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Abstract

Many morphologically ergative languages display asymmetries in the extraction of core arguments: while absolutive arguments (transitive objects and intransitive subjects) extract freely, ergative arguments (transitive subjects) cannot. This falls under the label “syntactic ergativity” (see, e.g., [Dixon 1972, 1994](#), [Manning 1996](#)). These extraction asymmetries are found in many languages of the Mayan family, where in order to extract transitive subjects (for focus, question, or relativization), a special construction known as the “Agent Focus” (AF) must be used. These AF constructions have been described as syntactically and semantically transitive because they contain two non-oblique DP arguments, but morphologically intransitive because the verb appears with only a single agreement marker and takes an intransitive status suffix ([Aissen 1999](#), [Stiebels 2006](#)). In this paper we offer a proposal for (i) why some morphologically ergative languages exhibit extraction asymmetries, while others do not; and (ii) how the AF construction in Q’anjob’al circumvents this problem. We adopt recent accounts which argue that ergative languages vary in the locus of absolutive case assignment ([Aldridge 2004, 2008a](#), [Legate 2002, 2008](#)), and propose that this variation is present within the Mayan family. Based primarily on comparative data from Q’anjob’al and Chol, we argue that the inability to extract ergative arguments does not reflect a problem with properties of the ergative subject itself, but rather reflects locality properties of absolutive case assignment in the clause. We show how the AF morpheme *-on* circumvents this problem in Q’anjob’al by assigning case to internal arguments.

keywords: case, ergativity, extraction asymmetries, Q’anjob’al, Chol, Mayan, Agent Focus

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The Role of Case in A-Bar Extraction Asymmetries: Evidence from Mayan

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1. Introduction

1.1. General

In Q'anjob'al, a Mayan language of Guatemala, the suffix *-(o)n* is found in two seemingly disparate environments: (i) in transitive clauses from which 3rd person subjects have been extracted (for questions, focus, relativization) as in (1); and (ii) in *all* non-finite embedded transitives as in (2) (Mateo-Toledo 2003a).¹

(1) Agent Focus

Maktxel max-ach il-on-i?

who ASP-2ABS see-SUF-ITV

'Who saw you?'

(2) "Crazy Antipassive"

Chi uj [hach y-il-on-i].

ASP be.able.to 2ABS 3ERG-see-SUF-ITV

'S/he can see you.'

The use of *-on* (or a cognate form) in Agent Focus environments like (1) is widespread throughout the family as a means of circumventing "syntactic ergativity"—the ban on extracting ergative-marked arguments (see, e.g., Smith-Stark 1978). The extension of this morpheme to

¹Unless otherwise noted, all Q'anjob'al, Chol, and Kaqchikel data are from [the authors'] fieldnotes. A list of gloss abbreviations can be found in Appendix A. In some cases glosses have been modified from their original sources for consistency and translations from Spanish sources are our own. We spell Mayan languages according to the conventions developed by native-speaker linguists, and adopted by the Academia de Lenguas Mayas de Guatemala (see discussion in Mateo-Toledo 2003b). These spellings may in some cases deviate from those used by the authors from which the data are cited.

embedded transitives like (2), however, is unique to the Q'anjob'alan branch (see, e.g., Pascual 2007, Quesada 1997). Kaufman (1990) dubbed this construction the “Crazy Antipassive”, noting: “Clearly this is a mixed structure, not worth interpreting according to logic”. In this paper we propose not only that a unified account is possible (building on the intuition in Pascual 2007), but that an analysis of the suffix *-on* in embedded transitives provides important clues about the Agent Focus construction, and thus about the nature of the restriction against A-bar extracting transitive subjects (ergatives) more generally.

Specifically, we argue—extending the analysis in Ordóñez 1995—that the morpheme *-on* in Q'anjob'al is responsible for *assigning case to internal arguments in environments where case is otherwise unavailable*. Crucially, we argue below that transitive objects in Q'anjob'al are licensed by finite Infl⁰ (in other words, we argue for an analysis where “absolute” in Q'anjob'al is essentially nominative case; cf. Bittner & Hale 1996a,b, Bok-Bennema 1991, Bok-Bennema & Groos 1984, Campana 1992, Johns 1992, Murasugi 1992, *a.o.*). In non-finite embedded environments like (2), there simply is no case-assigner and thus *-on* is required. We argue that extraction environments like (1) face a similar problem, in that extracting the subject would make the normal mechanism of case-assignment unavailable.

The first indication that these constructions should receive a unified analysis comes from the fact that both unexpectedly appear with the *intransitive* status suffix (*-i* ‘-irv’)—despite the presence of two full arguments. We show how the presence of intransitive verbal morphology—often discussed for the Agent Focus constructions—is connected to the change in case-assignment properties of these clauses.

1.2. Implications

Though the analysis presented here focuses on Q'anjob'al, we suggest that it has important consequences for other languages as well. We produce a typology of Mayan languages which predicts which languages will and which will not show extraction asymmetries. We argue that languages in which transitive objects are licensed by a high head, Infl⁰, are those which exhibit

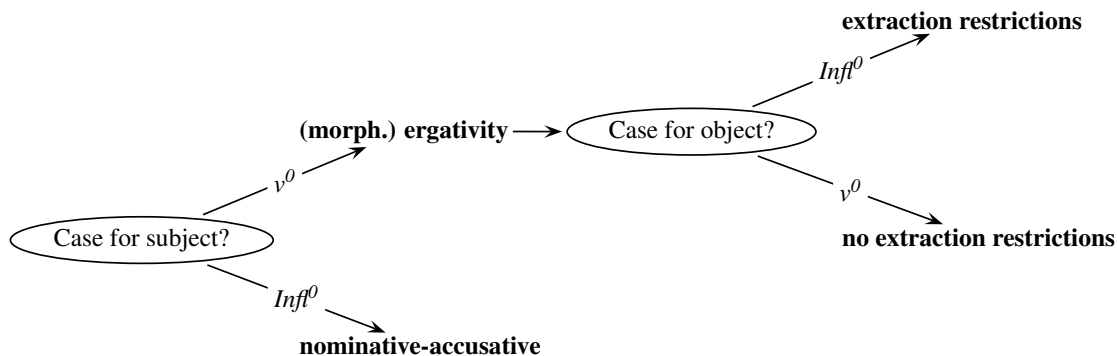
syntactic ergativity. We thus reduce the occurrence of the ban on extracting transitive subjects to independently observable morpho-syntactic properties of the languages in question.

This has the interesting consequence that syntactic ergativity, at least in the Mayan family, is not a direct result of properties of the *ergative* noun-phrase at all, as in accounts such as Markman & Grashchenkov 2012 and Polinsky 2011. Instead, we argue that syntactic ergativity—at least in these languages—is the result of properties of case-assignment to *absolutive* arguments. Accounts which reduce the ergative extraction ban to properties of the ergative noun-phrase itself face serious problems in Mayan. First, there are no discernible differences in the structure of ergative noun-phrases (or their associated agreement morphology) between those Mayan languages that exhibit syntactic ergativity and those that do not. Second, we show that extraction of ergative subjects is in fact possible in certain environments, but the crucial properties of the environments in question have to do with the *internal* argument, not the external/ergative one.

This proposal also has the advantage of separating morphological ergativity from syntactic ergativity—which is unequivocally a desideratum, given the existence of morphologically ergative languages that show no extraction asymmetries of this sort. Such languages, we will see, exist even within the Mayan family (as will be exemplified below using Chol).

To account for this point of variation within morphologically ergative languages, we adopt recent proposals by Aldridge (2004) and Legate (2008). These authors argue that what morphologically ergative languages have in common is that transitive subjects (ergatives) are licensed by a low head, v^0 , but that languages differ in how transitive objects (absolutives) are licensed: in some languages, transitive objects are licensed by v^0 (accusative case), while in others transitive objects are licensed by Infl^0 (nominative case). Since only *some* morphologically ergative languages exhibit extraction asymmetries, tying this point of variation to an independently motivated parameter—the locus of case for the absolutive object, as illustrated in (3)—is a welcome result.

(3) Case configuration in a transitive clause



The parameterization in (3) represents an advantage over proposals like [Assmann et al. 2013](#), which connect the ban on extracting ergatives to the same parameter which governs whether a language is morphologically ergative or morphologically accusative (via a general parameterization of the ordering of Merge and Agree operations). The present work shares with [Assmann et al. 2013](#) the idea that extraction asymmetries come about as a locality problem in clausal case assignment, but differs in that it does not make syntactic ergativity a necessary consequence of morphological ergativity.

Within the subset of morphologically ergative languages which display extraction asymmetries (at the top right in (3)), we recognize a further possibility for variation in the mechanisms available to circumvent the ban on ergative extraction. Antipassivization—which has the effect of turning the subject of a semantically dyadic predicate into an intransitive subject—is a well-attested strategy for circumventing this ban in a number of syntactically ergative languages (see, e.g., [Polinsky 2008](#)), and is noted below for Mayan as well. The complex voice systems of Austronesian languages may also fall into this category (see, e.g., [Gärtner, Law & Sabel 2006](#), [Himmelmann 2005](#), [Polinsky & Potsdam](#) to appear for overviews). In this paper, however, we concentrate on the Q’anjob’al Agent Focus (AF) construction, which we argue alleviates the locality problem of case assignment by assigning case to the transitive object, not unlike English *of*-insertion. Even within the Mayan family, however, variation appears to exist with respect to AF (see, e.g., [Erlewine 2013](#), [Henderson, Coon & Travis 2013](#)). The goal here is not to provide a unified account of Agent Focus across the Mayan family; rather, we show that the distribution of the morpheme *-on* in Q’anjob’al

provides important evidence for the proposal that extraction restrictions arise as a locality problem in which a high head (Infl^0) must license the transitive object.

Further work is required in order to determine whether instances of syntactic ergativity in other language families are reducible to the case assignment mechanisms discussed below. It may be the case that syntactic ergativity is not, after all, a homogeneous phenomenon (a theoretical trajectory that mirrors, to some extent, the theoretical treatment of ergativity itself; see, e.g., Johns 2000 and Aldridge 2008a for surveys of recent work). However, the current proposal makes testable predictions that go beyond the inextractability of ergative noun-phrases in general, and can therefore serve to investigate this very question: whether syntactic ergativity, where found, is of a cross-linguistically uniform nature.

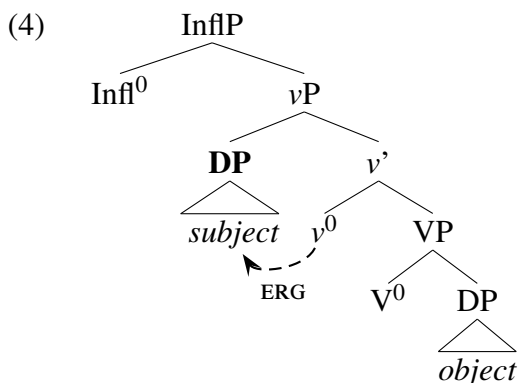
1.3. Outline

The remainder of this paper is organized as follows. We begin in section 2 with an overview of ergativity in the Mayan family. Here we provide a comparison between Q'anjob'al and Chol, a language of the Cholan branch spoken in Chiapas, Mexico. These two languages illustrate the different person marking possibilities found within Mayan languages. We propose a parameter which governs the distribution of absolutive morphemes based on the head responsible for licensing absolutive DPs. Section 3 focuses on how the case configuration properties of HIGH-ABS languages result in the ban on extracting transitive subjects. The Agent Focus construction in Q'anjob'al is discussed in section 4 as a means of circumventing syntactic ergativity by providing an alternative mechanism for assigning case to objects. Finally, 5 examines some predictions of the account and section 6 concludes.

2. Ergative and absolutive across Mayan

In an ergative-absolutive system, transitive objects and intransitive subjects (absolutives) pattern alike (e.g. in terms of morphological case or agreement marking), and differently from transitive subjects (ergatives). A significant body of work on ergativity has converged on the idea that what

sets ergative systems apart is that the transitive subject is licensed by (or receives abstract case from) a low functional head, transitive v^0 (Aldridge 2004, Legate 2002, Woolford 1997, 2006). This is illustrated in (4).

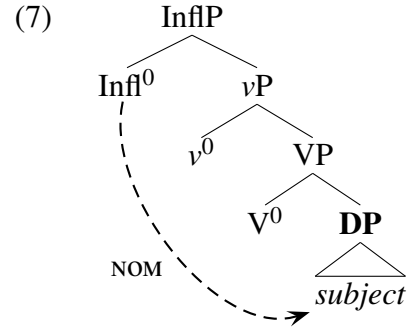
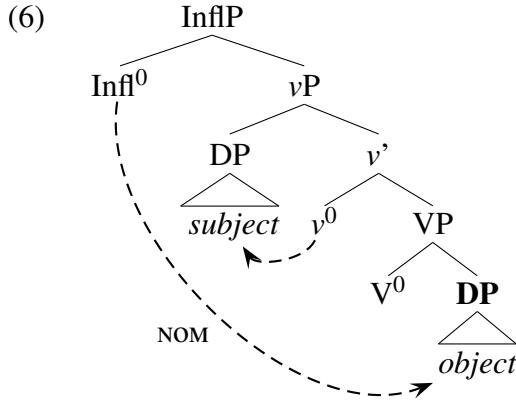


This raises the question of how absolutive DPs—transitive objects and intransitive subjects—are licensed in an ergative system. Legate (2008) argues that while “absolutive” may be a useful descriptive term, it does not represent a unified category. She takes morphological case and agreement to be a post-syntactic spell out of abstract case features assigned to DPs by functional heads.

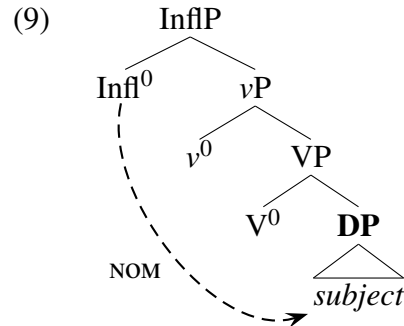
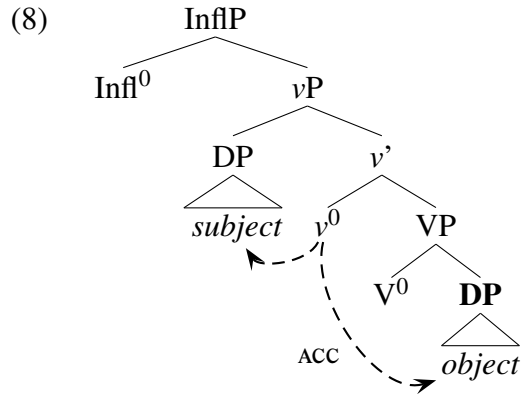
- (5)
- a. NOMINATIVE — abstract case assigned by Infl^0
 - b. ACCUSATIVE — abstract case assigned to transitive objects by v^0
 - c. ERGATIVE — abstract case assigned to transitive subjects by v^0

While “nominative”, “accusative”, and “ergative” can be characterized as in (5), Legate argues that “absolutive” is not an abstract case, but instead is a descriptive term for a morphological form shared by transitive objects and intransitive subjects, which can come about in at least two different ways.

