Mayan Agent Focus and the Ergative Extraction Constraint: Facts and Fictions Revisited*

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Abstract: Many languages of the Mayan family restrict the extraction of transitive (ergative) subjects for focus, *wh*-questions, and relativization (Ā-extraction). We follow Aissen (2017b) in labelling this restriction the ergative extraction constraint (EEC). In this paper, we offer a unified account of the EEC within Mayan languages, as well as an analysis of the special construction known as Agent Focus (AF) used to circumvent it. Specifically, we propose that the EEC has a similar source across the subset of Mayan languages which exhibit it: *intervention*. The intervention problem is created when an object DP structurally intervenes between the Ā-probe on C⁰ and the ergative subject. Evidence that intervention by the object is the source of the problem comes from a handful of exceptional contexts which permit transitive subjects to extract in languages which normally ban this extraction, and conversely, a context which exceptionally bans ergative extraction in a language which otherwise allows it. We argue that the problem with Ā-extracting the ergative subject across the intervening object connects to the requirements of the Ā-probe on C⁰: the probe on C⁰ is bundled to search simultaneously for [Ā] and [D] features. This relates the Mayan patterns to recent proposals for extraction patterns in Austronesian languages (e.g. Legate 2014; Aldridge 2017b) and elsewhere (van Urk 2015). Specifically, adapting the proposal of Coon and Keine (to appear), we argue that in configurations in which a DP object intervenes between the probe on C⁰ and an Ā-subject, conflicting requirements on movement lead to a derivational crash. While we propose that the EEC has a uniform source across the family, we argue that AF constructions vary Mayan-internally in how they circumvent the EEC, accounting for the variation in behavior of AF across the family. This paper both contributes to our understanding of parametric variation internal to the Mayan family, as well as to the discussion of variation in Ā-extraction asymmetries and syntactic ergativity cross-linguistically.

Keywords: Ā-extraction, extraction restrictions, syntactic ergativity, Agent Focus, Mayan, gluttony

1 Introduction

In many Mayan languages, the extraction of transitive (ergative) subjects is restricted; we follow Aissen (2017b) in labelling this restriction the Ergative Extraction Constraint, or EEC. This paper offers a unified account of the EEC within the Mayan language family, as well as an analysis of the special construction known as "Agent Focus" (AF), used to circumvent it. Agent Focus has been a longstanding topic in the Mayanist literature (Smith-Stark 1978; Craig 1979; Larsen and Norman 1979; Dayley 1981; Ayres 1983), and more recently has received a good deal of attention in wider morphosyntactic circles (Stiebels 2006; Aissen 2011; Coon et al. 2014; Preminger 2014; Assmann et al. 2015; Erlewine 2016; Aissen 2017b; Watanabe 2017; Henderson and Coon 2018; Tollan and Clemens 2019; Newman 2020). The continued interest in the EEC and AF is perhaps unsurprising given the connection to topics across a range of morphological

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and syntactic domains, including morphological and syntactic ergativity, Ā-extraction, hierarchy effects and feature structure, case and agreement (and Case and Agree), binding, incorporation, obviation, transitivity and voice morphology—all topics we discuss below. The similarities and differences found in this area across the roughly thirty languages of the Mayan family also make this a fruitful area in which to investigate syntactic microvariation.

Examples which illustrate the restriction on Ā-extracting the ergative subject from a regular transitive clause are previewed for Q'anjob'al and K'iche' in (1); we indicate foci in smallcaps in the English translations throughout.[1]

(1) *Ergative Extraction Constraint*

a. *Maktxel max y-il ix ix?
who PFV A3-see CLF woman
intended: 'Who saw the woman?' (Q'anjob'al; Coon et al. 2014, 193)

b. *Are ri ixoq x-u-b'aq ri ch'ajo'n.
FOC DET woman PFV-A3S-scrub DET clothes
intended: 'THE WOMAN scrubbed the clothes.' (K'iche'; Can Pixabaj 2004, 58)

In contrast, object Ā-extraction from transitive verb forms is well-formed.

