qa'wal tja' k'ul.*
 Tu'n me'n ax t-kub' kyim, t-kub' tzqij q-a'wal
 A2/3SG-RN:PURP NEG.V same a2/3sg-dir:down dead A2/3SG-DIR:down dry A1PL-crop
 t-ja' k'ul.
 A2/3SG-RN:below plant
 'So that our crops do not die or dry out under the brush.'

C.3.2 Iqal Atzaj (Picking herbs)

Speaker: Rebeca Martín Domingo

Date recorded: June 10th, 2022

Place: T-xe Ma'tx, San Juan Atitán, Huehuetenango, Guatemala

Rebeca Martín Domingo explains the process of gathering herbs from the land while picking and gathering herbs from a piece of land called T-xe Ma'tx.

Location in the CLA archive:

- [CLA 2020-15.045](#)

Accompanying material:

- Subtitled video recording
- Non-subtitled video recording

Qyol Mam: Iqal atzaj

B'a'n jun xle' te kiyi. Wiy nb'i no'k te Rebeca Martín. Ja'l ma chin kb'u'li T-xe Ma'tx. At nim kyq'i', nti' q'ij. Ya wiy ma chin tzaji iqal ch'in witzji. Aj max tuj tnam nti'yx yin atzaj. Ya ja'l T-xe' Ma'tx at nim. B'ix ju' t-ten wiy o kyej ye'k'an we tu'n n'xeli. Lutzan nqo tzaj xilal, nqo tzaj awal kjo'n, jyo'nkx ch'in atzaj qu'n, tu'n tb'ant te qchi'. Ya ja'l ma chna' wiy iqal ch'in wiy witzj. Pero o'kx a qa ne etzan aj tij me'n tz'el qin. Qa'yx yin chyob'al te, k'a yin. [video] Matzan b'ant jun yub' witzji ken. Matz chna'ji njay ya tu'ntzan tku'x te nchi'y. Okxten, chjonta qi.

English translation: Picking herbs

Good morning to you all. My name is Rebeca Martín. Today I have come down here to T-xe Ma'tx. It's very windy and it's not a sunny day. So, I have come to cut some herbs. In town, not many herbs are found. So now, T-xe Ma'tx, many are found. And that's how my grandmother taught me. When we come to cut coffee, when we come to plant milpa (corn fields), we always look for some herbs to be cooked as food. And today I'm going to pick some herbs for myself. But only the soft herbs should be cut, not the hard ones. They taste bad, they are somewhat bitter. [video] So now I have a handful of herbs here. I will return home and cook it. That's all, thank you.

Spanish translation: Cortar hierbas

Buenos días a todos. Mi nombre es Rebeca Martín. Hoy he bajado aquí en T-xe Ma'tx. Hay mucho viento y no es un día soleado. Entonces, yo he venido a cortar algo de hierba. En el pueblo, no se encuentran muchas hierbas. Entonces ahora, en T-xe Ma'tx se encuentra bastante. Y así es como me ha enseñado mi abuela. Cuando venimos a cortar cafe, cuando venimos a sembrar milpa, siempre buscamos un poco de hierba para ser cocinado como comida. Entonces ahora, voy a cortar un poco de hierba para mi. Pero solo las hierbas blandas se deban de cortar y las duras no. Sabe un poco feo, es un poco amargo. [video] Ahora, ya tengo un manojo de hierba aquí. Voy a regresar a mi casa para cocinarlo. Solamente, muchas gracias.