Legate (2008) identifies two types of ergative systems (see also Aldridge 2004, who reaches similar conclusions on independent grounds). In what Legate refers to as “ABS=NOM” (absolutive = nominative) languages, both transitive objects (6) and intransitive subjects (7) receive nominative case from Infl^0 .



In so-called “*ABS=DEF*” (absolutive = default) languages, transitive objects and intransitive subjects are licensed by distinct functional heads. Transitive objects are licensed by v^0 (accusative, shown in (8)), while intransitive subjects are licensed by Infl^0 (nominative, shown in (9)). These different abstract licensing mechanisms are spelled out as a morphological default (often null), which is what is then descriptively labeled “absolutive”.



In the remainder of this section, we provide evidence for this distinction within the languages of the Mayan family, and draw a correlation between the mechanisms of licensing absolutive DPs and the appearance of extraction asymmetries (which we refer to here as “syntactic ergativity”). Specifically, we show that within the Mayan family, languages in which the ergative DP is unable to undergo A-bar extraction are precisely those languages where *ABS=NOM*; whereas such movement turns out to be unproblematic in *ABS=DEF* languages. In the following section (§3), we will show that these extraction restrictions arise due to a problem of locality in the assignment of case to transitive objects, which arises in configurations like the one shown in (6).

The present proposal tethers the appearance of extraction asymmetries to the independently motivated parameter of how case is assigned to absolutive arguments (Aldridge 2004, Legate 2008). This, we suggest, provides an explanation for why extraction restrictions of the type discussed below are found *only* in morphologically ergative languages (those in which Infl⁰ licenses the transitive object), but crucially not in *all* morphologically ergative languages (since in *ABS=DEF* languages *v*⁰ licenses objects). This is illustrated in (10).

		+MORPH. ERGATIVITY	−MORPH. ERGATIVITY
(10)	+SYNTACTIC ERGATIVITY	Q’anjob’al	✗ (<i>unattested</i>)
	−SYNTACTIC ERGATIVITY	Chol	English

We begin with a brief overview of the Mayan language family, focusing on the properties which will be relevant to the discussion in the remainder of this paper.

2.1. Background: the Mayan language family

The Mayan language family consists of about thirty languages, usually grouped into five or six major sub-groups (Campbell & Kaufman 1985), spoken altogether by over six million people in Mexico, Guatemala, and Belize. A common grouping is shown in (11). This paper focuses on Q’anjob’al, a Q’anjob’alan language spoken in Huehuetenango, Guatemala. Chol, a Tseltalan language of Chiapas, Mexico, will also be discussed in some detail.

(11) Mayan family classification (Campbell & Kaufman 1985)

- a. **Wastekan:** Wastek
- b. **Yukatekan:** Yukatek, Lakandon; Mopan, Itzaj
- c. **Greater Tseltalan:**
 - i. *Cholan:* Chol, Chontal; Ch’orti’
 - ii. *Tseltalan:* Tseltal, Tzotzil

d. **Greater Q'anjob'al**:

i. *Q'anjob'al*: Q'anjob'al, Akatek, Jakaltek; Mocho'

ii. *Chujean*: Chuj, Tojol'ab'al

e. **K'ichean–Mamean**:

i. *K'ichean*: Q'eqchi'; Uspantek; Poqomchi', Poqomam; K'ichee', Kaqchikel, Tz'utujil, Sakapultek, Sipakapense

ii. *Mamean*: Tekiteko, Mam; Awakatek, Ixil

Despite significant diversity within the family, Mayan languages share a number of core characteristics. The unmarked word order is commonly verb-initial (England 1991).² Nearly all languages of the Mayan family show an ergative-absolutive system of marking grammatical relations (Dayley 1981), illustrated by the Q'anjob'al forms in (12). Core arguments are head-marked on the predicate with two sets of morphemes. Ergative prefixes mark the transitive subject in (12a), while transitive objects and intransitive subjects receive the same marking, here the 2nd person absolutive *-ach*.

(12) a. Q'anjob'al

Max-**ach** y-il-a'.

ASP-**2ABS** **3ERG**-SEE-TV

'She saw you.'

b. Max-**ach** way-i.

ASP-**2ABS** sleep-ITV

'You slept.'

The full paradigm of person markers in Q'anjob'al is given in (13). The ergative markers have pre-consonantal and pre-vocalic allomorphs. As in other Mayan languages, 3rd person absolutive

²Whether this word order is a matter of head-movement, XP movement, or base-generation—or even, whether the underlying mechanism is the same across all verb-initial Mayan languages—is not directly relevant for our current purposes, and we abstract away from it here. For a review, see Clemens & Polinsky to appear.

is null and ergative and possessive prefixes are identical.³ The clitic *-heb'* corresponds to 3rd person plural in both series of person markers, on verbs as well as on nominals. The absolutive markers shown here are bound forms, but may also appear as free-standing forms with the addition of an initial *h-* (e.g. *hin*, *hach*...); this will be relevant to our discussion of the Crazy Antipassive in section 5.1 below.

(13) Q'anjob'al person morphology

	ERGATIVE		ABSOLUTIVE
	__C	__V	
1sg	<i>hin-</i>	<i>w-</i>	<i>-in</i>
2sg	<i>ha-</i>	<i>h-</i>	<i>-ach</i>
3sg	<i>s-</i>	<i>y-</i>	<i>-Ø</i>
1pl	<i>ko-</i>	<i>j-</i>	<i>-on</i>
2pl	<i>he-</i>	<i>hey-</i>	<i>-ex</i>
3pl	<i>s-...-heb'</i>	<i>y-...-heb'</i>	<i>-heb'</i>

We assume that the absolutive morphemes arise through clitic doubling of full DP arguments, which can be *pro*. On the clitic status of absolutive agreement markers, see: Mateo-Toledo 2008 on Q'anjob'al; Woolford 2000 on Jakaltek; Coon 2010a on Chol; and Preminger 2011, in press on Kaqchikel; and for historical evidence to the same effect, see Kaufman 1990 and Robertson 1992. Throughout the Mayan family, absolutive morphemes appear to be reduced versions of full emphatic pronouns, which appear only in focus constructions. Compare Q'anjob'al full pronouns *ayin* (1SG), *ayach* (2SG), *ayon* (1PL), and *ayex* (2PL) with the corresponding absolutive forms in (13). The status of absolutives is discussed further in section 3.2.

Finite eventive predicates in Q'anjob'al are headed by one of several aspectual markers, for example the completive *max* in (12) above. Nominal arguments are not morphologically marked

³The ergative/genitive prefixes are often referred to jointly as “set A” markers within Mayanist literature; absolutive is known as “set B”. Here we sacrifice the neutrality of the A/B labels and use the more familiar ERG – ergative and ABS – absolutive. We gloss both transitive subjects and possessors as ‘ERG’ below.

for case, and can be freely omitted. The verb stem consists of a root, followed in some cases by derivational morphology, and often a final “status suffix”. Status suffixes vary with transitivity, stem class, and aspect. The two suffixes relevant to the following discussion are given in (14).

(14) Q’anjob’al status suffixes⁴

intransitive	-i	-ITV
transitive	-V’	-TV

Importantly, the status suffixes *-i* and *-V’* only surface phrase-finally in Q’anjob’al (Mateo Pedro 2011; see also Henderson 2012 on K’ichee’). We represent non-final suffixes in square brackets to show how they *would* surface if the stem were phrase-final, as shown in (15a). Note that this does not indicate *optionality*; whether or not these status suffixes will surface is determined unambiguously by whether or not the verb is in phrase-final position.

(15) a. Max-Ø way-i.

ASP-3ABS sleep-ITV

‘He slept.’

b. Max-Ø way[-i] naq winaq.

ASP-3ABS sleep-ITV DET man

‘The man slept.’

2.2. A Mayan Absolutive Parameter

Though most Mayan languages share the properties discussed for Q’anjob’al above, we find an interesting point of variation in the *relative position* of the absolutive morphemes: in what we will refer to as “HIGH-ABS” languages, the absolutive morpheme immediately follows the aspect

⁴Mayan languages morphologically distinguish two types of transitives: “root transitives” are formed from a CVC root, while “derived” or “non-root” transitives include stems which have been derived via overt morphology (e.g. causative, applicative), or in some cases are zero-derived (e.g. some denominals). Non-root transitives take the suffix *-j*, omitted here for simplicity. The symbol [V] represents a stem-harmonic vowel.

marker.⁵ In “LOW-ABS” languages, on the other hand, the absolutive morpheme appears at the end of the verb stem. Other morphemes appear in the same relative order, as shown in the table in (16).⁶ This basic division of Mayan languages is discussed by Bricker (1977), who notes that the HIGH-ABS languages are spoken predominantly in highland Guatemala, while the LOW-ABS languages are found in Mexico.

(16)

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

Q’anjob’al, shown in (17), exemplifies the former type; Chol, shown in (18), exemplifies the latter type.

(17) Q’anjob’al – “HIGH-ABS”

a. Max-**ach** y-il-a’.

ASP-2ABS 3ERG-SEE-TV

‘She saw you.’

b. Max-**ach** oq’-i.

ASP-2ABS cry-ITV

‘You cried.’

(18) Chol – “LOW-ABS”

a. Tyi y-il-ä-**yety**.

ASP 3ERG-SEE-TV-2ABS

‘She saw you.’

b. Tyi uk’-i-**yety**.

ASP cry-ITV-2ABS

‘You cried.’

Tada (1993:106) observes a correlation, within the Mayan language family, between the presence of extraction asymmetries on the one hand, and the location of the absolutive morpheme on the other. Overwhelmingly, HIGH-ABS languages like Q’anjob’al exhibit extraction asymmetries (namely, they do not allow extraction of the transitive subject), whereas LOW-ABS languages like Chol do not exhibit such restrictions; in the majority of LOW-ABS languages surveyed, all core arguments extract freely.

⁵Here we discuss only “verbal predicates” which show aspectual morphology. A further division is found within HIGH-ABS languages in the treatment of so-called “non-verbal predicates”, which we return to below.

⁶How these morphemes are grouped into phonological words is another point of variation across the family, not discussed here.

This is summarized in the table in (19); languages we have added to Tada’s original typology appear italicized (see Stiebels 2006 and references therein).⁷

(19) Relationship between location of ABS and the presence of extraction asymmetries

	+EXTRACTION ASYMMETRIES	–EXTRACTION ASYMMETRIES
HIGH-ABS	<i>Q’anjob’al</i> , <i>Akaktek</i> , <i>Jakaltek</i> , <i>Chuj</i> , <i>Q’eqchi’</i> , <i>Uspantek</i> <i>Poqomchi’</i> , <i>Poqomam</i> , <i>K’ichee’</i> , <i>Kaqchikel</i> , <i>Tz’utujil</i> , <i>Sakapultek</i> <i>Sipakapense</i> , <i>Mam</i> , <i>Awakatek</i>	
LOW-ABS	<i>Yukatek</i> , <i>Ixil</i>	<i>Lakandon</i> , <i>Mopan</i> , <i>Itzaj</i> , <i>Chol</i> , <i>Chontal</i> , <i>Tseltal</i> , <i>Tojol’ab’al</i>

We demonstrate the relevant properties through a comparison of *Q’anjob’al* (HIGH-ABS) with *Chol* (LOW-ABS).⁸ The examples in (20) demonstrate that **S** (intransitive subject) arguments may extract freely in *Q’anjob’al*:

⁷Tzotzil and Wastek are both omitted from this table; the more complicated case of Tzotzil is discussed further in Appendix B. Wastek is not clearly classifiable according to this typology—it is unusual within Mayan in having three series of person markers, including a series of portmanteau person markers (Edmonson 1988)—and we thus omit it from discussion here. It is the most divergent member of the family, having split off before any of the other languages, and is classified in its own sub-branch (Campbell & Kaufman 1985).

This classification also includes two apparent outliers: *Yukatek* and *Ixil*. The so-called Agent Focus construction in *Yukatek* differs significantly from that of the other languages both in form and in distribution (Bricker 1978, 1979, Gutiérrez Bravo & Monforte 2009, Tonhauser 2003, 2007; and Norcliffe 2009). Norcliffe (2009) argues that AF in *Yukatek* is best analyzed as belonging to the group of *resumptive/gap alternations*; if her analysis is on the right track, *Yukatek* does *not* in fact exhibit syntactic ergativity of the type seen in the HIGH-ABS languages presented here.

While absolutive markers follow the verb in *Ixil*, they are unique in that they are not enclitics—as they are in the other LOW-ABS languages—but separate words: “The absolutive markers are independent words, and it can be observed that they are identical to the independent first and second person pronouns” (Ayres 1991:134). If the absolutive morphemes are simply full pronominal forms in *Ixil*, we might attribute their low position to a phonological restriction, as in the case of Tzotzil discussed in Appendix B below.

⁸We use the following traditional notation for core clausal arguments: **S** for intransitive subjects; **A** for transitive subjects (“Agents”); and **P** for transitive objects (“Patients”).

(20) Extraction of Subject of intransitive

a. Max way[-i] naq winaq.

ASP sleep-ITV CL man

‘The man slept.’

b. Maktxel₁ max way-i ____₁?

who ASP sleep-ITV

‘Who slept?’

As shown below, **P** (transitive object) arguments also extract freely; but **A** (transitive subject) arguments cannot be extracted from a regular transitive clause. The unavailability of an **A**-extraction reading for an example like (21c), below, illustrates this restriction; as expected, this sentence is grammatical under a **P**-extraction reading (i.e., *Who did the woman see?*).

(21) a. Transitive

Max y-il[-a'] naq winaq ix ix.

ASP 3ERG-SEE-TV CL man CL woman

‘The man saw the woman.’

b. Patient extraction

Maktxel₁ max y-il[-a'] naq winaq ____₁?

Who ASP 3ERG-SEE-TV CL man

‘Who did the man see?’

c. Agent extraction

* Maktxel₁ max-Ø y-il[-a'] ____₁ ix ix?

who ASP-3ABS 3ERG-SEE-TV CL woman

intended: ‘Who saw the woman?’

(grammatical as: ‘Who did the woman see?’)

Extraction of **A** arguments is impossible not only in *wh*-questions like (21c), but also in other kinds of A-bar dependencies, such as relativization and focusing of 3rd person subjects (we return to focused 1st/2nd person subjects in section 5.1, below).

The state of affairs demonstrated above for Q'anjob'al differs crucially from what one finds in a LOW-ABS language, like Chol. In a Chol transitive where both arguments are 3rd person, A-bar extraction results in ambiguity—precisely the ambiguity that is blocked in the Q'anjob'al (21c), above. This is due to a confluence of the following factors: **(i)** both core arguments are normally post-verbal in Chol (the basic word order is VOS; see Coon 2010b, Vázquez Álvarez 2002); **(ii)** nominals in Chol, as in all of Mayan, lack morphological case marking of their own; and most importantly for our current purposes, **(iii)** both subjects and objects can in principle be targeted for A-bar extraction. The resulting ambiguity is demonstrated in (22b):

(22) Chol transitive (cf. the Q'anjob'al (21))

- a. Tyi y-il-ä x-'ixik jiñi wiñik.
 ASP 3ERG-SEE-DTV CL-WOMAN DET man
 'The man saw the woman.'
- b. 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?'