(2) *Object extraction*

a. Maktxel max y-il naq winaq?
who PFV A3-see CLF man
'Who did the man see?' (Q'anjob'al; Coon et al. 2014, 192)

b. Jas x-u-k'ut ri ixoq?
what PFV-A3S-teach DET woman
'What did the woman teach?' (K'iche'; Can Pixabaj 2004, 29)

The Agent Focus construction, used specifically to Ā-extract transitive subjects—for *wh*-questions, focus, and relativization—is illustrated for the same two languages in (3), and described further below.

(3) *Agent Focus*

a. Maktxel max-ach il-**on**-i?
who PFV-B2S see-AF-ITV
'Who saw you? (Q'anjob'al; Coon et al. 2014, 213)

b. Are ri sis x-ti'-**ow** ri kumatz.
FOC DET coati PFV-bite-AF DET snake
'THE COATI bit the snake' (K'iche'; Can Pixabaj 2004, 56)

This paper has three main goals. **First**, we aim to clarify the range of variation concerning the EEC and AF construction in the Mayan family in order to provide a more complete picture of the empirical landscape to be accounted for. While some recent work has tackled differences in AF across a number of Mayan languages (e.g. Stiebels 2006; Watanabe 2017), we show below that the variation is more limited than previously described. The "facts and fictions" in our title pays homage to Smith-Stark's (1978) seminal work on this topic, but now with the benefit of more than four decades of descriptive and theoretical work

[1]We follow Leipzig glossing conventions with the addition of the following abbreviations: A – "Set A" (ergative/possessive); AF – Agent Focus; B – "Set B" (absolutive); DIM – diminutive; DIR – directional; DTV – derived transitive status suffix; ENC – enclitic; EXT – existential; FOC –focus; ITV – intransitive status suffix; OBV – obviative; P – plural; PROX – proximate; RN – relational noun; S – singular; SS – status suffix; TV – transitive status suffix; WH – *wh*-word. In some cases, we have modified glosses or spelling of language names from original sources for consistency, and we have neutralized clitic/affix distinctions when present in originals. Unattributed examples are from the authors' elicitation notes. Translations from Spanish are our own.

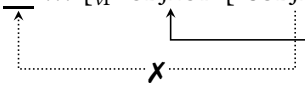
to add. We connect some of the apparent points of variation to independent properties in the languages in question, delimiting the EEC- and AF-specific factors to be explained.

Second, we argue that the EEC has a similar source across the subset of Mayan languages which exhibit it: intervention. We provide evidence for the generalization in (4).

(4) MAYAN EEC GENERALIZATION
When an interpreted DP object structurally intervenes between the subject and the Ā-probe on C⁰, the subject is restricted from undergoing Ā-extraction.

We propose, in line with other previous work on EEC-effects (and syntactic ergativity more generally), that in Mayan languages which exhibit the EEC, the transitive object raises to a position above the transitive subject, blocking the subject from extracting (e.g. Campana 1992; Ordóñez 1995; Bittner and Hale 1996a; Aldridge 2004, 2008a; Coon et al. 2014; Assmann et al. 2015; see Deal 2016 for a recent overview of these accounts and syntactic ergativity more generally). This configuration is schematized in (5).

(5) $[_{CP}$ __ … $[_{vP}$ OBJECT [SUBJECT $[_{VP}$ V ~~OBJECT~~]]]]



We show that special factors which exceptionally prevent such intervention from occurring have a direct effect on the extractability of the transitive subject.