Iqal atzaj

- (89) *B'a'n jun xle' te kiyi.*
 B'a'n jun xle' t-e ky-i=y.
 good one morning A2/3SG-RN:DAT A2/3PL-RN:DAT=DISAGR
 'Good morning to you all.'
- (90) *Wiy nb'i no'k te Rebeca Martín.*
 W-i=y n-b'i n=Ø=o'k t-e Rebeca Martín
 A1SG-RN:POSS=DISAGR A1SG-name IPFV=B2/3SG=DIR:in A2/3SG-RN:DAT Rebeca Martín
 'My name is Rebeca Martín.'
- (91) *Ja'l ma chin kb'u'li T-xe Ma'tx.*
 Ja'l ma chin kb'=u'l=i T-xe Ma'tx.
 today PROX B1SG DIR:down=DIR:arrive.here=DISAGR T-xe Ma'tx
 'Today I have come down here to T-xe Ma'tx.'
- (92) *At nim kyq'i', nti' q'ij.*
 At nim kyq'i', nti' q'ij.
 EXIST a.lot wind NEG.EXIST sun
 'It's very windy and it's not a sunny day.'
- (93) *Ya wiy ma chin tzaji iqal ch'in witzji.*
 Ya w-i=y ma chin tzaj=i iq-al ch'in
 so A1SG-RN:DAT=DISAGR PROX B1SG DIR:come=DISAGR carry=NF a.little
 w-itjz=i.
 A1SG-herb=DISAGR
 'So, I have come to cut some herbs.'
- (94) *Aj max tuj tnam nti'yx yin atzaj.*
 Aj max t-uj tnam nti'=y=x yin atzaj.
 DET DEM A2/3SG-RN:in town NEG.EXIST=ATT=EMPH ATT herb
 'In town, not many herbs are found.'
- (95) *Ya ja'l T-xe Ma'tx at nim.*
 Ya ja'l T-xe Ma'tx at nim.
 so now T-xe Ma'tx EXIST a.lot
 'So now in T-xe Ma'tx, many are found.'
- (96) *B'ix ju' t-ten wiy o kyej ye'k'an w-e tu'n n'xeli.*
 B'ix ju' t-ten w-i=y o kyej ye'k'-an we
 and also A2/3SG-be A1SG-RN:DAT=DISAGR PFV DIR:remain show-AP A1SG-RN:DAT
 t-u'n n-äel=i.
 A2/3SG-RN:AGT A1SG-grandparent=DISAGR
 'And that's how my grandmother taught me.'

- (97) *Lutzan nqo tzaj xilal, nqo tzaj awal kjo'n,*
 Lu=tzan n=qo tzaj xil-al, n=qo tzaj aw-al kjo'n,
 DEM=well IPFV=B1PL DIR:come cut-NF IPFV=B1PL DIR:come plant-NF corn.field
 'When we come to cut coffee, when we come to plant milpa (corn fields),
- (98) *jyo'nkx ch'in atzaj qu'n,*
 jyo'-n=k=x ch'in atzaj q-u'n,
 search.for-IMP=DIR:down=DIR:go a.little plant A1PL-RN:AGR
 'we always look for some herbs'
- (99) *Tu'n tb'ant te qchi'.*
 T-u'n t-b'ant t-e q-chi'
 A2/3SG-RN:PURP A2/3SG-done A2/3SG-RN:PAT A1PL-food
 'to be cooked as food.'
- (100) *Ya ja'l ma chna' wiy iqal ch'in wiy witzj.*
 Ya ja'l ma chn=a' w-i=y iq-al ch'in w-i=y
 so today PROX B1SG=start A1SG-RN:PAT=DISAGR carry-NF a.little A1SG-RN:POSS=DISAGR
 w-itjz.
 A1SG-herb
 'And today I'm going to pick some herbs for myself.'
- (101) *Pero o'kx a qa ne etza aj tij, me'n tz'el qin.*
 Pero o'kx a qa ne etza aj tij, me'n tz'=el q-i-n.
 but only DET PL CLF:small instead DET CLF:old NEG B2/3SG=DIR:out A1PL-take-DS
 'But only the soft herbs should be cut, not the hard ones.'
- (102) *Qa'yx yin chyob'al te, k'a yin.*
 Qa'yx yin chyob-b'al t-e k'a yin.
 bad ATT eat-NOM A2/3SG-RN:PAT bitter ATT
 'They taste bad; they are somewhat bitter'

[In the video, Rebeca picks herbs.]

- (103) *Matzan b'ant jun yub' witzji ken.*
 Ma=tzan Ø b'ant jun yub' w-itjz=i ken.
 PROX=well B2/3SG done one handful A1SG-herb=DISAGR DEM
 'So now I have a handful of herbs here.'
- (104) *Matz chna'ji njay ya tu'ntzan tku'x te nchi'y.*
 Ma=tz chn=a'j=i n-ja=y ya t-u'n=tzan
 PROX=EMPH B1SG=DIR:return=DISAGR A1SG-house=DISAGR so A2/3SG-RN:PURP=well
 t-ku'=x t-e n-chi'=y.
 A2/3SG-DIR:down=DIR:go A2/3SG-RN:PAT A1SG-food=DISAGR
 'I will return home and cook it.'

- (105) *Okxten, chjonta qi.*
 Okx=ten, chjonta q=i.
 only=be thanks 2PL=DISAGR
 ‘That’s all, thank you.’

C.4 Sb’ub’il ti’j xuj (Discrimination against women)

Speaker: Silvia Lucrecia Carrillo Godínez

Date recorded: July 3, 2022

Place: San Juan Atitán, Huehuetenango, Guatemala

Silvia Lucrecia Carrillo Godínez discusses and highlights the reality of life for Mayan women in Guatemala as involving violence and discrimination not only from Ladino Men, but also from Indigenous men. She expresses hope for the future and the strength and power of Indigenous women coming together.