This ambiguity disappears if the arguments differ in their person features (specifically, if the non-extracted argument is 1st/2nd person), since in that case, the agreement markers will disambiguate which argument is the subject/agent/ergative, and which is the object/patient/absolutive:

- (23) Maxki₁ tyi y-il-ä-yety ___₁?
 who ASP 3ERG-SEE-TV-2ABS
 'Who saw you?'
 (cannot mean: 'Who did you see?')

Crucially, ambiguity of the kind shown in (22b) never arises in a HIGH-ABS language like Q'anjob'al: if the verb is in its transitive form, the *wh*-phrase must be interpreted as the **P** argument (see (21b–c), above).

In section 3, we will offer an account for why *Tada's Generalization* (19) should hold. First, however, we will establish that in Mayan, the surface position of absolutive correlates with the head responsible for licensing absolutive arguments, in the manner shown in (24):

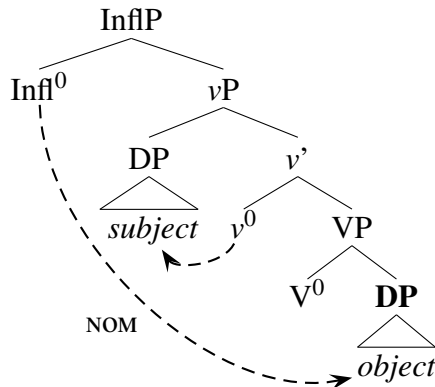
(24) Mayan Absolutive Parameter

HIGH-ABS (ABS realized on the aspect marker)	ABS assigned by Infl ⁰
LOW-ABS (ABS realized on the verb stem)	ABS assigned within vP

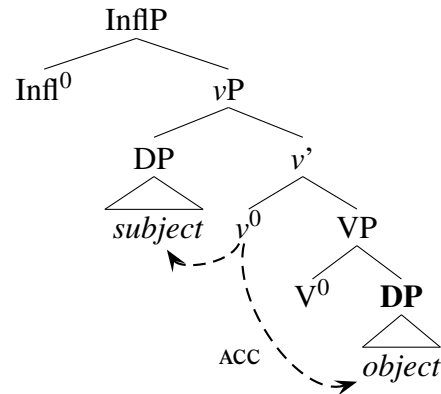
2.3. The locus of absolutive

In this sub-section, we provide evidence for the parameter in (24). Recall that the differences between Legate's *ABS=NOM* (which we propose corresponds to Mayan HIGH-ABS) and *ABS=DEF* (corresponding to Mayan LOW-ABS) is found in the case-assignment configurations of *transitive clauses*—since intransitive subjects are uniformly licensed by Infl⁰. In *ABS=NOM*, transitive objects are licensed by Infl⁰; in *ABS=DEF*, transitive objects are licensed by transitive v⁰. Structures for transitives are repeated in (25) and (26) below.

(25) *ABS=NOM*



(26) *ABS=DEF*



As discussed in work by both Aldridge and Legate on unrelated languages, these two different possibilities for assigning case to transitive (“absolutive”) objects make different predictions about the behavior of transitive objects in non-finite clauses. Just as nominative becomes unavailable in non-finite embedded clauses in a nominative-accusative language, “absolutive” objects should lose the ability to be licensed by Infl^0 in an $ABS=NOM$ language as in (25). In an $ABS=DEF$ configuration like (26), on the other hand, Infl^0 is not responsible for licensing transitive objects in the first place, and so the licensing of such objects should in principle still be possible, even in non-finite environments. Since Infl^0 is responsible for licensing intransitive subjects in both $ABS=NOM$ and $ABS=DEF$ languages (see (7) and (9) above), intransitive “absolutive” subjects should become unavailable in both. These predictions are summarized in (27).

(27) Licensing absolutive DPs

	<i>ABS=NOM</i>	non-finite?	<i>ABS=DEF</i>	non-finite?
intransitive subject	Infl^0	✗	Infl^0	✗
transitive object	Infl^0	✗	v^0	✓

In Mayan, non-finite embedded clauses lack the pre-verbal aspect markers found in matrix clauses. Though aspectual distinctions are more prevalent than grammatical tense distinctions throughout the family, in at least some Mayan languages tense and aspect information are bundled together in these preverbal morphemes, which we assume occupy Infl^0 (following Aissen 1992). Below we see that the predictions of our Mayan Absolutive Parameter in (24) are borne out: non-finite embedded transitive objects require special morphosyntactic means to be licensed in HIGH-ABS languages, but not in LOW-ABS languages. In embedded intransitives, absolutive subjects are impossible across the family.

2.3.1. Absolutive in HIGH-ABS languages

In Q’anjob’al and other HIGH-ABS languages, we predict that absolutive DPs—either 1st/2nd person clitics, or full 3rd person nominals—will be unavailable in both transitive and intransitive non-finite

environments (or, more precisely, unavailable absent some special licensing mechanism). As we will see, this prediction is borne out.

Q'anjob'al matrix transitive constructions are shown in (28). Here, the objects are marked with the 1st and 2nd person absolutive clitics, *-in* and *-ach*, which attach to the initial aspect marker.

- (28) a. Ch-**in** y-il[-a'] ix Malin.

ASP-1ABS 3ERG-see-TV CL Maria

'Maria sees me.'

- b. Max-**ach** hin-laq'.

ASP-2ABS 1ERG-hug

'I hugged the man.'

The matrix verb *uj* 'be able to' and the progressive predicate *lanan* both embed non-finite (aspectless) clauses (see Mateo-Toledo 2003a). However, embedding aspectless equivalents of the transitive forms in (28) is impossible, as shown by the ungrammatical constructions in (29).

- (29) a. * Chi uj [**hin** y-il ix Malin].

ASP be.able.to 1ABS 3ERG-see CL Maria

intended: 'Maria can see me.'

- b. * Lanan [**hach** hin-laq'-a'].

PROG 2ABS 1ERG-hug-TV

intended: 'I am hugging you.'

Though the absolutive arguments in (29) are the freestanding forms *hin* and *hach* (see also section 5.1, below), it is reasonable to wonder whether the problem with (29a–b) may still be a morphological one. Suppose that absolutive morphemes in HIGH-ABS languages like Q'anjob'al *must* attach to an aspect marker, as in the grammatical matrix clauses in (28) above. Since the non-finite embedded clauses in (29) have no aspect marker, perhaps this is the reason that the

absolute cannot appear.⁹ The contrast in (30) illustrates that this is not the problem. Recall that there are no 3rd person absolute morphemes in Mayan (see (13) above); a sentence with a full 3rd person NP is shown in (30a). The embedded equivalent in (30b) is nonetheless impossible. This indicates that the problem is not morphological, but syntactic: with no finite Infl⁰, there is no means to license a transitive object.

(30) a. Max hin-laq' **naq winaq**.

ASP 1ERG-hug CL man

'I hugged the man.'

b. * Lanan [hin-laq' **naq winaq**].

PROG 1ERG-hug CL man

intended: 'I am hugging the man.'

In order to embed non-finite transitives in Q'anjob'al, a special construction known as the "Crazy Antipassive" is required. We return to this construction in 5.1 below.

The difference between finite and non-finite *intransitives* is perhaps even more striking. Examples of Q'anjob'al matrix intransitives are given in (31). Here, the intransitive subjects are marked by the absolute clitics *-on* and *-ach*, which again attach to the clause-initial aspect markers.

(31) a. Ch-**on** b'ey-i.

ASP-1ABS.PL walk-ITV

'We walk.'

b. Max-**ach** way-i.

ASP-2ABS sleep-ITV

'You slept.'

⁹Thanks to an anonymous reviewer for raising this possibility.

Non-finite embedded equivalents are shown in (32). Again, the bracketed embedded clauses have no aspect marking. The single argument of the intransitive is marked not by an absolutive clitic, but with the *ergative* prefix, normally reserved for transitive subjects and possessors.¹⁰

- (32) a. Chi uj [**ko**-b'ey-i].
 ASP be.able.to 1ERG.PL-walk-ITV
 'We can walk.'
- b. Lanan [**ha**-way-i].
 PROG 2ERG-sleep-ITV
 'You are sleeping.'

Using the absolutive morpheme (either free-standing, given here, or bound forms) results in ungrammaticality, as shown in (33). The behaviour of these intransitives has been described as an instance of split ergativity, since these particular intransitive subjects fail to pattern with transitive objects; see Coon 2013 for discussion.

- (33) a. * Chi uj [**hon** b'ey-i].
 ASP be.able.to 1ABS.PL walk-ITV
 intended: 'We can walk.'
- b. * Lanan [**hach** b'ey-i].
 PROG 2ABS walk-ITV
 intended: 'You are sleeping.'

The transitive and intransitive non-finite embedded forms contrast with fully finite embedded clauses like the one shown in (34). Here the embedded form appears with aspectual marking and the absolutive morphemes are again possible. The complementizer *tol* is optional.

¹⁰Indeed, many analyses propose that these ergative prefixes co-index grammatical *possessors*. Mateo Pedro (2009) argues that non-finite embedded clauses like the bracketed forms in (32) are nominalizations—the subject is marked as the *possessor* of a nominalized clause (though we gloss ergative/possessive morphemes consistently as 'ERG' for simplicity). The sentence in (32a) would then be more literally translated as 'Our walking is allowed/possible'; see also Larsen & Norman 1979; Bricker 1981 on Yukatek and Coon 2013 on Chol.

(34) a. Chi w-oche-j [(tol) ch-**in** y-il[-a'] ix Malin].

ASP 1ERG-want-DTV COMP ASP-1ABS 3ERG-see-TV CL Maria

‘I want Maria to see me.’

b. Chi w-oche-j [(tol) ch-**ach** b’ey-i].

ASP 1ERG-want-DTV COMP ASP-2ABS walk-ITV

‘I want you to walk.’

We predict more generally that absolutive should be unavailable in non-finite embedded clauses in HIGH-ABS Mayan languages. While we find variation in how non-finite embedded clauses are expressed across HIGH-ABS Mayan languages, the general absence of absolutives holds in all of the languages we examine. We briefly discuss Kaqchikel, K’ichee’, Q’eqchi’, and Mam below, before turning to LOW-ABS languages in the following section. While a comprehensive analysis of non-finite clauses in Mayan languages is beyond the scope of this paper, we provide the examples below to illustrate the striking unavailability, in HIGH-ABS Mayan languages, of absolutive in non-finite environments—both for transitive objects and for intransitive subjects.

A Kaqchikel (K’ichean) matrix transitive is shown in (35a). In (35b), we see that the verb ‘want’ can embed a fully finite clause which is itself marked for aspect. Here, the embedded object is marked with the 2nd person absolutive *-at*, just as in the matrix transitive. The verb ‘begin’ in (35c), on the other hand, embeds a smaller, aspectless clause. The stem is nominalized with the suffix *-ik* and the embedded object must be expressed with the ergative/possessive prefix, as in the Q’anjob’al forms in (32) above.

(35) Kaqchikel (K’ichean)

a. X-**at**-in-tz’et.

ASP-2ABS-1ERG-see

‘I saw you.’

b. X-inw-ajo' [x-**at**-in-tz'et].

ASP-1ERG-want ASP-2ABS-1ERG-see

'I wanted to see you.'

c. X-in-chäp [**a**-tz'et-ik].

ASP-1ERG-begin 2ERG-see-NML

'I began to see you.' (lit.: 'I began your seeing.')

Corresponding intransitives are shown with the verb *k'iy* 'grow' in (36). As in the transitives above, the embedded clause with aspect in (36b) patterns identically to the matrix intransitive in (36a). When aspect is lost, as in the embedded clause in (36c), absolutive marking also disappears. The verb appears in a nominalized form and in the single argument is again represented using the ergative/possessive prefix, *qa-*. K'ichee' (another Kichean language) patterns similarly (Robert Henderson, pers. comm.).

(36) a. X-**oj**-k'iy.

ASP-1ABS.PL-grow

'We grew.'

b. X-q-ajo' [x-**oj**-k'iy].

ASP-1ERG.PL-want ASP-1ABS.PL-grow

'We wanted to grow.'

c. X-qa-chäp [**qa**-k'iy-en].

ASP-1ERG.PL-begin 1ERG.PL-grow-NML

'We began to grow.' (lit.: 'Our growing began.')

Similar facts are found in HIGH-ABS Q'eqchi', also from the K'ichean branch.¹¹ Transitive and intransitive matrix clauses are shown in (37), which realize the HIGH-ABS morpheme order.

¹¹For the remaining languages in this section—Q'eqchi', Mam, and Jakalteq—we rely on data from secondary sources. While ungrammatical examples and full paradigms are not provided, the discussion in the cited sources appears to confirm the pattern we describe here.

(37) Q’eqchi’ (K’ichean)

a. X-**at**-ka-ch’aj.

ASP-2ABS-1ERG.PL-wash

‘We washed you.’

b. X-**at**-yajer.

ASP-2ABS-be.sick

‘You got sick.’

(Berinstein 1998:213)

Two options available for realizing transitive aspectless embedded clauses in Q’eqchi’ are demonstrated in (38a–b). In (38a), the verb appears in a nominal stem form and the thematic object is marked with the ergative/possessive prefix, comparable to (35c), as well as (32). Alternatively, the embedded verb may be antipassivized, as in (38b); here, the object must be bare and non-referential (see also Berinstein 1990). We follow a range of work which assumes that bare objects are licensed by being *incorporated* (Baker 1988) or *pseudo-incorporated* (Massam 2001) into the verb stem, and thus do not require the kind of licensing discussed earlier (see also §5.2).

(38) a. T-inw-aj [**aaw**-il-bal].

ASP-1ERG-want 2ERG-see-NML

‘I want to see you.’ (lit.: ‘I want your seeing.’)

b. Laa’in t-inw-aj [lo’-o-k **tul**].

PRON1 ASP-1ERG-want eat-AP-NF banana

‘I want to eat bananas.’

(Berinstein 1985:265–9)

England (to appear) discusses various types of aspectless embedded clauses in the HIGH-ABS language Mam (Mamean branch). What they all appear to share is an absence of absolutive marking. What she labels “infinitive” forms are marked with the suffix *-l*, as in (39). In (39a), the object is introduced via ergative/possessive marking on a relational noun, a common strategy across the Mayan family for introducing oblique arguments. In the form in (39b), the object must be bare and thus presumably incorporated, comparable to Q’eqchi’ (38b). England (to appear)

states: “One can express the patient of a non-finite transitive verb, but in an oblique or generic (non-specific) form.”

(39) Mam (Mamean)

a. O chi e'x xjaal [laq'oo-**l t-ee**]

ASP 3ABS.PL go people buy-NF 3ERG.SG-RN

‘The people went to buy it.’

b. Ma tz'-ok n-q'o-'n-a [tx'eema-**l sii'**]

ASP 3ABS.SG-DIR 1ERG.SG-give-SD-1SG cut-NF wood

‘I made him cut wood.’