We argue, following previous work in Mayan, that the problem with extracting transitive (ergative) subjects cannot be reduced to properties of the ergative subject itself (contra Deal 2016; Polinsky 2016). Furthermore, while other previous work on extraction asymmetries has attributed the problem resulting from the inversion in (5) to a failure of abstract case (Case) assignment or nominal licensing (Coon et al. 2014; Assmann et al. 2015), we demonstrate below that this line of analysis cannot capture the patterns found across the Mayan EEC. Instead, we argue that the problem with Ā-extracting the ergative subject across the moved object connects to the requirements of the Ā-probe on C⁰. In section 3, we specifically propose that the probe on C⁰ is a complex probe which probes simultaneously for [Ā] and [D] features. For reasons detailed below, this causes the probe to enter into an Agree relationship with *both* the object and the subject in structures like (5). Adapting the "feature gluttony" proposal of Coon and Keine (to appear), we argue that in such a configuration, conflicting requirements on movement force a derivational crash. Our account thus builds on existing work which ties extraction asymmetries to variation in the requirements of the Ā-probe on C⁰, and to a blurred division between traditional A- and Ā-operations and positions more generally, discussed further below.

Finally, we argue that while the EEC has a common source (the configuration in (5)), the Agent Focus construction in (3) is not homogenous across the family. We focus on the two subfamilies which have received the most attention in recent literature: Q'anjob'alan and K'ichean Proper. In the former, we follow the basic outline of the analysis in Coon et al. 2014, in which the Agent Focus (AF) morpheme is a v^0 head which does not cause the object to raise, thus allowing the ergative subject to extract freely. In K'ichean, in contrast, we propose that the object *does* raise (Levin 2018), but lands in a specifier equidistant with the subject to higher probes on Infl⁰ and C⁰. We propose in section 5 that the two different AF strategies account for independent differences in these constructions in Q'anjob'alan and K'ichean. What these strategies share in common is that the object does *not* intervene between the probe on C⁰ and the ergative subject, avoiding the intervention problem in (5).

The remainder of this paper is organized as follows. In section 2 we provide a survey of the EEC and the Agent Focus construction in a representative sample of Mayan languages, and we summarize the desiderata that a successful analysis of these facts must cover. Section 3 provides a unified account of the extraction problem, which attributes the EEC to the nature of the Ā-probe on C⁰ and intervention of a DP.

In section 4 we offer further evidence for our proposal that intervention is at issue in deriving the EEC, as stated in the generalization in (4) above. In section 5 we provide an analysis of AF which accounts for both the similarities and differences found in AF constructions. Section 6 concludes with a summary and discussion of connections to extraction restrictions outside of the Mayan family.

2 Agent extraction and Agent Focus: Description and desiderata

This section lays out the EEC and Agent Focus facts for which we aim to account. As noted at the outset, there is variation across the Mayan family in details of what have been called Agent Focus constructions, as well as in the nature of the restriction on extracting agents.[2] Here we offer a proposal for how to delimit the scope of investigation, and also attribute some of the apparent variation to independent differences among the languages in question. The core properties of the Agent Focus construction which we aim to account for are exemplified by the Chuj (Q'anjob'alan) example in (6b), contrasted with the regular transitive in (6a) (clause structure basics will be reviewed shortly, in §2.1).

(6) a. Ix-in-y-il ix ix.
PFV-B1S-A3-see CLF woman
'The woman saw me.' (Chuj transitive)

b. Ha ix ix ix-in-il-an-i.
FOC CLF woman PFV-B1S-see-AF-ITV
'THE WOMAN saw me.' (Chuj Agent Focus)

The Agent Focus construction in Chuj has the characteristics listed in (7), also shared by the AF constructions in Q'anjob'al and K'iche' in (3) above. First, AF is used only when the transitive subject appears in a dedicated preverbal Ā-position, as in the focus construction in (6b). The example in (6b) further illustrates that neither of the arguments of the AF verb is oblique. Zooming in on the AF verb stem itself we find: (i) the absence of the Set A (ergative) prefix (cf. *y-* in (6a)); (ii) a special AF suffix *-an*; and (iii) an *intransitive* "status suffix" *-i* (§2.2). We take these to be the core characteristics to be accounted for in a successful analysis of AF.