Location in the CLA archive:

- [CLA 2020-15.053](#)

Accompanying material:

- Subtitled video recording
- Non-subtitled video recording

Qyol Mam: Sb’ub’il ti’j xuj

Je’y jun q’olb’eb’il te kyiy. A wiy nb’i no’k te Silvia Kril Ktintz. Te Xjan Xwan qini, at qini tuj Xjan Xwan ja’l. Te junk’al kyaj ab’q’i qini. Ajxnaq’tzal qini. B’ix nim nchin tzalji tu’n nchin yolni tuj qyol Mam. Te wiy, xuj qini. At nimka sb’ub’il no’k wi’ji. B’ix nya o’kx wi’ji, te tkyaqil xuj. A qa xuj kuk’al qib’, a qa b’an chi yola jun yol maya chitzan. Wiy nyol, yol mam, tu’ntzan tlaj, te wiy... Taj o chin tzaj itz’ji, tuj njay at nim tipumal anq’ib’il, b’ix qxechil tuj qjay. Tu’ntzan tlaj atx wiy nximtz, tokxsa’n tuj nximtz. At nim qipumal, at nim tipumal qanq’ib’il. At nim tipumal qa qe q-xilen. Qa qe qxe’chil, tkyaqil a jun qe o kyej kyq’o’n qa qchman te ojtxa.

Attzan jun ploj toksa’n ti’j ja’l. A qa xuj nim sb’ub’il kyib’j. No’k qb’i’n at sb’ub’il kyu’n qa amb’, kyu’n qa mos kyij qa xuj. Aj wiy o tz’el niky’ ti’j. Nya o’kx at sb’ub’il kyu’n amb’, kyij qa xuj. At junt sb’ub’il matijxix kyib’j qa xuj kyu’n qa xin ax tuj qtanm. Tijiltzan nb’aj? At nim k’ajq’e’n kyu’n xin. At nim ploj no’k kyq’o’n xin. No’k kyb’yo’n xin xuj. B’ix nya o’kx a jun ky’ixb’il qi’j chitzan tuj tyol amb’ fisicamente chitzan. Ax kyju’x jun kyximtz xuj, nchi kub’ b’ajsa’n qa xjal. Nkub’ b’ajsa’n xuj tu’ntlaj nxi q’amat. “Nti’ tnab’li, nti’ b’a’n tu’ni, me’n q’ajti, me’n kub’ qey, texi! Me’n tzaji, xuji, texi tzix!” At maj nti’ no’k q’ama’n yol ken. Noq tu’n jun qxmayan, nxi qxmayan xjal. Noq tu’n jun qwitz nxi qyek’an.

Noq tu'n jun ik'b'il, at jun ik'b'il tokksa'n. Nti' ntzaj q'ama'n per ne'l qniky' te alkye ik'b'il. At nim xuj ne'l ik'an tuj jun ch'up xjal jun grupo chitzan jun ch'up xjal. B'ixmo nxi q'ama'n, njaw tin tipan xuj. Tu'n tel tq'ajel twi' xuj. Ntzaj junt xjal, "Me'n q'ajti. Me'n txi tq'ama'ni. Ploj nb'ant tu'ni. Ploj tyoli." Mo jun txin taj tz'aq'nani, nknet jun tchmil txin. Ntzaj q'ama'n, "Me'n tz'aq'nani, me'n txi'y. Me'n b'ant ken tu'ni, qekyi ja. Xuji, o'kx tili, ktxjoli xb'alan, b'anchani wab'j, ke'ynxi qa kwa'l." Per aj wiy ne'l niky' te. At nim qnab'il xuj qo. At nim qe qnab'il. At nim qe qoklen. At nim qipumal. B'awnt tok qch'upan qib' junx tu'n qa'nani junx. Tu'ntzan tkub' b'aj twi' jun sb'ub'il luw. Okxten, chjonta qi.

English translation: Discrimination against women

Hello, greetings to you all. My name is Silvia Carrillo Godínez. I'm from San Juan Atitán, and I'm in San Juan Atitán now. I am twenty four years old. I'm a teacher. And I'm very happy that I speak Mam. For me, as a woman, I have suffered a lot of violence/discrimination. And not only towards me, but towards all women. Women who are Indigenous, and those who speak a "Mayan" language. My language is Mam, so, for me... Since I was born, in my house, the culture and our ancestors have a lot of power. Therefore, I have the mentality that we have a lot of power, our culture has a lot of power. Our identity also has a lot of power. Our roots, and everything that our ancestors left us.