Other aspectless clauses are formed by passivization of transitive stems. In (40), the single argument of the passive, *a'* ‘water’, gives rise to the ergative/possessive marker *t-*.

(40) Walaan [t-k'aa-**njtz** a']

good 3ERG.SG-drink-PASV water

‘Drinking water is good.’ (lit.: ‘The water’s drinking is good.’) (England to appear)

Subjects in non-finite intransitives also appear with ergative marking, as in (41), rather than the absolutive, as one would have perhaps expected given the general ergative-absolutive pattern of the language.

(41) Ok [q-poon-a q-jaa-y'].

when 1ERG.PL-arrive.there-1PL 1ERG.PL-house-1PL

‘When we arrived at our houses. . .’ (England to appear)

To summarize, in finite clauses we find a standard distribution of ergative and absolutive markers: transitive subjects are marked ergative, while transitive objects and intransitive subjects are marked absolutive. In non-finite embedded clauses, only a single argument is possible, and it must be marked ergative. This means that—as with Kaqchikel and Q'eqchi' above—

thematically transitive verbs must be somehow detransitivized via passivization, antipassivization, or incorporation; see England (1983:260) for further discussion.

Finally, in Jakaltek (HIGH-ABS; see Craig 1977:ch. 8) aspectless embedded clauses appear to behave like those in Q'anjob'al (discussed further in §5.1).

To the best of our knowledge, there is no HIGH-ABS language which allows absolutive arguments—either transitive objects or intransitive subjects—to occur in non-finite aspectless clauses. Importantly, this is not a definitional matter: the initial classification of HIGH-ABS vs. LOW-ABS was based not on this syntactic behavior, but on the position of absolutive agreement morphology within the verb-aspect complex (see (19), above).

The Mayan Absolutive Parameter in (24), above, provides a straightforward account for the lengths these HIGH-ABS languages go to to circumvent the appearance of absolutives (1st and 2nd person clitics, as well as full 3rd person arguments) in aspectless embedded clauses. Following proposals which equate Mayan preverbal aspect markers with Infl^0 , if HIGH-ABS languages are *ABS=NOM*, then the absence of absolutive DPs in aspectless environments follows directly.

2.3.2. Absolutive in LOW-ABS languages

Recall now the predictions for non-finite embedded clauses in LOW-ABS languages (those in which absolutive agreement morphology appears at the end of the verb-aspect complex), given in (27) above. These language, we argue, instantiate Legate's *ABS=DEF* class. Thus, in these languages, intransitive subjects are licensed by finite Infl^0 (cf. “nominative case”), while transitive objects are licensed by transitive v^0 (cf. “accusative case”), but both happen to receive the same morphological spell-out (descriptively labeled “absolutive”); this was illustrated in (8)–(9) above. If it is indeed the case that LOW-ABS languages instantiate this type of system, then we predict absolutive to be possible in non-finite transitive clauses, but not in non-finite intransitives.

This prediction is borne out in Chol, a LOW-ABS language. In contrast with the state of affairs in the HIGH-ABS languages examined above, absolutive *objects* are fine in aspectless embedded clauses in Chol (42).¹²

(42) Chol

a. Mejl [i-k'el-**oñ**].

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

‘Maria can see me.’

b. Choñkol [k-mek'-**ety**].

PROG 1ERG-hug-2ABS

‘I am hugging you.’

Crucially, absolutive is still unavailable in non-finite *intransitives*—exactly as predicted. A baseline matrix intransitive is shown in (43a); when an intransitive is embedded under the aspectual predicate *choñkol*, person must be marked with a prefix from the ergative series (43b); absolutive is impossible (43c), regardless of the morphological form of the embedded intransitive stem.

(43) a. Tyi ts'äm-i-**yoñ**.

ASP bathe-ITV-1ABS

‘I bathed.’

b. Choñkol [k-ts'äm-el].

PROG 1ERG-bathe-NML

‘I am bathing.’

¹²While we predict that absolutive would be unavailable in aspectless clauses in a HIGH-ABS language (at least without recourse to some special licensing mechanism), we do not predict that absolutive would necessarily be available in all aspectless clauses in a LOW-ABS language. For example, it may be possible to embed elements smaller than *vP* (cf. Abney 1987, Wurmbrand 2001, a.o.), in which case even the low absolutive-assigner v^0 would not be included in the embedded domain. It is the case that non-finite clauses throughout the Mayan family take the form of nominals; while some may be nominalizations above the *vP* level, others may contain less structure than that (see Coon 2013).

c. * Choñkol [ts'äm-i-yoñ].

PROG bathe-ITV-1ABS

intended: 'I am bathing.'

Importantly, the availability of absolutive for objects in aspectless transitive clauses is not restricted to Chol. Absolutive-marked transitive objects are grammatical in the LOW-ABS Yukatekan languages Yukatek and Itzaj, as shown in (44) and (45).

(44) Yukatek

In-k'áat [inw-il-**ech**].

1ERG-want 1ERG-see-2ABS

'I want to see you.'

(Bricker 1981:96)

(45) Itzaj

K-u-jo'm-ol [ki-b'et-ik **kiw-uk'-ul-ej**].

ASP-3ERG-end-ITV 1ERG.PL-make-TV 1ERG.PL-drink-NML-TOP

'After we make our drink.'

(Hofling 2000:486)

Absolutive is lost, however, in non-finite intransitives, exactly as in the Chol examples above. Compare the matrix intransitive in (46a) with the non-finite clause embedded under the aspectual predicate *táan* in (46b).

(46) Yukatek

a. h-k'uch-**ech**

ASP-arrive-2abs

'You arrived.'

b. táan [in-k'uch-ul].

PROG 1ERG-arrive-IMPF

'I am arriving.'

(Bricker 1981:84)

In other non-finite (“dependent”) intransitives, person simply goes unmarked, as is the case in each of the embedded clauses in the following two examples (from Yukatek and Itzaj):

(47) a. Yukatek

In-k’áat [han-al].

1ERG-want eat-NML

‘I want to eat.’

(Bricker 1981:96)

b. Itzaj

U-k’a’tij [wen-el].

3ERG-want sleep-NML

‘She wants to sleep.’

(Hofling 1998:216)

Tojol’ab’al has been grouped alternately with Tseltalan languages (McQuown 1956), and with Chuj in the Q’anjob’alan branch (Campbell & Kaufman 1985). Despite its questionable genetic status, it behaves as predicted according to the typology presented here. Absolutive markers in Tojol’ab’al are suffixal, which would lead us to classify it as a LOW-ABS language; and indeed, absolutive is available in aspectless embedded clauses in Tojol’ab’al, as shown in (48).¹³

(48) Tojol’ab’al

a. Hose x-y-il-a [s-mak’-e’ Manwel].

Jose ASP-3ERG-see-TV 3ERG-hit-3ABS.PL Manuel

‘Jose sees Manuel hit them.’

b. Oh [k-il-Ø-eh].

go 1ERG-see-3ABS-NF

‘I am going to see it.’

(Furbee-Losee 1976:207–209)

While these sections have provided only a cursory survey of the range of patterns found in non-finite clauses in Mayan, the data examined have all supported the proposal stated earlier.

¹³The null 3rd person absolutive gloss in (48b) is present in the original cited source.

In non-finite environments in HIGH-ABS languages, we do not find absolutive with transitives or intransitives. In non-finite environments in LOW-ABS languages, on the other hand, absolutives are possible with transitives, while still impossible with intransitives. These findings support the typology described by Legate (2008), in which in some ergative-absolutive systems, what is called “absolutive” does not have a uniform source, but is instead a cover term for the case of transitive objects and that of intransitive subjects. In the following section, we examine how the different locations of the absolutive morphemes in Mayan languages correspond to their mechanisms of syntactic licensing.

3. HIGH-ABS and the ban on extracting transitive subjects

We now turn to the ban on extracting transitive subjects. This ban is referred to under the umbrella of *syntactic ergativity* because in languages that exhibit this ban, it is not only morphology that treats transitive subjects differently from transitive objects and intransitive subjects, but syntax as well (see also Aldridge 2008b, Dixon 1994, Manning 1996).

We argue that syntactic ergativity, at least in Mayan, arises because assignment of absolutive to the transitive object requires movement of the object out of the verb-phrase, effectively “trapping” the transitive subject in situ. Crucially, this locality problem arises *only* in HIGH-ABS languages, because in LOW-ABS languages, the object has, in v^0 , a perfectly local assigner of absolutive (see the discussion in §2.3). Thus, no extraction restrictions arise in LOW-ABS languages, even though they too are morphologically ergative.

Note that we do not, in this section, discuss the alternative morphosyntactic means employed in the languages in question to express those utterances that are affected by this ban on extracting transitive subjects. One such strategy, the Agent Focus construction, will be the topic of the subsequent section (§4). Instead, we first concentrate on the nature of the ban itself, and its distribution within the Mayan language family.

3.1. HIGH-ABS and locality

Recall the typology of Mayan languages from (19) above: HIGH-ABS language exhibit extraction restrictions, while LOW-ABS languages do not. Any account of syntactic ergativity in Mayan must attend to two significant aspects of (19). First, it is clear that morphological ergativity is not a *sufficient* condition for syntactic ergativity (cf. Assmann et al. 2013). Every language listed in (19) is morphologically ergative; nevertheless, only those in which the absolutive morpheme is low allow the transitive subject to extract freely. Second, as observed by Tada (1993) and discussed in some detail in §2.2, only HIGH-ABS Mayan languages exhibit a ban on extracting the transitive subject; LOW-ABS languages show no such ban.

In §2.3, we proposed and substantiated the *Mayan absolutive parameter*, repeated in (49):

(49) Mayan Absolutive Parameter

HIGH-ABS (ABS realized on the aspect marker)	ABS assigned by Infl ⁰	[=(24)]
LOW-ABS (ABS realized on the verb stem)	ABS assigned within vP	

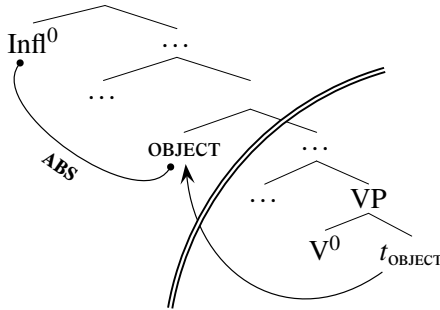
The immediate question that arises from juxtaposing the results of §2.2 and §2.3 is the following: Why would the emergence of syntactic ergativity correlate with the identity of the absolutive case assigner?

We assume, with much recent work in minimalist syntax, that transitive verb-phrases constitute a locality domain (a *phase*, in the terminology of Chomsky 2000, 2001). We briefly postpone the discussion of precisely which category, in the extended verbal projection, constitutes the boundary in question (vP, VoiceP, VP, etc.); we return to this question shortly. Regardless of its precise categorial identity, however, the locality domain in question will contain the base position of the transitive object, and crucially, will not contain the Infl⁰ node.

As shown in §2.3, absolutive case in HIGH-ABS languages like Q'anjob'al is assigned by Infl⁰. We demonstrated this independently of syntactic ergativity (i.e., the ban on extracting transitive subjects), using the diagnostics put forth by Aldridge (2004) and Legate (2008). Given the existence of a verb-phrase-level locality boundary, the fact that the source of absolutive case in

HIGH-ABS languages is Infl^0 *entails* that the transitive object will have to escape the verb-phrase in these languages in order to receive absolutive case. This is schematized in (50), below:¹⁴

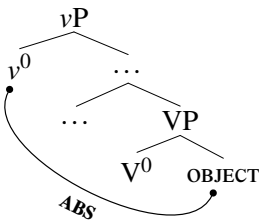
(50) ABS assignment in HIGH-ABS languages



This much follows directly from the existence of a verb-phrase-level locality domain, coupled with the structurally high source of absolutive case in the languages in question.

Crucially, in a LOW-ABS language, where the source of absolutive case is v^0 , the kind of movement shown in (50) is not necessary for the assignment of absolutive (provided that v^0 itself is not outside of the verb-phrase-level locality domain):

(51) ABS assignment in LOW-ABS languages



Now recall *Tada's Generalization* (19): within the Mayan language family, only HIGH-ABS languages exhibit the ban on extracting the transitive subject. The juxtaposition of Tada's

¹⁴A reviewer asks what prevents v^0 from assigning case to the object in situ in a structure like (50) (case which could be thought of as “accusative”). That such case assignment is unavailable is precisely the defining characteristic of Legate’s (2008) *ABS=NOM* class of languages (see also Aldridge 2004, 2008a, Legate 2002), which we have shown that HIGH-ABS Mayan languages (those where absolutive agreement shows up on the aspectual marker) are an instance of. While we have nothing to add on why such languages would exist, the fact that they do is well supported by the diagnostics in question (for example, if v^0 in these languages could assign the equivalent of “accusative”, there would be no explanation for why the object cannot be case-marked by v^0 in non-finite clauses; see §2.3.1).

Generalization with (50–51) suggests that it is precisely this movement of the transitive object (for case purposes) that “traps” the transitive subject in situ in HIGH-ABS languages.

Below, we present a syntactic account that derives precisely this correlation. But before proceeding, we would like to summarize the desiderata that *any* adequate theory of syntactic ergativity in Mayan must meet. First, we have seen that Mayan languages fall into two categories with respect to the linear position of absolutive agreement relative to the verb stem (§2.2), and that these two types of languages—HIGH-ABS and LOW-ABS—exhibit the hallmarks of absolutive case assignment by Infl^0 and by v^0 , respectively (§2.3). Furthermore, we have shown that given commonplace assumptions regarding locality boundaries at the verb-phrase level, these different loci of absolutive case assignment will entail movement of the transitive object for case purposes in HIGH-ABS languages, but not in LOW-ABS ones. Crucially, as observed by Tada (1993), it is only the former—HIGH-ABS languages—that exhibit syntactic ergativity (i.e., the ban on extracting transitive subject; see §2.2).

A successful theory of syntactic ergativity in Mayan must explain why these two modes of absolutive case assignment, and their attendant consequences for movement of the transitive object, correlate with the possibility or impossibility of extracting the transitive subject.

3.2. How the subject in HIGH-ABS languages becomes “trapped”

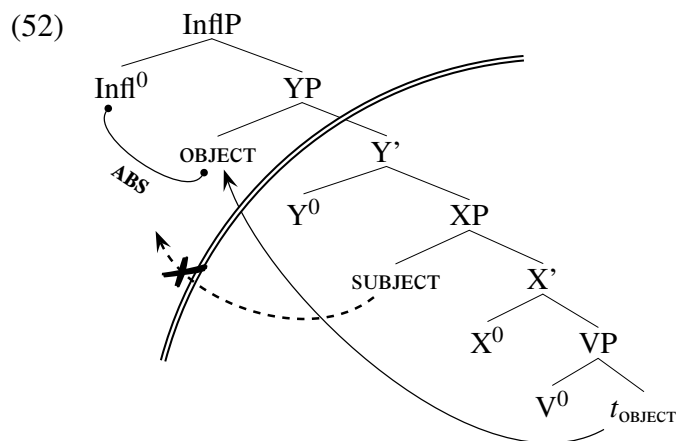
We propose an account of syntactic ergativity in Mayan based on the following two assumptions: (i) the verb-phrase-level locality domain has a single escape hatch; and (ii) the base position of the transitive subject is properly contained within this locality domain.