(7) *Characteristics of Mayan Agent Focus*
a. AF is used when the transitive subject is Ā-extracted;
b. AF constructions involve dyadic predicates in which neither subject nor object DP is oblique;
c. Set A (ergative) φ-marking is absent;
d. a special Agent Focus suffix appears on the stem;
e. if a status suffix appears, it is an intransitive status suffix.

This combination of properties has been noted to give AF constructions across the family an apparently "mixed" status with respect to transitivity (Stiebels 2006). They appear to be *transitive* insofar as we find two non-oblique DP arguments. Nonetheless, the verb appears with only a single φ-indexing morpheme, and when a status suffix appears, it is an *intransitive* status suffix.

Note that there are two ways that "Agent Focus" has been used in previous literature: (i) a particular construction used *exclusively* to Ā-extract transitive subjects, with a defined set of characteristics, as in (7); or (ii) *any* construction which permits the extraction of agents. Here we focus on the former, setting aside antipassive constructions, which do not conform to (7b), as well as other constructions characterized by an oblique object sometimes described under the umbrella of Agent Focus, discussed in section 2.3 below.

[2]Note that the "Agent" in "Agent Focus" is used to refer refer to the most agent-like argument in a transitive construction, setting aside variation in details of thematic roles, which to our knowledge do not have an effect on the EEC or AF constructions.

The characteristic in (7d) also rules out a construction which has been labelled as AF in Yucatec Maya (which patterns differently from more canonical AF in both form and distribution); we follow Norcliffe (2009) who treats this as a distinct phenomenon, and we do not discuss Yucatec further here. See Norcliffe 2009 and discussion in Coon et al. 2014 for more on the Yucatec case, and section 2.3 below on the decision to eliminate constructions with oblique objects from the scope of our investigation.

We begin in section 2.1 with brief background on the Mayan language family and grammatical characteristics relevant to the discussion below, and then turn to our theoretical assumptions about Mayan clause structure in section 2.2. In section 2.3 we examine the EEC and AF in more detail, focusing on two apparent areas of variation: (i) *which* DP (the subject or the object) governs the Set B φ-marking on the AF verb stem, and (ii) apparent variation in the relevance of person features of the subject DP to whether or not AF is needed for ergative extraction. In both cases, we connect the variation to independent grammatical properties of the languages in question.

2.1 Mayan background

The Mayan language family is made up of about thirty languages spoken in southern Mexico, Guatemala, Belize, and Honduras by over six million people (Bennett et al. 2016; Aissen et al. 2017b; England 2017). The family is typically divided into six major subgroups: Yucatecan, Greater Tseltalan, K'ichean, Greater Q'anjob'alan, Mamean, and Huastecan (Campbell and Kaufman 1985; England and Zavala 2013; Campbell 2017).[3] The Huastecan branch is the most divergent, having been the first to branch off, and is not discussed further here. The five remaining subfamilies are shown in (8) (further subdivisions are separated by semicolons). We have underlined four languages that will play a main role in the discussion and analysis below.

(8) a. **Yucatecan**: Yuctec Maya, Lacandon; Itzaj, Mopan
b. **Greater Tseltalan**: Ch'ol, Yokot'an, Ch'orti; Tsotsil, Tseltal
c. **K'ichean**: Q'eqchi'; Uspantek; Poqom, Poqomchi'; K'iche', Kaqchikel, Tz'utujil, Sakapultek, Sipakapense
d. **Greater Q'anjob'alan**: Q'anjob'al, Akatek, Popti', Mocho'; Chuj, Tojol-ab'al
e. **Mamean**: Mam, Tektitek; Awakatek, Ixil

Despite variation across the family, a number of core characteristics are found across Mayan languages. First, Mayan languages are generally verb initial in discourse-neutral contexts, with arguments appearing in preverbal positions for topic, focus, *wh*-questions, and relativization (England 1991; Aissen 1992; Clemens and Coon 2018). Core arguments may generally be *pro*-dropped, and are cross-referenced on the verb stem by two series of morphemes: "Set A" (ergative, possessive) and "Set B" (absolutive). Set A morphemes are always prefixal, while the location of Set B morphemes varies. A general template for a full transitive verbal complex is shown in (9). Note that whether and where word boundaries are transcribed internal to this complex varies from language to language.