And in that now, there is something negative. Women suffer from discrimination. We have heard that women suffer from discrimination by Ladinos. What I have understood is that not only does discrimination against women by Ladinos exist. There is another even bigger discrimination towards women by the men of our own culture. So what's happening? There is a lot of alcoholism in men. Men do a lot of damage. Men hit women. And there is not only "physical" violence. In addition, they also discriminate psychologically. They discriminate against the woman when they tell her the following: "You have no capabilities, you don't know anything, shut up, you have no place here, get out of here! Don't come here, you're a woman, get out of here!" Sometimes these words are not said. Only with a look. Only with the look we show.

Therefore, there is an exclusion among us. Although they don't say it but we realize the type of exclusion and discrimination. There are many women who are excluded and discriminated against by a group of people. Sometimes the woman finds courage herself. To lift up her voice. Another person comes. "Be quiet. Don't say these words. You are doing things wrong. Your words are wrong." Or sometimes there are young women who want to work, but they find husband. The husband says: "Don't work. Don't do this, stay at home. You are a woman, and you only serve to wash clothes, cook, and take care of children." But, what I have understood is that we as women have many capacities. We have a lot of knowledge and rights. We have power. I hope we can join to work together to end discrimination and exclusion. That's all, thank you.

Spanish translation: Discriminación contra la mujer

Hola, saludos a todos. Mi nombre es Silvia Carrillo Godínez. Soy de San Juan Atitán, y estoy en San Juan Atitán ahora. Tengo veinticuatro años. Soy maestra. Estoy muy feliz porque hablo el idioma Mam. Para mí, como mujer, he sufrido mucha violencia/discriminación. Y no sólo hacia mí, sino hacia todas las mujeres. Las mujeres que somos indígenas, y las que hablamos

un idioma “Maya.” Mi idioma es el Mam, por eso, para mí... Desde que yo nací, en mi casa, la cultura y nuestros ancestros tienen mucho poder. Por eso, yo tengo la mentalidad de que tenemos mucho poder, nuestra cultura tiene mucho poder. Nuestra identidad también tiene mucho poder. Nuestras raíces, y todo lo que nos dejaron nuestros ancestros.

Y en eso ahora, hay algo negativo. Las mujeres sufrimos de discriminación. Hemos escuchado que las mujeres sufren de discriminación por parte de los ladinos. Lo que yo he entendido es que no solo existe la discriminación por parte de los ladinos hacia las mujeres. Existe otra discriminación aún más grande hacia las mujeres por los mismos hombres de nuestra cultura. ¿Entonces que está pasando? Existe mucho alcoholismo en los hombres. Los hombres hacen mucho daño. Los hombres pegan a las mujeres. Y no solo existe la violencia “física.” Así mismo, y también las discriminan psicológicamente. Discriminan a la mujer cuando le dicen lo siguiente: “No tienes capacidades, no sabes nada, cállate, no tienes lugar aquí, sal de aquí! No vengas aquí, eres mujer, sal de aquí!” A veces estas palabras no se dicen. Solo con una mirada. Solo con la mirada que mostramos.

Por eso, existe una exclusión entre nosotros. Aunque no lo dicen, pero nos damos cuenta del tipo de exclusión y discriminación. Hay muchas mujeres que son excluidas y discriminadas por un grupo de personas. A veces la mujer se arma de valor. Para alzar su voz. Viene otra persona. “Cállate. No digas estas palabras. Estás haciendo las cosas mal. Tus palabras están mal.” O a veces hay señoritas que quieren trabajar, pero encuentran esposo. El esposo dice: “No trabajes. No hagas esto, quédate en casa. Eres mujer, y sólo sirves para lavar ropa, cocinar, y cuidar niños.” Pero, lo que he entendido es que nosotras como mujeres tenemos muchas capacidades. Tenemos muchos conocimientos y derechos. Tenemos poder. Ojalá podamos unirnos para trabajar juntos para acabar con la discriminación y exclusión. Es todos, gracias.

Sb'ub'il ti'j xuj

(106) *Je'y jun q'olb'eb'il te kyiy.*

Je'y jun q'olb'e=b'il t-e ky-i=y.
 hello one greeting=NML A2/3SG-RN:PAT A2/3PL-RN:PAT=DISAGR
 'Hello, greetings to you all.'

(107) *A wiy nb'i no'k te Silvia Kril Ktintz.*

A w-i=y n-b'i n=Ø=o'k t-e Silvia Kril
 DET A1SG-RN:PAT=DISAGR A1SG-name IPFV=B2/3SG=DIR:in A2/3SG-RN:PAT Silvia Carrillo
 Ktintz.
 Godínez
 'My name is Silvia Carrillo Godínez.'²

²Kril is the Mam translation of Carrillo and Ktintz is the Mam translation of Godínez.