The kind of parameterization embodied by (i) is well-supported for locality domains at the CP level: English CPs, for example, are restricted to a single escape hatch, whereas Bulgarian CPs are not (see Richards 2001, Rudin 1988). If the locality boundary found at the verb-phrase level is of the same sort as the one found at the CP level (e.g. because both are *phases*; Chomsky 2000, 2001), then we would in fact expect some language to be “the English of verb-phrases,” so to

speak, restricting the verb-phrase-level locality domain to a single escape hatch. We suggest that Mayan languages realize precisely this typological expectation.

Regarding (ii), it is not clear to us at the present time whether this property is Mayan-specific, or more general in nature. We leave this question for future research, and concede that in the present context, (ii) constitutes a stipulation. We contend, however, that this stipulation facilitates what is by far the most straightforward account of the desiderata surveyed in §3.1.

The reason is that movement of the transitive object out of the verb-phrase in HIGH-ABS languages has to proceed through this single escape hatch; and as a result, the transitive subject cannot move out of its locality domain. This is schematized in (52), below, where we make temporary use of the following labels: YP is the verb-phrase-level projection which constitutes a locality domain for extraction (per (i), above); XP is the projection that introduces the subject (per (ii), above).



Because such movement of the transitive object is not necessary in LOW-ABS languages, where the assigner of absolutive is located within the verb phrase (§3.1), the escape hatch remains free and the transitive subject in LOW-ABS languages can extract freely.

Let us now address the issue of labeling, with respect to a structure like (52). As it stands, YP is the projection whose opacity for locality purposes—whose *phasehood*—covaries with the transitivity of the verb. Transitivity is also morphologically expressed in the languages under consideration; recall (53), repeated from §2.1:

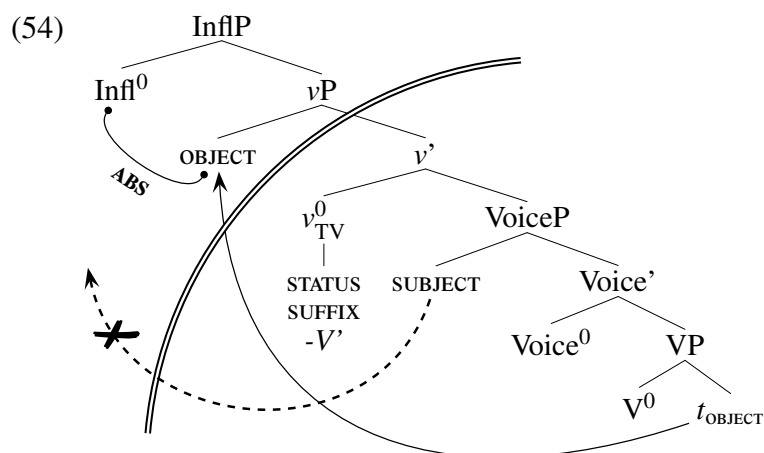
(53) Q'anjob'al status suffixes

[=(14)]

intransitive	-i	-ITV
transitive	-V'	-TV

Given that the projection in question is already sensitive to transitivity in one respect (phasehood), the most parsimonious analysis of the exponents in (53) would take them to be the spellout of the head of this very same projection.

Taken together, these facts suggest that YP is none other than *vP*. The lower projection, XP, is solely responsible for introducing the external argument; as such, it corresponds to Harley's (2013) *VoiceP*.¹⁵ We will therefore label the relevant projections in (52) in the manner shown in (54):



Recall that the original basis for the Mayan Absolutive Parameter was the differing placement of ‘absolutive agreement’ in the two classes of Mayan languages; see (55), repeated from earlier.

(55)

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

[=(16)]

¹⁵For Harley (2013), VoiceP is located *above* vP, and its head (Voice⁰) is what selects vP. As noted at the outset of this sub-section, the languages under consideration here appear to require the exact inverse of this hierarchical arrangement. We leave for future research the question of whether this is a point of irreducible parameterization, or can be reduced to some other source of variation (e.g. ergativity).

In what follows, we will assume that the so-called ‘absolutive agreement markers’ that show up right-adjacent to the aspect marker in HIGH-ABS languages arise via clitic doubling of the full absolutive DP argument (which can be *pro*). Crucially, the locality conditions on clitic doubling are known to be even more stringent than those that apply to “pure” syntactic agreement (see, e.g., Preminger 2009). Therefore, this instance of clitic doubling can only obtain if the full DP has moved into the same locality domain as the cliticization host, which is precisely what we see in (54).

We have attributed the ban on extraction of **A** arguments in transitives to the high position of the absolutive DP. While 1st and 2nd person absolutive arguments are realized affixed to the aspect marker (56a), this is not the case for full 3rd person DPs (56b). Nonetheless, extraction of **A** arguments is impossible irrespective of the person features of the object.

(56) a. Max-**in** h-el-a’.

ASP-1ABS 2ERG-see-TV

‘You saw me.’

b. Max- \emptyset_i h-el[-a’] **naq winaq_i**.

ASP-3ABS 2ERG-see-TV CL man

‘You saw the man.’

There are at least two possibilities for accounting for this: we can assume that 3rd person objects involve a null pronominal in the specifier of ν P, and the full DP is adjoined higher in an adjunct position, as in pronominal argument languages (Jelinek 1984). A second possibility is that the full DP object forms a chain headed in Spec, ν P, but only the *lower* copy is pronounced, perhaps due to a phonological restriction. We adopt the latter option here, and provide additional support for this type of analysis in the discussion of Tzotzil, in appendix B below.

So far, we have addressed the reason the transitive subject cannot extract in HIGH-ABS languages; but we have said nothing about how a particular HIGH-ABS language might get around this ban, in the event that the speaker wishes to convey a target meaning that would normally involve such

extraction. A construction known as the Agent Focus is employed throughout the HIGH-ABS Mayan languages in order to circumvent the ban on extracting transitive subjects. While recent work recognizes that AF is not a uniform construction across Mayan (e.g. Henderson, Coon & Travis 2013, Stiebels 2006), we provide below an analysis of the Q'anjob'al AF morpheme *-on*, and show how its extension to non-finite embedded clauses lends support to the analysis presented here—namely, that syntactic ergativity results from a problem of the locality of case assignment to the object.

4. The Agent Focus construction and Agent extraction

In section 3, we explained why it is that HIGH-ABS Mayan languages do not permit extraction of the transitive subject. In this section, we discuss the Agent Focus (AF) construction, a common means used in these languages to circumvent this restriction. We argue that the Q'anjob'al AF morpheme provides an alternative means of assigning case to the transitive object, thus alleviating the locality problem which otherwise arises specifically in HIGH-ABS languages.

4.1. Agent Focus: not an antipassive

The AF construction is characterized by a particular suffix which attaches to the verb stem, as well as changes to verbal agreement and status suffixes, discussed below. Representative examples from Q'anjob'al, where the form of this affix is *-on*, are given in (57a–c):

(57) Agent Focus

a. *wh*-Question

[Maktxel] max-ach il-on-i?

(Q'anjob'al)

who ASP-2ABS see-AF-ITV

‘Who saw you?’

b. Focus

[A ix Malin] max-ach il-on-i.

FOC CL Maria ASP-2ABS see-AF-ITV

‘It was Maria who saw you.’

c. Relativization

[Ix ix] max-ach il-on-i

CL woman ASP-2ABS see-AF-ITV

‘The woman who saw you’

As these examples demonstrate, this construction can be used in Q’anjob’al to circumvent the ban against forming A-bar dependencies that target the notional subject of a transitive verb; and it can be used regardless of the particular flavor of A-bar dependency involved (e.g. *wh*-interrogation (57a), focalization (57b), relativization (57c)).

Some early descriptions of AF in Mayan have characterized it as a kind of *antipassive* (see Larsen & Norman 1979); and across HIGH-ABS Mayan languages, the form of the AF suffix itself is often (partially) cognate with the form of the antipassive suffix (see Stiebels 2006). Nevertheless, later work has provided extensive argumentation that AF is not an antipassive at all (see, e.g., Aissen 1992, Ayres 1983, Craig 1979, Smith-Stark 1978, Stiebels 2006, Tonhauser 2007; though see also Aissen 2011 for an account of K’ichee’ which revives parts of an antipassive analysis).

Antipassives affect the way the notional Patient is syntactically realized: it can be *demoted* (meaning it surfaces as an oblique phrase, rather than a regular nominal); it can be incorporated (see Mondloch 1981, as well as Aissen 2011); or it can be omitted altogether. An example of a true antipassive in Q’anjob’al is given in (58):

(58) Antipassive

Max maq’-waj[-i] naq winaq (OBL y-in no tx’i’).

(Q’anjob’al)

ASP hit-AP-ITV CL man 3ERG-RN CL dog

‘The man hit the dog.’

In (58), the notional Patient need not be realized at all. If realized, it surfaces as the complement of a relational noun (glossed ‘RN’; this is a common strategy for oblique marking across Mayan). As a result, the verbal agreement morphology controlled by the subject (the notional Agent) is absolutive agreement, rather than ergative agreement. This can be diagnosed in (58) by the *absence* of overt agreement morphology: as shown in §2.1, absolutive agreement with 3rd person arguments in Q’anjob’al (as in all of Mayan) is null, while ergative agreement such arguments is overt.

The account of syntactic ergativity put forth in section 3 predicts that antipassives would allow extraction of the subject. That is because the category acting as a verb-phrase-level locality domain, which we have identified as *vP*, should only be phasal when the verb is transitive (Chomsky 2000). Since the antipassive verb is formally *intransitive*, *vP* should not be phasal in this case. As a result, the single occupied escape hatch scenario (§3.2), which is at the core of our account of syntactic ergativity, should not arise. This prediction is borne out:

- (59) Maktxel max maq’-waj[-i] (OBL y-in no tx’i’)?
 who ASP hit-AP-ITV 3ERG-RN CL dog
 ‘Who hit the dog?’

An example like (58), above, demonstrates another important difference between antipassives and AF: the antipassive can be deployed even in run-of-the-mill transitives, where the notional Agent is *not* part of an A-bar dependency. This is not the case with AF, which is restricted to environments of agent extraction.¹⁶

The properties of the AF construction have led some authors to describe it as *syntactically transitive*, but *morphologically intransitive* (see, for example, Aissen 1999, Craig 1979, Stiebels 2006). On the one hand, the construction involves two non-oblique core arguments, just like a

¹⁶In Mam (England 1983) and Q’eqchi (Berinstein 1990), there is construction that has been labeled “Agent Focus” but resembles true antipassives in that the object can only surface as an oblique form. Unlike the Q’anjob’al antipassives shown here, the Mam and Q’eqchi constructions in question are possible only in extraction contexts (which is perhaps why they have nevertheless received the “Agent Focus” label). While we do not account for the unavailability of these constructions in non-extraction contexts, it is important to stress that they differ significantly from Agent Focus in the rest of Mayan, which does not involve demotion of the notional Patient.

regular transitive. The clearest illustration of this is a comparison of agreement in an antipassive like (60a) with agreement in an AF example like (60b):

(60) a. Antipassive → *abs agreement co-indexes subject*

Maktxel max-Ø il-waj[-i] [_{OBL} h-en]?
 who COM-3ABS see-AP-ITV 2ERG-RN
 ‘Who saw you?’

b. Agent Focus → *abs agreement co-indexes object*

Maktxel max-**ach** il-on-i?
 who ASP-2ABS see-AF-ITV
 ‘Who saw you?’

In the antipassive example (60a), the absolutive agreement marker co-indexes the notional subject (*maktxel* ‘who’), the single non-oblique core argument. In the AF example (60b), the absolutive agreement marker co-indexes the notional object (*pro*_{2abs}), which would be impossible if the latter were oblique as it is in (60a).¹⁷

On the other hand, just like in a regular intransitive, the AF verb lacks ergative agreement marking, and carries only one set of agreement markers, taken from the absolutive series. Furthermore, the AF verb carries the intransitive status suffix, *-i*. Compare the AF form in (61) with the transitive and intransitive forms in (62a–b):

(61) Q’anjob’al AF

[Maktxel] max-ach il-on-i?
 who ASP-2ABS see-AF-ITV
 ‘Who saw you?’

¹⁷While we have not explained, here, why absolutive agreement in Q’anjob’al co-indexes the notional object rather than the notional subject, the mere fact that this is possible at all is what is crucial for establishing that the object in AF is non-oblique. Indeed, across HIGH-ABS Mayan languages, there are languages where the choice of which argument will be co-indexed by absolutive agreement in AF is more complicated (see Stiebels 2006 for a recent review).

(62) a. Q'anjob'al transitive

Max-ach y-il-a'.

ASP-2ABS 3ERG-see-TV

'She saw you.'

b. Q'anjob'al intransitive

Max-ach way-i.

ASP-2ABS sleep-ITV

'You slept.'

The three main differences between the AF and antipassive forms in (60) can be summarized as follows: (i) antipassive objects are marked as obliques and may be omitted, while AF objects show no oblique marking and are obligatory; (ii) AF is possible only when the transitive subject is A-bar extracted, while antipassive appears regardless of extraction; (iii) the antipassive subject behaves like other intransitive subjects in triggering absolutive marking on the verb, while in Q'anjob'al AF it is the *object* which triggers absolutive marking; there is no subject marking.

This apparent mismatch between the syntax and morphology of AF (characterized as 'transitive' and 'intransitive', respectively) has inspired a large body of work on this construction across different Mayan languages—see, among others, Aissen 1999, 2011, Ajsivinac & Henderson 2011, Ayres 1983, Berinstein 1990, Bricker 1979, Coon & Mateo Pedro 2011, Craig 1979, Davies & Sam-Colop 1990, Norcliffe 2009, Ordóñez 1995, Preminger 2011, in press, Pye 1989, Smith-Stark 1978, Stiebels 2006, Tonhauser 2007.