(9) TAM – { SET B } – SET A – [Root – (Voice) – (Status suffix)] – { SET B }

The stem core (in square brackets in (9)) consists of a root, possibly one or more valence or argument structure-related suffixes (including the AF suffix, discussed below), and in some languages, a final "status suffix", which varies according to TAM, transitivity, and clause type (-ITV, -TV, and -DTV below). In some languages, status suffixes only surface phrase-finally (Henderson 2012; Royer to appear). Set A prefixes precede the verb stem, and a TAM marker appears initially. As shown in (9) and noted above, Set B morphemes appear either following the TAM marker, or stem-finally, discussed further below. Third person

[3] See also Bennett et al. 2016 and Campbell 2017 for discussion and alternate spellings of language names, and discussion of potential language versus dialect divisions.

singular Set B lacks an overt reflex across the family; we do not represent a null morpheme in glosses.

Examples of transitive stems in three different languages are shown in (10). The core stem, in brackets in (9), is underlined.

(10) a. Tyi i-k'el-e-y-ety.
PFV A3-watch-TV-EP-B2
'He watched you.' (Ch'ol; Vázquez Álvarez 2011, 177)

b. X-in-ki-ch'ab'ee-j.
PFV-B1S-A3P-speak-DTV
'They spoke to me.' (K'iche'; Can Pixabaj 2004, 27)

c. Max-ach hin-kol-o'.
PFV-B2S A1S-help-TV
'I helped you.' (Q'anjob'al; Mateo Toledo 2017, 538)

Many languages exhibit split ergativity in certain non-perfective aspects, as well as in nonfinite embedded clauses. In these splits, the intransitive subjects are marked with the same Set A (ergative/possessive) series normally reserved for transitive subjects (Larsen and Norman 1979; Coon 2013), as shown by the Ch'ol progressive in (11) (compare the identically-marked transitive subject in (10a) above).

(11) Choñkol **i**-wäy-el.
PROG A3-sleep-NML
'She is sleeping.'

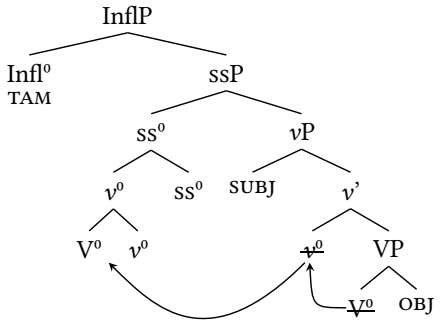
Importantly for the discussion below, intransitive subjects are never restricted from extracting, even when they are marked by the same Set A ("ergative") morphology as transitive subjects. The EEC is restricted to *transitive* subjects, and is not directly connected to Set A morphology (contra Stiebels 2006).

See also England and Zavala 2013, Bennett et al. 2016, England 2017, and works in Aissen et al. 2017b for recent overviews of Mayan grammar.

2.2 Theoretical assumptions

Following Clemens and Coon 2018, we take the verb stem to be formed by head movement of the root up through functional projections related to the verb's argument structure. Minimally, for a transitive stem this includes a bundled v^0/Voice^0 head (Harley 2017) which introduces the transitive subject in its specifier position (and may or may not be realized by overt valence morphology). We represent this head here as v^0. The stem lands above the subject in a head which hosts the stem-final status suffix ('ssP') and sits above the transitive subject, resulting in basic verb-initial order, as in (12) (see §2.2.2 on VSO/VOS alternations).