- (108) *Te Xjan Xwan qini, at qini tuj Xjan Xwan ja'l.*
 T-e Xjan Xwan qin=i, at qin=i t-uj Xjan Xwan ja'l.
 A2/3SG-RN:PAT San Juan 1SG=DISAGR EXIST 1SG=DISAGR A2S/3G-RN:in San Juan now
 'I'm from San Juan Atitán, and I'm in San Juan Atitán now.'³
- (109) *Te junk'al kyaj ab'q'i qini.*
 T-e jun-k'al kyaj ab'q'i qin=i
 A2/3SG-RN:PAT one-twenty four year 1SG=DISAGR
 'I am twenty four years old.'
- (110) *Ajxnaq'tzal qini.*
 Ajxnaq'tzal qin=i.
 teacher 1SG=DISAGR
 'I am a teacher.'
- (111) *B'ix nim nchin tzalji tu'n nchin yolni tuj qyol Mam.*
 B'ix nim n=chin tzalj=i t-u'n n=chin yol-n=i
 and very IPFV=B1SG happy=DISAGR A2/3SG-RN:REAS IPFV=B1SG speak-AP=DISAGR
 t-uj q-yol Mam
 A2/3SG-RN:in A1PL-language Mam
 'And I'm very happy that I speak Mam.'
- (112) *Te wiy, xuj qini.*
 T-e w-i=y xuj qin=i.
 A2/3SG-RN:PAT A1SG-RN:PAT= DISAGR woman 1SG=DISAGR
 'For me, as a woman.'
- (113) *At nimka sb'ub'il no'k wi'ji.*
 At nim=ka sb'u-b'il n=∅=o'k w-i'j=i.
 EXIST a.lot=ATT discrimination-NML IPFV=B2/3SG=DIR:in A1SG-RN:MAL=DISAGR
 'I have suffered a lot of violence/discrimination.'
- (114) *B'ix nya o'kx wi'ji, te tkyaqil xuj.*
 B'ix nya o'kx w-i'j=i, t-e tkyaqil xuj.
 and NEG.NP only A1SG-RN:MAL=DISAGR A2/3SG-RN:PAT all woman
 'And not only towards me, but towards all women.'
- (115) *A qa xuj quk'al qib',*
 A qa xuj q-uk'al q-ib',
 DET PL woman A1PL-RN:COM A1PL-RN:RR
 'Women who are Indigenous,'

³Xjan Xwan is the translation of San Juan Atitán in Mam. Xjan translates to San in Spanish and Xwan translates to Juan.

- (116) *a qa b'an chi yolán jun yol maya chitzan.*
 a qa b'an chi yol-an jun yol maya chi=tzan.
 DET PL can B2/3PL speak-AP one language Mayan say=well
 'those who speak a "Mayan" language.'
- (117) *Wiy nyol, yol mam, tu'ntzan tlaj, te wiy...*
 W-i=y n-yol, yol mam, t-u'n=tzan tlaj,
 A1SG-RN:POSS=DISAGR A1SG-language language Mam A2/3SG-RN:PURP=well reason
 t-e w-i=y...
 A2/3SG-RN:PAT A1SG-RN:PAT=DISAGR
 'My language is Mam, so, for me...'
- (118) *Taj o chin tzaj itz'ji,*
 Taj o chin tzaj itz'-j=i,
 when PFV B1SG DIR:come born-PASS=DISAGR
 'Since I was born,'
- (119) *tuj njay at nim tipumal anq'ib'il, b'ix qxechil tuj qjay.*
 t-uj n-ja=y at nim t-ipumal anq'i-b'il, b'ix
 A2/3SG-RN:in A1SG-house=DISAGR EXIST a.lot A2/3SG-power culture=NML and
 q-xechil t-uj q-ja=y.
 A1PL-history A2/3SG-RN:in A1PL-house=DISAGR
 'in my house the culture and our ancestors have a lot of power.'
- (120) *Tu'ntzan tjalj atx wiy nximtz, tokxsa'n tuj nximtz*
 T-u'n=tzan tjalj at=x w-i=y n-ximtz,
 A2/3SG-RN:PURP=well reason EXIST=still A1SG-RN:POSS=DISAGR A1SG-thought
 t-ok=x=sa'n t-uj n-ximtz=i
 A2/3SG-DIR:in=DIR:go=long.term A2/3SG-RN:in A1SG-thought=DISAGR
 'Therefore, I have the mentality that'
- (121) *at nim qipumal, at nim tipumal qanq'ib'il.*
 at nim qipumal, at nim tipumal qanq'ib'il.
 EXIST a.lot A1PL-power, EXIST a.lot A2/3SG-power A1PL-culture
 'we have a lot of power, our culture has a lot of power.'
- (122) *At nim tipumal qa qe q-xilen.*
 At nim t-ipumal qa q-e q-xilen.
 EXIST a.lot A2/3SG-power PL A1PL-RN:POSS A1PL-identity
 'Our identity also has a lot of power.'