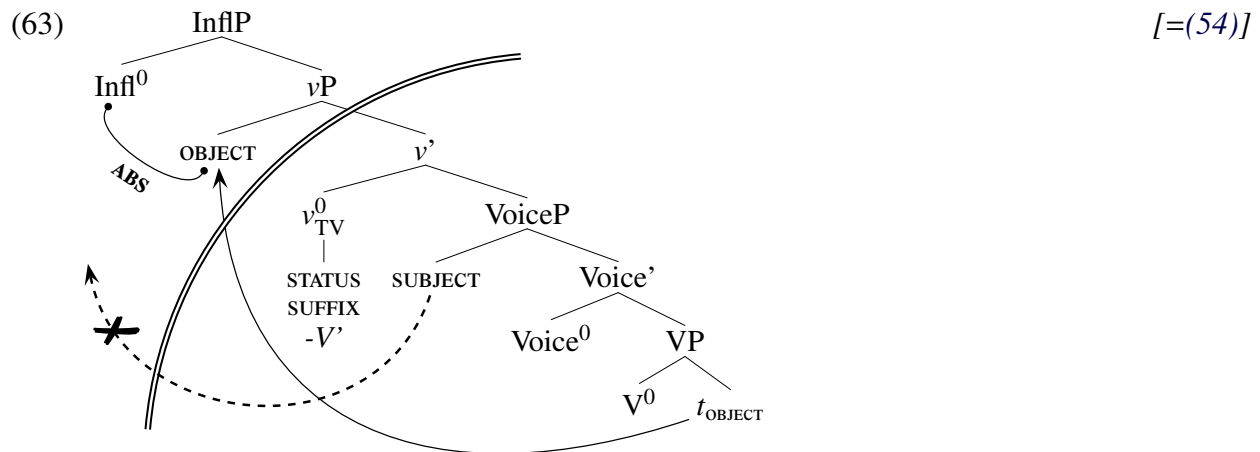
We have seen that both the antipassive construction and AF facilitate extraction of **A** arguments. In the case of the antipassive, this is unsurprising: the notional subject of an antipassive is, syntactically speaking, the subject of an intransitive verb—as is the case for any verb selecting one nominal argument and another (optional) oblique argument. Indeed, antipassives are widely attested as a mechanism for circumventing extraction asymmetries (see, e.g., Polinsky 1994 on Chukchi). But what we have seen in this subsection is that the **A** argument in AF clauses is not

an intransitive subject, insofar as the clause contains *two* non-oblique core arguments. This begs the obvious question of how it is that AF facilitates extraction of the **A** argument; we turn to this question now.

4.2. How Q'anjob'al AF facilitates extraction

In §3.2, we argued that the ban on extraction of **A** arguments in Q'anjob'al arises because the **P** argument must raise to Spec,vP to receive case from Infl⁰, thus blocking the subject from extracting out of the phasal transitive vP. In this sub-section, we present an analysis of Q'anjob'al AF that explains how this construction circumvents that ban.

We adopt Ordóñez's (1995) analysis of AF in the related language Jakaltek, whereby *-on* (the AF suffix) assigns case to the notional object. But while Ordóñez analyzes this suffix as a preposition incorporated into the verb, we analyze AF as a variant of Voice⁰. Recall the clause structure argued for in §3.2 for regular Q'anjob'al transitives (with the attendant ban on extraction annotated):



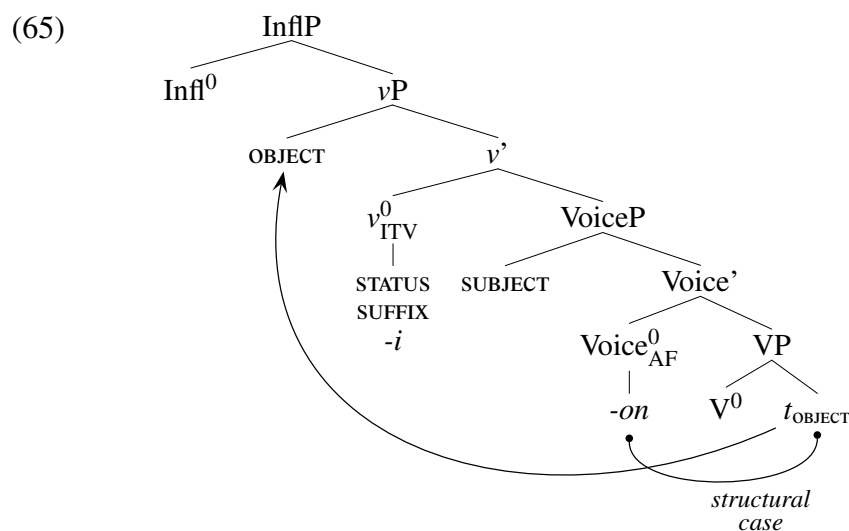
In regular transitives, Voice⁰ is responsible for introducing the external argument (§3.2); suppose that there was a second, marked variant of Voice⁰, which in addition to introducing the external argument, also assigned structural case to the notional object (under c-command). If this second variant were selected in a given derivation, the notional object would be case-marked by this Voice⁰

head, and Infl^0 would be freed up to assign case to the subject instead. (Recall that HIGH-ABS languages are those in which $\text{ABS}=\text{NOM}$, and thus the source of absolutive in these languages is Infl^0 ; see §2.3.)

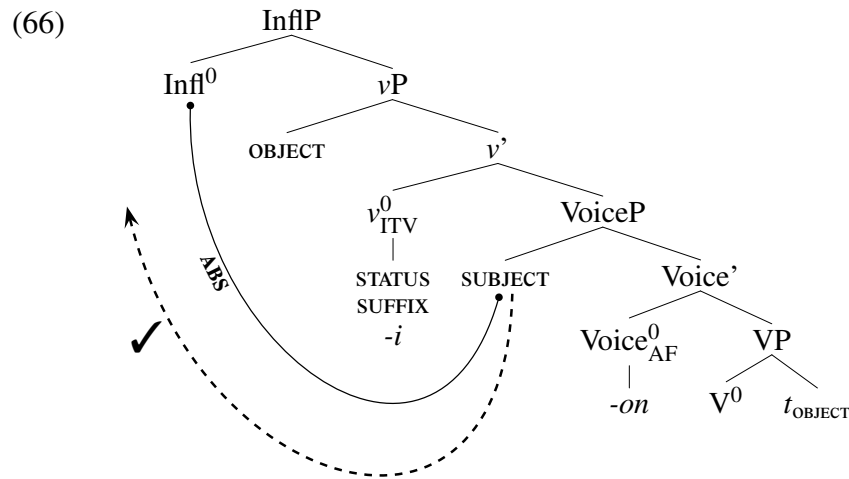
In such a clause, no ergative case would be assigned; this means that the type of v^0 that would be selected would be *intransitive* v^0 , rather than its transitive variety. This last point is crucial: recall that by hypothesis v^0 in Q'anjob'al is the head whose spellout is the 'status suffix' (*-i* for intransitives, *-V'* for transitives), and whose phasehood co-varies with its transitivity (see §3.2). That means that if this second, marked variant of Voice^0 is used, we expect to see the intransitive status suffix. As already noted in §4.1, this is precisely what we find in Q'anjob'al AF:

- (64) [Maktxel] max-ach il-on-i? [=(61)]
 who ASP-2ABS see-AF-ITV
 'Who saw you?'

Independent of AF, it can be observed that the position of absolutive markers in Q'anjob'al is the same (namely, HIGH-ABS) in transitives and intransitives; see (62) above. We take this to indicate that both transitive and intransitive v^0 are equipped with an EPP feature that attracts (viz. triggers clitic doubling of) the internal argument:



But by hypothesis, intransitive v^0 is not phasal. Consequently, this movement of the notional object to Spec, v P does not “trap” the subject in its Spec,VoiceP position in the manner detailed in §3.2:



This means that when this marked version of Voice⁰ (whose spellout is *-on*) is merged, extraction of the subject will be possible—explaining how it is that the AF ‘construction’ (now construed as a variant of Voice⁰) circumvents the ban on extracting transitive subjects in Q’anjob’al.

The stipulation that both transitive and intransitive eventive v^0 always has an EPP feature derives the consistently “high” position of the absolutive morpheme and may also help us understand a point of variation found *within* HIGH-ABS languages in the domain of “non-verbal predicates” (NVPs). NVPs are stative forms that do not appear with the status suffixes or aspect morphology found in the verbal predicates discussed so far. In Q’anjob’al NVPs, the absolutive marker appears in a free-standing form (prefixed by *h-*) *following* the predicate (67a), while in Kaqchikel the absolutive marker maintains its typical pre-predicate position (67b).

(67) Location of ABS in NVPs

a. Q’anjob’al

Kuywom **hach**.

student 2_{ABS}

‘You are a student.’

b. Kaqchikel

At tijoxel.

2_{ABS} student.

‘You are a student.’

We capture this division as follows: In Q’anjob’al, eventive v^0 heads (whether transitive or intransitive) have an EPP feature which attracts the absolutive morpheme to its surface position alongside the aspect marker. Stative predicates lack this v^0 —as evidenced by the absence, in (67a), of the relevant status suffixes (see table (14)). Suppose, following Baker (2003, 2008), that NVPs involve a null predicative head, Pred^0 . In Q’anjob’al, Pred^0 lacks the EPP, while in Kaqchikel, Pred^0 is [+EPP]. The latter derives the morpheme order seen in the Kaqchikel (67b). Crucially, the absence of this feature on an intransitive should not create any licensing problems and we might thus expect to find exactly the variation seen in (67a–b).

Before concluding this section, two more comments are in order concerning the analysis just presented. First, we follow Ordóñez’s (1995) original analysis in assuming that insertion of the AF morpheme is a ‘last-resort’ strategy, akin to *of*-insertion in English. In the current terms, it means that the marked variant of Voice^0 cannot be merged in derivations where the notional subject ultimately remains in situ. This renders the notional subject in AF clauses on a par with, for example, embedded subjects in infinitival clauses selected by the *wager*-class of ECM predicates (Postal’s 1974 *Derived Object Constraint*). How such “obligatorily vacated” positions are to be treated theoretically is still very much up for debate; but recent work has uncovered similar scenarios in other languages and constructions (see, e.g., the discussion of Zulu raising in Halpert 2012).

Second, while other HIGH-ABS Mayan languages (e.g. the languages of the Kichean branch) have constructions that are similar to (and historically related to) the Q’anjob’al Agent Focus construction, we are not claiming that these constructions—in the synchronic grammars of the languages in question—can necessarily all be analyzed in the same fashion. Recall that the main

fact we wish to account for here is that Mayan languages, all of which are morphologically ergative, split into two types: those with extraction asymmetries, and those without (see §1). We have proposed that this can be correlated with the source of “absolutive” case on the transitive object. The preceding sections have concentrated on establishing this correlation (§2), and on describing how the assignment of case to transitive objects by Infl^0 fails in contexts of agent extraction (§3). As noted in the discussion of (3), above, while the etiology of syntactic ergativity may be consistent across Mayan, different languages in the family may exhibit different means of circumventing it. Indeed, though AF constructions across Mayan share some common properties, Stiebels 2006 summarizes a range of variation across different Mayan languages; and Henderson, Coon & Travis 2013 argue that Mayan AF simply does not constitute a unified construction. Nonetheless, Q’anjob’al is a particularly relevant language to examine, because the extension of the AF marker to non-finite embedded clauses corroborates the claim that case assignment properties of the object are implicated in syntactic ergativity. We turn to this and other predictions in the section that follows.

5. Predictions

We have concentrated so far on the counterposition of Chol (a LOW-ABS language, with no extraction asymmetries and no AF construction) with Q’anjob’al (a HIGH-ABS language with extraction asymmetries and an AF construction), in the hope that a detailed comparison of these two languages can shed light on the nature of extraction asymmetries, and how—at least in Q’anjob’al—they are circumvented. In this section, we provide additional support for the claim that extraction asymmetries in these languages are about the assignment of case to objects, not about properties of the ergative subject itself.

5.1. The Crazy Antipassive once more

Recall from section 2.3 that in HIGH-ABS languages like Q’anjob’al, we expect a problem with absolutive in non-finite embedded environments: Infl^0 , whose substantive content in Mayan is

aspect, assigns absolutive (*ABS=NOM*; Aldridge 2004, Legate 2008). We therefore predict that transitive objects and intransitive subjects should *both* require special licensing mechanisms in aspectless non-finite clauses. Recall from (33) above that intransitive subjects, which normally trigger absolutive morphology, are instead marked with the ergative/possessive morpheme in non-finite embedded clauses; this pattern is found across the Mayan family.

In most of the languages examined in section 2.3, transitives are simply not possible in aspectless embedded clauses. In HIGH-ABS languages like Mam, for example, non-finite transitives must be passivized or antipassivized in order to appear in a non-finite embedded clause (39–41). Q’anjob’al, in contrast, *does* have a way to express embedded transitives: this is the “Crazy Antipassive”, introduced briefly in section 1, and demonstrated in (68).

(68) Q’ANJOB’AL “CRAZY ANTIPASSIVE”

- a. Chi uj [hin y-il-**on**[-i] ix Malin].

ASP be.able.to 1ABS 3ERG-see-AF-ITV CL Maria

‘Maria can see me.’

- b. Lanan [hach hin-laq’-**on**-i].

PROG 2ABS 1ERG-hug-AF-ITV

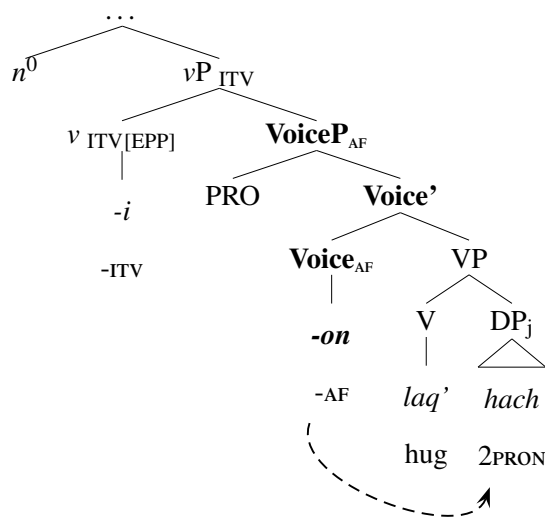
‘I am hugging you.’

The Q’anjob’al Crazy Antipassive employs the same *-on* morpheme as the AF construction, discussed in section 4, and does so precisely in those environments where the transitive object has no other viable source for case. Just as we have proposed for the AF construction (following Ordóñez 1995, on Jakaltek), here too we argue that *-on* assigns absolutive case to an otherwise caseless internal argument. More concretely, in non-finite embedded environments, just as in AF constructions, *-on* has the following two functions: (i) assigning case to the transitive object; and (ii) introducing the transitive subject.

As shown in (69), the internal argument receives case from *-on* and then, just as in the AF construction, raises to Spec,*v*P to satisfy the EPP features of *v*⁰. An important difference arises,

however, between the Crazy Antipassive and the AF construction: across Mayan, non-finite embedded clauses appear to be nominalizations (see Mateo Pedro 2009 on Q'anjob'al, Coon 2013 on Chol, and references cited in §2.3.1). We propose that the embedded predicate undergoes nominalization above the ν P level so it may be selected by the nominal-embedding item in the matrix clause (e.g. *lanan* 'PROG', in (68b)). The overt subject is realized as a higher possessor, possibly controlling an embedded PRO subject within the nominal. As in AF, ergative case is not assigned.

(69) Q'ANJOB'AL EMBEDDED TRANSITIVE



Recall that Crazy Antipassive forms like those in (70b) are also unlike regular finite transitives (70a), but like AF constructions (70c), in that they appear with the *intransitive* status suffix, *-i*. Above, we proposed that the relevant difference between intransitive and transitive ν^0 is in the assignment of ergative case (see (53)); and since no ergative case is assigned in the Crazy Antipassive, the intransitive status suffix surfaces.