(12) *Mayan verb stem formation* (Clemens and Coon 2018)



Following Aissen (2010) for Tsotsil and Coon (2017) for Ch'ol, we assume that Set A morphology appears due to a spec–head agreement relationship between v^0 and its specifier, which takes place directly upon merge (formalized in §5). See also Wiltschko 2006 for a similar case of "inherent agreement" in Halkomelem Salish. Set B morphemes are discussed just below.

As noted above, Mayan languages also feature preverbal positions for topic, focus, *wh*-questions, and relativization. Norman (1977) initially recognized two positions: a sentence-initial "topic" position, and a preverbal "focus" position: TOPIC ≫ FOCUS ≫ verb. Aissen (1992) further refines this picture, noting the existence of two distinct topic positions across Mayan languages, one clause-internal and one clause-external; external topics are base-generated high, and are co-indexed with a pronominal inside the clause (often null). For our purposes below, it will be important that (i) there is a single focus position into which foci, *wh*-interrogatives, relativized arguments, as well as certain scope-bearing elements must move; and (ii) movement into this position by transitive subjects is restricted by the EEC, requiring instead the AF construction. Topics, in contrast, do not trigger AF, a point we return to in section 4.1. In the Tz'utujil examples in (13), for example, the focused subject in (13a) triggers the AF form of the verb, while the topicalized subject in (13b) appears with the regular transitive verb form.

(13) a. [$_{\text{FOC}}$ Ma ch'ooy ta] x-tij-ow-i ja keeso.
NEG rat IRR PFV-eat-AF-ITV DET cheese
'It wasn't A RAT that ate the cheese.' (Tz'utujil; Dayley 1981, 444)

b. [$_{\text{TOP}}$ Ja ch'ooy-aa'] x-k-ee-tij ja tzyaq.
DET rats-PL PFV-A3P-B3P-eat DET clothes
'The rats ate the clothes.' (Tz'utujil; Dayley 1981, 419)

Below, we represent the focus position as Spec,CP, with topics occupying higher positions in the left periphery.[4]

2.2.1 HIGH-ABS and LOW-ABS languages

Recall from (9) that the location of Set B (absolutive) morphology varies both across the family, and in some cases even within individual languages. This variation in Set B is relevant because of the generalization, noted by Tada (1993) and discussed further in Coon, Mateo Pedro, and Preminger 2014, that languages in which Set B marking appears in the pre-stem position generally restrict the extraction of ergative arguments (i.e. generally exhibit the EEC, and require AF for transitive subject extraction), while languages in which Set B marking follows the stem do not (i.e. generally do not exhibit the EEC, and do not possess AF forms). We follow Coon et al. (2014) who—building on Aldridge 2004 and Legate 2008 for other languages—take this variation to relate to two different possible sources of Set B morphology: "HIGH-ABS" languages have pre-stem Set B morphemes generated by finite Infl^0; "LOW-ABS" languages have post-stem Set B morphemes generated by a low functional head, v^0.

Ch'ol and Tseltal are examples of LOW-ABS languages. Following Coon et al., we assume that in LOW-ABS languages, Set B markers in transitive clauses are generated via an Agree relationship established by the transitive v^0 head, akin to accusative in nominative-accusative languages. Set B markers in intransitive clauses are generated by finite Infl^0 (i.e. an ABS=DEF system in the terminology of Legate (2008)). Evidence for this proposal comes from the fact that Set B morphemes are available in nonfinite (TAM-less) embedded transitives, as shown in (14) for LOW-ABS Ch'ol. This is compatible with the proposal that Set B morphemes have a low source and thus remain present in nonfinite embeddings.[5]

[4] Note that for Aissen (1992), foci occupy Spec,IP and internal topics occupy Spec,CP. For our purposes here, what is important is that (i) the probe driving Ā-movement is located above the head responsible for Set B ϕ-agreement. The latter point will be important for the reconstruction account in §4.3 below.