- (123) *Qa qxe'chil, tkyaqil a jun qe o kyej kyq'o'n qa qchman te ojtxa.*
 Qa q-xe'chil, tkyaqil a jun q-e o ∅ kyej ky-q'o-'n
 PL A1PL-history everything DET one A1PL-RN:DAT PFV B2/3SG DIR:remain A2/3PL-give-DS
 qa q-chman t-e ojtxa.
 PL A1PL-elder A2/3SG-RN:DAT past
 'Our roots, and everything that our ancestors left us.'
- (124) *Attzan jun ploj toksa'n ti'j ja'l.*
 At=tzan jun ploj t-ok=sa'n t-i'j ja'l.
 EXIST=well one bad A2/3SG-DIR:in=long.term A2/3SG-RN:PAT today
 'And in that now, there is something negative.'
- (125) *A qa xuj nim sb'ub'il kyib'j.*
 A qa xuj nim sb'u-b'il ky-ib'j.
 DET PL woman a.lot discrimination A2/3PL-RN:over
 'Women suffer from discrimination.'
- (126) *No'k qb'i'n at sb'ub'il ky-u'n a amb, kyu'n qa mos kyij'j qa xuj.*
 N=∅=o'k q-b'i-'n at sb'u-b'il ky-u'n qa amb',
 IPFV=B2/3SG=DIR:in A1PL-hear-DS EXIST discrimination-NML A2/3PL-RN:AGT PL foreigner
 ky-u'n qa mos ky-i'j qa xuj.
 A2/3PL-RN:AGT PL ladino A2/3PL-RN:MAL PL woman
 'We have heard that women suffer from discrimination by Ladinos.'
- (127) *Aj wiy o tz'el niky' ti'j*
 Aj w-i=y o tz'=el n-niky' t-i'j
 DET.REL A1SG-RN:PAT=DISAGR PFV B2/3SG-DIR:out A1SG-understand A2/3SG-RN:about
 'What I have understood'
- (128) *nya o'kx at sb'ub'il kyu'n amb', kyij'j qa xuj.*
 nya o'kx at sb'u-b'il ky-u'n amb' ky-i'j qa
 NEG.NP only EXIST discrimination-NML A2/3PL-RN:AGT foreigner A2/3PL-RN:MAL PL
 xuj
 woman
 'is that not only does discrimination against women by Ladinos exist.'
- (129) *At junt sb'ub'il matijxix kyib'j qa xul kyu'n qa xin ax tuj qtanm.*
 At junt sb'u-b'il matij=xix ky-ib'j qa xul ky-u'n
 EXIST another discrimination-NML big=EMPH A2/3PL-RN:over PL woman A2/3PL-RN:AGT
 qa xin ax t-uj q-tanm.
 PL man same A2/3SG-RN:in A1PL-town
 'There is another even bigger discrimination towards women by the men of our own cul-
 ture.'

- (130) *Tijiltzan nb'aj?*
 Tijil=tzan n=∅=b'aj?
 what=well IPFV=B2/3SG=DIR:compl
 'So what's happening?'
- (131) *At nim k'ajq'e'n ky'u'n xin.*
 At nim k'ajq'e'n ky-u'n xin.
 EXIST a.lot alcoholism A2/3PL-RN:AGT man
 'There is a lot of alcoholism in men.'
- (132) *At nim ploj no'k kyqo'n xin.*
 At nim ploj n=∅=o'k ky-q'o-'n xin.
 EXIST a.lot IPFV=B2/3SG=DIR:in A2/3PL-give-DS man
 'Men do a lot of damage.'
- (133) *No'k kyb'yo'n xin xuj.*
 N=∅=o'k ky-b'yo-'n xin xuj.
 IPFV=B2/3SG=DIR:in A2/3PL-hit-DS man woman
 'Men hit women.'
- (134) *B'ix nya o'kx a jun ky'ixb'il qi'j chitzan tuj tyol amb' fisicamente chitzan.*
 B'ix nya o'kx a jun ky'ix-b'il qi-i'j chi=tzan t-uj
 and NEG.NP only DET one violence=NML A1PL-RN:MAL say=well A2/3SG-RN:in
 t-yol amb' fisicamente chi=tzan.
 A2/3SG-language foreigner physically say=well
 'And there is not only "physical" violence.'
- (135) *Ax kyju'x jun kyximtz xuj, nchi kub' b'ajsa'n qa xjal.*
 Ax kyju'x jun ky-ximtz xuj, n=chi kub' b'ajsa'n qa
 same also one A2/3PL-thought woman PFV=B2/3PL DIR:down complete=long.term PL
 xjal.
 person
 'In addition, they also discriminate psychologically.'
- (136) *Nkub' b'ajsa'n xuj tu'ntlaj nxi q'amat.*
 N=∅=kub' b'aj=sa'n xuj t-u'n=tlaj
 IPFV=B2/3SG=DIR:down complete=long.term woman A2/3SG-RN:REAS=reason
 n=∅=xi q'ama-t.
 IPFV=B2/3SG=DIR:go say-PASS
 'They discriminate against the woman when they tell her the following:'
- (137) *Nti' tna'b'li, nti' b'a'n tu'ni,*
 Nti' t-na-b'l=i, nti' b'a'n t-u'n=i,
 NEG.EXIST A2/3SG-intelligence-NML=DISAGR, NEG.EXIST good A2/3SG-RN:AGT=DISAGR,
 'You have no capabilities, you don't know anything.'