(70) a. Matrix transitive

Ch-in y-il-a'.

ASP-1ABS 3ERG-see-TV

'She sees me.'

b. Crazy Antipassive

Chi uj [hin y-il-on-i].

ASP be.able.to 1ABS 3ERG-see-AF-ITV

‘She can see me.’

c. Agent Focus

Maktxel max-in il-on-i.

who ASP-1ABS see-AF-ITV

‘Who saw me?’

This appearance of *-on*, in clauses that are specifically transitive and non-finite, is consistent with our proposal that this suffix assigns case to internal arguments in environments where case would otherwise be unavailable—here, because the absolutive-assigning aspectual head which instantiates finite *Infl*⁰ is absent. Moreover, because intransitive subjects can be realized as possessors (see 2.3.1), this use of *-on* is limited to non-finite embedded *transitives*, and does not extend to intransitives.

There is a further difference between the Crazy Antipassive and the AF construction. As noted briefly in section 2.2, AF in Q’anjob’al is restricted to clauses involving *3rd person* agents, whereas no such restriction exists with respect to the Crazy Antipassive. Compare the AF forms in (71): AF is required when the 3rd person subject extracts in (71a), but is impossible when a 1st person subjects extracts in (71b). Instead, 1st and 2nd person subjects appear in focus constructions with a regular transitive verb.

(71) a. 3rd person Agent – AF

A-Juan max maq’-on[-i] no tx’i’.

FOC-Juan ASP hit-AF-ITV CL dog

‘It was Juan who hit the dog.’

- b. 1st person Agent – no AF

Ay-in max hin-maq'[-a'] no tx'i'.

FOC-1ABS ASP 1ERG-hit-TV CL dog

‘It was me who hit the dog.’

This is a genuine point of variation among those Mayan language that have an AF construction (see, e.g., [Stiebels 2006](#)). In Kaqchikel, for example, the equivalents of (71a–b) both require AF:

(72) Kaqchikel

- a. **Ja ri a-Juan** x-Ø-tz'et-ö ri tz'i'.

FOC DET CL-Juan ASP-3ABS-see-AF DET dog.

‘It was Juan who saw the dog.’

- b. **Ja y'in** x-i-tz'et-ö ri tz'i'.

FOC 1PRON ASP-1ABS-see-AF DET dog

‘It was me who saw the dog.’

These facts suggest that we probably do not want to derive the Q'anjob'al facts in (71) from deep properties of syntactic ergativity in the Mayan family. Rather, we assume that in Q'anjob'al, 1st and 2nd person agents are allowed to be base-generated in a high position, while 3rd person agents are not (see, e.g., [Aissen's 1992](#) discussion of internal and external topics in Tzotzil; and see [Wiltschko 2006](#) on the higher position of 1/2 agreement in Halkomelem Salish).¹⁸ If this is correct, no AF is required in (71b) because nothing has extracted.

We leave this as a topic for future research, but note here that regardless of how we account for the absence of AF with 1st or 2nd person A arguments, we correctly predict that the same restriction should *not* be found with the Crazy Antipassive. In embedded contexts, it is not extraction that is incompatible with the assignment of absolutive to the transitive subject (as is the case in AF contexts; §3.2); the culprit is the outright absence of finite Infl⁰, a property of embedded non-finite

¹⁸Thanks to Maria Polinsky for this suggestion.

clauses regardless of the person features of the notional subject. Compare the embedded transitive form in (73) below with the focus construction in (71b):

(73) Q'anjob'al

Chi uj [hach w-il-on-i].

ASP be.able.to 1ABS 3ERG-SEE-AF-ITV

'I can see you.'

To summarize, the appearance of the morpheme *-on* in Q'anjob'al non-finite transitives supports the proposal that *-on* is a case-assigner, licensing the transitive object in environments when case is otherwise unavailable. This, in turn, supports our claim that the problem with transitive subject extraction in HIGH-ABS Mayan languages is a configurational one, involving the assignment of case to objects across the higher subject.

As noted above, different Mayan languages may have different means of circumventing this configurational problem; and indeed it is only in the Q'anjob'alan branch that the AF morpheme is extended to embedded non-finite environments. Henderson, Coon & Travis (2013) argue, for example, that the AF construction in Kaqchikel circumvents the same locality problem by permitting the subject to be *base-generated* in a higher position; see also Aissen (2011), Coon & Henderson (2011) and Erlewine (2013), for different analyses of AF constructions in languages of the K'ichean branch.

5.2. Caseless objects

Another source of support for the analysis that syntactic ergativity is directly linked to object case assignment comes from *reflexive* and "*extended reflexive*" objects (the former also noted in Ordóñez 1995). As in other Mayan languages, Agent Focus is not possible in Q'anjob'al in clauses

in which the object is a reflexive (Pascual 2007).¹⁹ Instead, the regular transitive form of the verb is used. Compare the forms in (74):²⁰

(74) a. Reflexive

Maktxel max y-il **s-b'a?**

who ASP 3ERG-see 3ERG-SELF

‘Who saw herself?’

b. * Reflexive + AF (impossible)

Maktxel max il-on[-i] **s-b'a?**

who ASP see-AF-ITV 3ERG-SELF

‘Who saw herself?’

c. Non-reflexive w/AF

Maktxel max il-on[-i] naq winaq?

who ASP see-AF-ITV CL man

‘Who saw the man?’

Furthermore, AF is impossible in sentence in which the possessor of the object is coreferential with the subject, as shown in (75). This construction is known as the “extended reflexive” (Aissen 1999). When AF is used—as in (75b)—the subject and the possessor of the object are necessarily interpreted as having disjoint reference.

(75) a. Extended reflexive

Maktxel max s-b'on **s-na?**

who ASP 3ERG-paint 3ERG-house

‘Who_i painted his_{i/*j} (own) house’

¹⁹See also Craig 1977, on Jakalteq; Aissen 1999, on Tzotzil; and Aissen 2011, Coon & Henderson 2011, Mondloch 1981, on K'ichee'.

²⁰In (74a), we do not represent the transitive status suffix in square brackets as we have above. Since the reflexive object cannot be dropped—or if it were, the clause would not be interpreted as a reflexive—we have no way of determining what the suffix would be. Nonetheless, these forms take ergative marking like other transitives.

b. Agent Focus – disjoint reference

Maktxel max b'on-on[-i] **s-na?**

who ASP paint-AF-ITV 3ERG-house

‘Who_i painted his_{*i/j} house?’

Note that the reflexive and extended reflexive constructions in (74a) and (75a) are formally identical—the difference is that a common noun is possessed in (75a), while the possessed nominal *-b'a* in (74a) no longer has any meaning outside of reflexive constructions. From this perspective, their similar behavior with respect to AF is unsurprising; we therefore propose that both should receive the same analysis.

Independent evidence from word order and the availability of nominal classifiers suggests that the bold-faced objects in the Q'anjob'al examples in (74a) and (75a) are not full DPs. Word order in the language is normally VSO, but must be VOS with reflexives.²¹

(76) a. Transitive – VSO

Max y-il[-a'] ix ix naq winaq.

ASP 3ERG-SEE-TV CL woman CL man

‘The woman saw the man.’

b. Reflexive – VOS

Max y-il s-b'a ix ix.

ASP 3ERG-SEE 3ERG-SELF CL woman

‘The woman saw herself?’

Noun classifiers are impossible on reflexive and extended reflexive objects, as shown by the contrast in (77). In a sentence where the transitive subject is co-referential with the object's possessor, the classifier *te'* is impossible (77a), while when the subject and possessor are *non*-coreferential, the classifier is obligatory (77b).

²¹This restriction does not appear to hold for extended reflexives, a fact which we cannot presently explain.

(77) a. Extended reflexive

* Maktxel max s-b'on[-o'] (*te') **s-na**?

who ASP 3ERG-paint-TV CL 3ERG-house

'Who_i painted his_i (own) house?'

b. Non-extended reflexive

Maktxel max s-b'on-on[-i] *(te') **s-na**?

who ASP 3ERG-paint-AF-ITV CL 3ERG-house

'Who_i painted his_j house'

In a similar vein, Aissen (2011) notes that AF in K'ichee' is "systematically absent" when the object is a bare (determinerless) NP. As shown in (78a), a regular transitive form is used instead. The same form with a full DP object is ungrammatical, as illustrated in (78b).

(78) K'ichee'

a. No AF

Jachiin x-u-log' uuq?

who ASP-3ERG-buy cloth

'Who bought cloth?'

b. AF required

* Jachiin x-u-log' **rii** uuq?

who ASP-3ERG-buy DET cloth

intended: 'Who bought the cloth?'

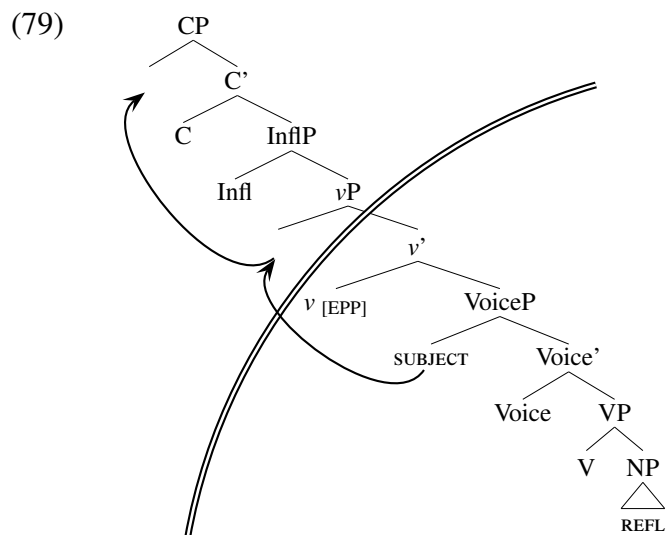
(Aissen 2011:15)

The question is thus not only why reflexive and bare objects are impossible with AF—see Aissen 2011 for one account—but what *permits* the use of a regular transitive verb form with a bare/reflexive object. Examples like (78a) demonstrate another crucial desideratum of any account of "syntactic ergativity" in Mayan: the extraction asymmetries in question cannot be uniformly characterized as a ban on restricting *ergative*-marked arguments (or arguments that trigger *ergative*

agreement); in the examples here an ergative argument extracts. Instead, as noted earlier, the restriction—while manifesting itself in the extraction possibilities of the transitive subject—is really about the case-related properties of the *absolutive* argument.

We assume that reflexive, extended reflexive, and bare NP objects are licensed by being *incorporated* (Baker 1988) or *pseudo-incorporated* into the verb stem (Massam 2001). In terms of Mithun’s (1984) classification of incorporation, this is an instance of ‘composition by juxtaposition’, where “the V and the N are simply juxtaposed to form an especially tight bond. [...] The V and N remain separate words phonologically; but as in all compounding, the N loses its syntactic status as an argument of the sentence” (Mithun 1984:849). Because the incorporated objects do not require case, we conclude that the bare objects above are *caseless*—correctly predicting the absence of AF in these constructions—since AF is precisely about assigning case to objects (§4.2).

The proposed structure of examples like (74a), (75a), and (78a) is schematized in (79). Transitive v^0 is merged, and assigns ergative case to the subject. We assume that these reflexive, extended reflexive, and bare objects are all smaller than DP, and are therefore unable to satisfy the EPP feature of v^0 ; instead, the object remains in situ. The bare NP objects are thus trapped inside the vP (which is phasal, since it is headed by transitive v^0); but since they do not require case, nothing goes wrong. Crucially, even though the construction is transitive—evidenced by the ergative agreement marking—the subject can raise through the phase edge because the object has not moved into this edge to satisfy its own absolutive-assignment requirements.



Previous analyses—Aissen 2011 and Coon & Henderson 2011—have accounted for the incompatibility of AF and reflexives in terms of the binding configuration within AF constructions. These analyses, however, do not address the question of why transitive constructions are permitted in these environments, even when the **A** argument is extracted via A-bar movement. That is, one could imagine that if there was a language-wide ban on extracting the **A** argument, coupled with a problematic binding configuration between AF subjects and reflexive objects, constructions like (74a) would simply be impossible, and a periphrastic construction would be required instead.

Our analysis not only derives the impossibility of AF—since there is no case-requiring object, and AF is a last resort case-licensing mechanism for the object (on a par with English *of*-insertion)—but also for the *possibility* of a transitive. Because the object cannot satisfy the EPP, Spec,vP remains free for the subject to move through. Thus, **A** arguments are actually free to extract so long as the object does not receive case.²²

Support for this account of reflexives is found in closely-related Chuj (Q'anjob'alan). In Chuj, AF is *optional* with reflexive and extended reflexive objects. However, only when the AF form of

²²As pointed out to us by Judith Aissen (pers. comm.), the AF morpheme *does* appear in non-finite embedded clauses with reflexive and extended reflexive objects, a fact which the analysis here does not currently explain. It is possible that a combination of binding and case facts could account for this difference, though we leave this as a topic for future work.

the verb is used, adverbial material may intervene between the verb and the reflexive object. This contrast is shown in (80).

(80) Chuj

a. Mach s-mak' (*ewi) s-b'a?

WHO 3ERG-hit yesterday 3ERG-SELF

intended: 'Who hit himself yesterday?'

b. Mach mak'-an (ewi) s-b'a?

WHO hit-AF yesterday 3ERG-SELF

'Who hit himself yesterday?'

(Hou 2013)

As Hou (2013) discusses, this contrast receives a natural explanation under the proposal advanced above. In Chuj, the reflexive object may be generated either as a case-requiring DP, or a smaller caseless form, accounting for the optionality of AF in these environments. If the reflexive object is caseless, no AF is required, but—since the object must be pseudo-incorporated into the verb in order to be licensed—intervening material is impossible (80a). If, on the other hand, the reflexive object is a full case-requiring DP, AF must be used; no incorporation takes place, and intervening adverbs are possible (80b).

5.3. Extracting non-arguments out of ν P

On the proposal put forth in this paper, subjects are unable to extract in a normal transitive clause because this would deprive the object of its ability to receive case from Infl^0 , by rendering the single escape hatch of ν P occupied. We therefore predict not only that *subjects* should be unable to extract out of ν P, but that *nothing* besides the object should escape from a transitive ν P. Again, this contrasts with accounts in which extraction asymmetries are due to properties of the ergative A argument themselves, in which we would not necessarily predict problems with extraction of other ν P-internal elements. In this section we examine the issue of extraction of other ν P-internal elements.

The first thing one might test would be the second object in a double-object construction. Interestingly, neither Q'anjob'al nor Kaqchikel have double-object constructions. In fact, to the best of our knowledge, double object constructions are systematically absent in HIGH-ABS languages. While LOW-ABS Chol has an applicative (81a), Q'anjob'al benefactives are introduced with the preposition *b'ay* (81b), analyzed as an adjunct in (Mateo-Toledo 2008). In Kaqchikel, a relational noun is required (81c). Since Chol is LOW-ABS, we correctly predict that both objects in applicative constructions are able to extract. The bold-faced obliques in (81b–c) may also appear pre-verbally, though more work is needed to determine the nature of the constructions in question, and in particular, whether they actually involve extraction of a phrase generated *vP*-internally, in the first place.