[5] We set aside for now the question of whether Set B morphemes are pronominal clitics or agreement markers, returning to

(14) K-om [j-käñ-**ety**].
A1-want A1-know-B2
'I want to speak to you.' (Ch'ol; Vázquez Álvarez 2011, 99)

K'iche', on the other hand, is an example of a language in which the Set B absolutive morphemes uniformly precede the predicate stem, as in (10b) above. These HIGH-ABS languages are proposed by Coon et al. (2014) to be languages in which finite Infl^0 is the source of absolutive morphology in both transitive and intransitive clauses (Legate's ABS=NOM; see also Campana 1992; Bittner and Hale 1996b; Aldridge 2004, among others). As expected, Set B morphemes may *not* appear in nonfinite embedded clauses. The subject of a nonfinite embedded intransitive is cross-referenced via Set A marking, and transitive predicates must appear with passive or antipassive morphology in order to be embedded, as in (15).[6]

(15) X-u-chap [nu-kuna-x-iik].
PFV-A3S-begin A1S-cure-PASS-ITV
'She began to cure me.' (K'iche'; Can Pixabaj 2015, 116)

Some languages, like Chuj and Q'anjob'al, allow both pre- and post-stem Set B morphology. In general, Set B markers appear attached to the TAM marker in eventive predicates, and follow the stem in stative "non-verbal" predicates which obligatorily lack TAM marking. Compare the Chuj eventive predicate in (16a) with the stative TAM-less form in (16b).

(16) a. Tz-**in**-y-il waj Xun.
IPFV-B1S-A3S-see CLF Juan
'Juan sees me.' (Chuj; Buenrostro 2013, 128)
b. Winak-**in**.
man-B1S
'I am a man.' (Chuj; Buenrostro 2013, 119)

We propose that these Q'anjob'alan languages are nonetheless HIGH-ABS in the sense that finite Infl^0 is responsible for generating the Set B morphemes, and that alternations like the one in (16) are morphophonological in nature (having to do, for example, with the need for an overt host for the Set B morpheme). As with K'iche' and other consistently HIGH-ABS languages, Q'anjob'al and Chuj do not permit nonfinite embedded transitive stems. However, while K'ichean embedded predicates must be formally intransitive, Q'anjob'alan languages permit nonfinite embedded transitives *with the use of the AF morpheme* (Ordóñez 1995; Quesada 1997; Pascual 2007; Coon et al. 2014; termed the "Crazy Antipassive" by Kaufman 1990). This fact will form an important part of the motivation for the proposal in section 5 that while the EEC has a consistent source across the Mayan family, the AF solution is not homogenous.

The patterns examined thus far are shown in the table (17).

this issue for individual languages in section 5 below. What is relevant here is that an Agree relationship prefigures either, and we use the term "agreement" informally below to refer to any φ-indexing on the predicate. See for example Preminger 2019 and work cited therein on Agree as being a precursor to both agreement and pronominal clitic formation.

[6]Based on the possibility of embedded reflexives, Can Pixabaj (2015) argues that nonfinite complement clauses in K'iche' may be formally transitive. Nonetheless, what is crucial here is the fact that—to our knowledge—Set B marking does not appear on these or other TAM-less embedded clauses in HIGH-ABS languages. See also Aissen 2017b, Coon and Royer 2020, and works in Palancar and Zavala 2013 on nonfinite embedding in Mayan languages.

(17) *Extraction and embedding in three Mayan languages*

			source of ABS/Set B	EEC?	embedded ABS/Set B?
a.	LOW-ABS	e.g. Ch'ol	v^0	no	✓
b.	HIGH-ABS	e.g. K'iche'	Infl^0	yes	✘
c.	HIGH-ABS	e.g. Q'anjob'al	Infl^0	yes	with AF

To summarize, we assume that Set B morphemes are generated by an Agree relation with a functional head. While the linear position and source of Set B marking typically align, we take the important distinction between HIGH- and LOW-ABS to be about the particular functional head responsible for generating the morpheme in question. In transitive clauses in LOW-ABS languages, like Ch'ol in row (a), transitive v^0 is responsible for the appearance of the Set B morpheme, and in general we do not find extraction restrictions in these languages. In HIGH-ABS languages, on the other hand, finite Infl^0 is the head responsible for Set B morphology, and ergative subjects are restricted from extracting. HIGH-ABS languages either ban Set B marking in nonfinite clauses altogether (e.g. K'iche'), or require the use of the AF morpheme in nonfinite embedded clauses (e.g. Q'anjob'al), a point of variation we return to in section 5 below.