- (138) *me'n q'ajti, me'n kub' qey, texi!*
 me'n q'ajt=i, me'n kub' qe=y, t-e-x=i!
 NEG.V make.noise=DISAGR, NEG.V DIR:down sit=DISAGR A2/3SG-DIR:out=DIR:go=DISAGR,
 shut up, you have no place here, get out of here!
- (139) *Me'n tzaji, xuji, texi tzix!"*
 Me'n tzaj=i, xuj=i, t-e-x=i tzix!
 NEG.V DIR:come=DISAGR, woman=DISAGR, A2/3SG-DIR:out=DIR:go=DISAGR DEM
 Don't come here, you're a woman, get out of here!"
- (140) *At maj nti' no'k q'ama'n yol ken.*
 At maj nti' n=∅=o'k q'ama-'n yol ken.
 EXIST instance NEG.EXIST IPFV=B2/3SG=DIR:in say-DS word DEM
 'Sometimes these words are not said.'
- (141) *Noq tu'n jun qxmayan, nxi qxmayan xjal.*
 Noq t-u'n jun qxmayan, n=∅=xi qxmayan xjal.
 only A2/3SG-RN:AGT one look IPFV=B2/3SG=DIR:go look person
 'Only with a look.'
- (142) *Noq tu'n jun qwitz nxi qyek'an.*
 Noq t-u'n jun q-witz n=∅=xi q-yek'-an.
 only A2/3SG-RN:AGT one A1PL-face IPFV=B2/3SG=DIR:go A1PL-show-DS
 'Only with the look we show.'
- (143) *Noq tu'n jun ik'b'il, at jun ik'b'il tokxsa'n.*
 Noq t-u'n jun ik'-b'il, at jun ik'-b'il
 only A2/3SG-RN:AGT one exclusion-NML EXIST one exclusion-NML
 t-ok=x=sa'n.
 A2/3SG-DIR:in=DIR:go=long.term
 'Therefore, there is an exclusion among us.'
- (144) *Nti' ntzaj q'ama'n per ne'l qniky' te alkye ik'b'il.*
 Nti' n=∅=tzaj q'ama-'n per n=∅=e'l q-niky'
 NEG.EXIST IPFV=B2/3SG=DIR:come tell-DS but IPFV=B2/3SG=DIR:out A1PL-understand
 t-e alkye ik'-b'il.
 A2/3SG-RN:THEME which exclusion-NML
 'Although they don't say it but we realize the type of exclusion and discrimination.'
- (145) *At nim xuj ne'l ik'an tuj jun ch'up xjal jun grupo chitzan jun ch'up xjal.*
 At nim xuj n=∅=e'l ik'-an t-uj jun ch'up xjal jun
 EXIST many woman IPFV=B2/3SG=DIR:out exclude-AP A2/3SG-RN:in a group person one
 grupo chi=tzan jun ch'up xjal.
 group say=well one group person
 'There are many women who are excluded and discriminated against by a group of people.'