(81) a. Chol applicative

Tyi k-mel-**be**-yety waj.
 ASP 1ERG-make-APPL-2ABS tortilla
 'I made you tortillas.'

b. Q'anjob'al benefactive

Max hin-man jun chanej ti **b'ay ix ha-txutx**.
 ASP 1ERG-buy one skirt DEM PREP CL 2ERG-mother
 'I bought this skirt for your mother.'

c. Kaqchikel relational noun

X-in-loq' ri uq **ri-chin a-te'**.
 ASP-1ERG-buy DET skirt 3ERG-RN.for 2ERG-mother
 'I bought the skirt for your mother.'

The second type of element to test for extraction out of *vP* are low adverbials, to which we now turn our attention. As described in Mateo-Toledo 2003a, Pascual 2007, the appearance of certain pre-verbal adverbs—typically *manner adverbs*—triggers the same Crazy Antipassive verb forms we saw in the non-finite embedded clauses in section 5.1. Manner adverbs are typically

considered to be base-generated low in the syntactic structure (Cinque 1999), and our analysis might thus predict that it is precisely these adverbs which require special treatment in order to appear pre-verbally—assuming that extraction out of a normal transitive vP is blocked.

Post-verbal manner adverbials must be introduced with an inflected relational noun, *-in*, shown in (82). The adverbial form takes a nominal *-Vl* suffix, and triggers 3rd person agreement on the relational noun. This contrasts with the behavior of temporal adverbs like *ewi* ‘yesterday’ in (83), which simply appear post-verbally.

(82) Manner adverb

Max-in b’ey[-i] **y-in** **amank’wan-il**.

ASP-1ABS walk-ITV 3ERG-RN quickly-NML

‘I walked quickly.’

(83) Temporal adverb

Max-in b’ey[-i] **ewi**.

ASP-1ABS walk-ITV yesterday

‘I walked yesterday.’

Temporal adverbs like *ewi* can also appear pre-verbally, with no other change to the construction. When manner adverbials appear pre-verbally, however, they optionally trigger the non-finite forms of the verb, as shown in (84). Mateo-Toledo (2003a) and Pascual (2007) argue that this is another context of embedding, structurally akin to the forms in (85), in which the manner adverbs serve as the matrix predicate. (The forms in (85) are provided as a baseline for non-finite embedding in Q’anjob’al; recall from sections 2.3.1 and 5.1 that the bracketed forms in (85) are analyzed as nominalized clauses: the subjects receive *possessive* marking and the *-on* suffix is required in the transitive to license the otherwise caseless object.)

(84) a. **Amank’wan** [hin-b’ey-i].

quickly 1ERG-walk-ITV

‘My walking is/was quick.’

- b. **Amank'wan** [hin-b'on-on[-i] te' na].

quickly 1ERG-paint-AF-ITV CL house

'My painting the house is/was quick.'

- (85) a. Embedded intransitive

Lanan [hin-way-i].

PROG 1ERG-sleep-ITV

'I am sleeping.' (~ 'My sleeping is happening.')

- b. Embedded transitive = "Crazy Antipassive"

Lanan [hach hin-laq'-on-i].

[=(68b)]

PROG 2ABS 1ERG-hug-AF-ITV

'I am hugging you.' (~ 'My hugging you is happening.')

A similar pattern is seen in the interrogatives below. The temporal question word *b'aq'in* does not trigger an embedded verb form (86a), while the manner question in (86b) does. In (86b), the light verb and subsequent subordinated verb stem are obligatory.

- (86) a. **B'aq'in** max s-b'on naq te' na?

when ASP 3ERG-paint PRON CL house

'When did he paint the house?'

- b. **Tzet** max y-un s-b'on-on naq te' na?

how ASP 3ERG-do 3ERG-paint-AF PRON CL house

'How did he paint the house?'

Again, if manner adverbials are base-generated in a low, *v*P-internal position, it is precisely these elements which should require special constructions in order to appear pre-verbally. The constructions in (84), for example, do not appear to be derived by movement at all; the manner adverb serves as the matrix predicate, and it is not likely that this construction is derivationally related to a construction like (82).

Further support for the idea that low modifiers of this sort require special morphosyntactic means in order to appear outside the verb phrase comes from Kaqchikel, where a similar set of low adjuncts triggers the post-verbal clitic *-wi* when fronted to a pre-verbal focus position (Henderson 2007); a similar phenomenon is found in Ixil (Ayres 1983), as well.²³

Admittedly, further work is needed to understand precisely how these facts fit into our analysis. First, while the constructions in (84) are *only* possible with low adjuncts, they are not *obligatory* with all such adjuncts. Furthermore, all else being equal, we might expect that these constructions should only be required of transitives (assuming that intransitive *v*P is not phasal), which is not the case. Nonetheless, we take the appearance of these constructions exactly when low adverbs appear *v*P-externally, as further—if tentative—support for our analysis.

6. Conclusion

In this paper, we argued for an account in which the appearance of extraction asymmetries in the Mayan family of languages reduces to independently observable differences among these languages in how absolutive arguments are licensed in the clause (following work by Aldridge 2004, 2008b, Legate 2002, 2008). We argued that the relevant difference is as follows. In languages in which absolutive is assigned internal to the *v*P phase (LOW-ABS), either argument may extract through Spec,*v*P. In contrast, if absolutive is assigned by Infl⁰ (HIGH-ABS), the object must raise to Spec,*v*P, leaving the subject (along with other *v*P-internal elements) trapped. If this analysis is correct, then at least some cases of “syntactic ergativity” are not the result of special properties of the ergative subject itself, but have to do with the mechanics of case assignment to the object. Indeed, we observed that when the object appears to be caseless, the ergative-marked subject is free to extract. These effects would be entirely mysterious if syntactic ergativity—at least of the

²³Ayres (1983) groups this construction together with Agent Focus under the label “argument indexing”, and distinguishes this from traditional “voice”. Although both voice and indexing suffixes appear in the same post-verbal slot in Mayan languages, Ayres notes that the indexing suffixes do not alter grammatical relations, but simply serve to mark which argument has been focused. This might be compared to the “voice” systems of Austronesian languages (see, e.g., Chung & Polinsky 2009 and references therein).

kind exhibited by Q'anjob'al—were about properties of the ergative noun phrase; but they receive a natural explanation if the real restriction is on extraction of non-objects more generally.

The above discussion has focused largely on a comparison between two Mayan languages: the HIGH-ABS language Q'anjob'al, and the LOW-ABS language Chol. The high position of the absolutive pronoun in the former type was claimed to be responsible for the syntactic ergativity found in the language: **A** arguments are unable to extract out of phasal ν P, because they are blocked by the **P** argument, which must raise to the phase-edge to get case. Independently observable properties of non-finite embedded clauses corroborated the analysis that the locus of case assignment to transitive objects—Infl⁰ in HIGH-ABS languages vs. ν^0 in LOW-ABS languages—is the factor which determines whether or not a language will exhibit syntactic ergativity.

Crucially, there remains room for variation. In addition to fact that a high head, Infl⁰, assigns case to transitive objects, there are at least three factors which combine to bring about the ban on extraction of **A** arguments in Q'anjob'al:

- (87) I. transitive ν P is phasal
II. the transitive subject is generated *below* the ν P phase
III. there is only a single specifier available for extraction out of ν P

Furthermore, while we hope to have demonstrated that syntactic ergativity does not *necessarily* arise from a deficit of the ergative argument itself, we have by no means demonstrated that this is *never* the source of syntactic ergativity.

Finally, while the correlation between the locus of case assignment and the appearance of extraction asymmetries appears to be consistent across Mayan, there is also room for variation concerning the means used to circumvent these extraction asymmetries. We presented a detailed account of the Q'anjob'al Agent Focus construction, and showed how the appearance of the AF morpheme in non-finite embedded transitives (the so-called “Crazy Antipassive”) lends support to our claim that the etiology of these effects concerns the assignment of case to the transitive object.

Recent work recognizes a range of variation within AF constructions; where Q'anjob'alan languages introduce a low case-assigner, K'ichean languages may solve the problem by base-generating agents higher in the clause. We suggest that this contributes to a larger body of work showing that ergative languages cannot be regarded as a homogenous group, but must be investigated in detail on a case by case basis.

A. Abbreviations

Abbreviations in glosses are as follows: ABS – absolutive; AF – agent focus; AP – antipassive; APPL – applicative; ASP – aspect marker; CAUS – causative; CL – clitic; COMP – complementizer; DEIC – deictic; DET – determiner; DIR – directional; DTV – derived transitive suffix; ERG – ergative; EXCL – exclusive; FOC – focus marker; INCL – inclusive; ITV – intransitive verb suffix; NF – non-finite form; NML – nominal; PERF – perfect; PL – plural; POSS – possessive; PREP – preposition; PROG – progressive; RN – relational noun; SUF – suffix; TERM – terminative suffix; TV – transitive verb suffix.

B. Tzotzil

As discussed in Woolford 2011, Tzotzil does not clearly belong to either the HIGH-ABS or LOW-ABS division schematized in (16), above. Rather, Tzotzil has two distinct sets of absolutive morphemes, shown in (88) and (89). As in other Mayan languages, 3rd person absolutive is null.²⁴ We discuss the Tzotzil person marking system here at some length, as we believe it provides support for our claim about the low appearance of full 3rd person objects in otherwise HIGH-ABS languages above.

²⁴Woolford 2011 includes the 3rd person plural *-ik* in the LOW-ABS series. The 3rd person plural suffix, however, has special characteristics across the Mayan family: for example, it can mark plural on nouns as well as agreement on verbs, and can be associated with **A**, **P**, and **S** arguments. In Chol, it can be shown to appear in a different syntactic position from other person markers. See also Mateo-Toledo 2008 on Q'anjob'al.

(88) Tzotzil high-abs series

- 1 -i-
- 2 -a-

(89) Tzotzil low-abs series

- 1SG -on
- 2SG -ot
- 1PL.INCL -otik
- 1PL.EXCL -otikotik
- 2PL -oxuk
- PLURAL -ik

Aissen (1987) describes the high series as a *subset* of the low series. Woolford (2011) argues that while this is an adequate description of their function, these markers should be considered two distinct series: not only do they have distinct forms and positions, but they encode different features. The low forms distinguish both number and person, while the high forms encode only person.

What governs the appearance of these sets of morphemes? Aissen (1987:44–45) states that the high series is used if a stem-initial prefixal aspect marker is present (i.e., eventive or “verbal” predicates), like the incomplete *ch-* in (90a); while the low series must be used when there is no aspect marker, as in stative or “non-verbal” predicates like (90b). (Note that aspect markers are impossible in non-verbal or stative predicates like the perfect form in (90b).)

(90) a. Ch-a-s-mil.

ASP-2ABS-3ERG-kill

‘He is going to kill you.’

b. J-mala-oj-oxuk.

1ERG-wait-PERF-2ABS.PL

‘I have waited for you_{PL}.’

There is one important exception to this generalization: in transitives with a 2nd person subject and a 1st person object the high series is not used, even in the presence of an initial aspect

marker (Aissen 1987:45), as shown in (92a). Compare the ungrammatical form in (91b) with the grammatical sentence in (92).

(91) a. Ch-**a**-mil-**on**.

ASP-2ERG-kill-1ABS

‘You are going to kill me.’

b. * Ch-**i**-**a**-mil.

ASP-1ABS-2ERG-kill

intended: ‘You are going to kill me.’

(92) L-**i**-s-maj a-tot.

ASP-1ABS-3ERG-hit 2ERG-father

‘Your father hit me.’

(Aissen 1987:40)

Woolford (2011) proposes that this is not an accidental gap. The order of Tzotzil morphemes parallels the order we have seen in the other languages above (see, e.g., (16)): ASP-ABS-ERG-STEM-ABS, where—as noted above—Tzotzil is unique in making use of both absolutive slots. The gap arises exactly in the only situation in which a vocalic absolutive marker would precede the only vowel-initial ergative marker: the 2nd person.²⁵ The form in (91b) is thus ruled out on phonological grounds, due to a ban against adjacent vowels (common throughout the Mayan family).

(93) Tzotzil ergative prefixes

	__C	__V
1 st person	<i>j</i> -	<i>k</i> -
2 nd person	<i>a</i> -	<i>av</i> -
3 rd person	<i>s</i> -	<i>y</i> -

²⁵The other possible two-vowel combination would be the 2nd person ergative and the 2nd person absolutive, ruled out on binding theoretic grounds (e.g. a reflexive must be used instead).

We account for the Tzotzil facts in our system as follows: eventive v^0 heads contain an EPP feature which probes for person, but not number (see Preminger *in press*). Person features are attracted to Spec, v P and spelled out as the HIGH-ABS morphemes—unless this is prevented due to a phonological restriction—while number features remain low and are spelled out as the LOW-ABS series.

The fact that phonological factors may play a role in the surface spell-out of the absolutive forms is relevant to our discussion of Q'anjob'al 3rd person objects in section 3.2, above. Specifically, this may lend support to the claim that 3rd person objects form a chain headed in Spec, v P—thus blocking other elements from extracting out of the phase—but only the lower copy of the chain is spelled out, perhaps due to phonological heaviness of full nominal arguments.

Just as Tzotzil straddles the HIGH-ABS /LOW-ABS divide, it also does not clearly show extraction asymmetries. As discussed in Aissen 1999, Tzotzil *does* have an Agent Focus construction, shown in (94). Like the AF constructions examined above, it is morphologically marked by the suffix *-on* (one of the reconstructed Proto-Mayan AF suffixes), and ergative marking is absent in this construction.

(94) Buch'u i-kolta-**on** li tzeb-e?

who ASP-help-AF DET girl-ENC

'Who helped the girl?'

(Aissen 1999:455)

But unlike any of the languages discussed above, AF in Tzotzil is limited to clauses in which both subject and object are 3rd person, and even in these contexts it is not obligatory. Rather, AF alternates with regular transitive forms like the one in (95). (As with the Chol transitives discussed in §2.2, this results in ambiguity when both arguments are 3rd person.) Aissen (1999:459) writes that "the major factor determining the distribution of [transitive] and AF verbs under agent extraction is the relative prominence of subject and object: the AF form requires that the object be more prominent than the subject; the [transitive] form requires roughly the opposite." She

compares Tzotzil AF to obviation systems in languages of the Algonquian family (e.g. Bloomfield 1962, Frantz 1966).

(95) Buch'u i-s-kolta li tzeb-e?

who ASP-3ERG-help DET girl-ENC

‘Who helped the girl’ / Who did the girl help? (Aissen 1999:459)

At this point we do not have an account for how this pattern emerges. Note, however, that AF in Tzotzil appears only when the **P** argument is more prominent than the **A** argument. This is reminiscent of the facts discussed in section 5.2: in languages like Q'anjob'al and K'ichee', AF is *impossible* in contexts where the **P** argument is smaller than a DP. In the same vein, perhaps the proximate object in Tzotzil requires special licensing, and the AF morpheme is thus brought in exactly these contexts. We leave this as a topic for future research.

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