- (146) *B'ixmo nxi q'ama'n, njaw tin tipan xuj.*
 B'ix=mo n=∅=xi q'ama-'n, n=∅=jaw t-in
 and=or IPFV=B2/3SG=DIR:go tell-DS IPFV=B2/3SG=DIR:up A2/3SG-take
 t-ipan xuj.
 A2/3SG-strength woman
 'Sometimes the woman finds courage herself.'
- (147) *Tu'n tel tq'ajel twi' xuj.*
 T-u'n t-el t-q'ajel t-wi' xuj.
 A2/3SG-RN:PURP A2/3SG-DIR:out A2/3SG-sound A2/3SG-head women
 'To lift up her voice.'
- (148) *Ntzaj junt xjal.*
 N=∅=tzaj junt xjal.
 IPFV=B2/3SG=DIR:come another person
 'Another person comes.'
- (149) *"Me'n q'ajti. Me'n txi tq'ama'ni.*
 Me'n q'ajt=i. Me'n t-xi t-q'ama-'n=i.
 NEG.V make.noise=DISAGR. NEG.V A2/3SG-DIR:go A2/3SG-say-DS=DISAGR
 "Be quiet. Don't say these words.'
- (150) *Ploj nb'ant tu'ni. Ploj tyoli."*
 Ploj n=∅=b'ant t-u'n=i. Ploj t-yol=i."
 bad IPFV=B2/3SG=do A2/3SG-RN:AGT=DISAGR bad A2/3SG-word=DISAGR
 'You are doing things wrong. Your words are wrong.'
- (151) *Mo jun txin taj tz'aq'n-an, nknet jun tchmil txin.*
 Mo jun txin t-aj tz'=aq'n-an, n=∅=knet jun t-chmil
 or one girl A2/3SG-want B2/3SG=work-AP IPFV=B2/3SG=find one A2/3SG-husband
 txin.
 CLF:girl
 'Or sometimes there are young women who want to work, but they find husband.'
- (152) *Ntzaj q'ama'n,*
 N=∅=tzaj q'ama-'n,
 IPFV=B2/3SG=DIR:come say-DS
 'The husband says.'
- (153) *"Me'n tz'aq'nani, me'n txi'y.*
 Me'n tz'=aq'n-an=i, me'n t-xi'=y.
 NEG.V B2/3SG=wor-AP=DISAGR NEG.V A2/3SG=DIR:go=DISAGR
 "Don't work.'

- (154) *Me'n b'ant ken tu'ni, qekyi ja.*
 Me'n b'ant ken t-u'n=i, qekyi=i ja
 NEG.V do DEM A2/3SG-RN:AGT=DISAGR sit=DISAGR house
 "Don't do this, stay at home."
- (155) *Xuji, o'kx tili, ktxjoli xb'alan, b'anchani wab'j, ke'ynxi qa kwa'l.*
 Xuj=i, o'kx t-il=i, k-txjo-l=i xb'alan,
 woman=DISAGR only A2/3SG-sin=DISAGR, POT-wash-POT=DISAGR clothes
 b'anch-an=i wa-b'j, ke'y-n=x=i qa k'wal."
 make-AP=DISAGR food-UNPOSS, watch-IMP=DIR:go=DISAGR PL child
 "You are a woman, and you only serve to wash clothes, cook, and take care of children."
- (156) *Per aj wiy ne'l niky' te*
 Per aj w-i=y n=Ø=e'l n-niky' t-e
 but DET A1SG-RN:DAT=DISAGR IPFV=B2/3SG=DIR:out A1SG-understand A2/3SG-RN:PAT
 'But, what I have understood is that'
- (157) *at nim qnab'il xuj qo.*
 at nim q-nab'il xuj qo.
 EXIST a.lot A1PL-intelligence woman 1PL
 'we as women have many capacities.'
- (158) *At nim qe qnab'il. At nim qe qoklen.*
 At nim q-e q-nab'il. At nim q-e q-oklen.
 EXIST a.lot A1PL-RN.POSS A1PL-intelligence EXIST a.lot A1PL-RN.POSS A1PL-rights
 'We have a lot of knowledge and rights.'
- (159) *At nim qipumal.*
 At nim q-ipumal.
 EXIST a.lot A1PL-power
 'We have a lot of power.'
- (160) *B'awnt tok qch'upan qib' junx tu'n qa'nun junx*
 B'a-wnt t-ok q-ch'up-an q-ib' junx t-u'n
 can-COND A2/3SG-DIR:in A1PL-join-AP A1PL-RN:RR together A2/3SG-RN:PURP
 q-aq'n-an junx
 A1PL-work-AP together
 'I hope we can join to work together'
- (161) *tu'ntzan tkub' b'aj twi' jun sb'ub'il luw.*
 tu'n=tzan t-kub' b'aj t-wi' jun
 A2/3SG-RN:PURP=well A2/3SG-DIR:down DIR:COMPL A2/3SG-RN:above one
 sb'u-b'il luw.
 discrimination-NML DEM
 'to end this discrimination and exclusion.'

- (162) *Okxten, chjonta qi.*
Okx=ten, chjonta q=i.
only=do thanks 2PL=DISAGR
'That's all, thank you.'