Following Coon et al. (2014) and Assmann et al. (2015) we take the above facts to be connected: in HIGH-ABS languages, the transitive object must move to a position *above* the ergative subject. We take this object movement to be driven by an [EPP] feature on transitive v^0, present in HIGH-ABS languages. This movement makes the object the closest accessible goal for the ABS-generating probe on Infl^0, as in (18).[7] For simplicity in (18), as well as in diagrams below, we do not represent the movement of the verb to the high ss^0 position (see (12)), but recall that the verb proceeds the subject and object arguments. In section 4.3 we provide additional evidence for the high position of the object in HIGH-ABS languages.

(18) $[_{\text{InflP}}\ \text{Infl}^0\ \ldots\ [_{v\text{P}}\ \textsc{object}\ [\ \textsc{subject}\ [_{\text{VP}}\ \text{V}\ \sout{\textsc{object}}\ ]\ ]\ ]\ ]$

SET B

While movement of the object above the subject is necessary for Set B morphology in HIGH-ABS languages, the object creates an intervention problem for extraction of the ergative subject, as illustrated in (19) and formalized in section 3 below. We will propose that this configuration is the source of the EEC.[8]

(19) $[_{\text{CP}}\ \underline{\quad}\ \ldots\ [_{v\text{P}}\ \textsc{object}\ [\ \textsc{subject}\ [_{\text{VP}}\ \text{V}\ \sout{\textsc{object}}\ ]\ ]\ ]\ ]$

✗

While we have discussed Infl^0 and v^0 as the heads responsible for the Agree operations underlying the appearance of the Set B (absolutive) morphemes, we make no commitment as to whether the realization of Set B morphology is also related to nominal licensing. While some previous accounts of Mayan Agent Focus attribute the extraction problem to a failure of abstract case assignment (see e.g. Coon et al. 2014; Assmann et al. 2015), we argue below that this does not adequately cover all the facts. Our proposal leaves open the possibility that the appearance of Set B morphology is tied to abstract case assignment, but this is not a necessary part of the analysis, which we take to be an advantage of our account.

[7] Here and below we use "accessible to a probe" to mean that a goal (i) is in the search domain of the probe and (ii) bears features which match those on the probe, formalized in §3. We assume that probes typically probe into their complement; we distinguish this from the "inherent" Set A agreement, which takes place in a spec–head configuration, discussed above and in §5 below. The Phase Impenetrability Condition further restricts the search domain to elements not transferred to the interfaces by a lower phase (Chomsky 2001), as will be relevant in §4.3.

[8] Note that while objects in LOW-ABS languages are proposed to not raise *above* the transitive subject, objects may still undergo object shift out of VP, for example for semantic interpretation, as argued by Little (2020). What is important here is that object shift in LOW-ABS languages results in a configuration in which the object is still c-commanded by the subject.

2.2.2 Word order and the source of Set B

Finally, a note on word order is in order. All else being equal, we might expect that variation in postverbal word order in the Mayan family would correlate with the HIGH/LOW-ABS distinction, with HIGH-ABS languages showing VOS order (because the object has raised) and LOW-ABS languages showing VSO (because the object remains low).[9] The picture, however, is more complicated than this, and we find languages with basic VOS and basic VSO on both sides of the HIGH/LOW-ABS divide. As one example, the Chuj dialect of San Mateo Ixtatán has basic VOS order, while the Chuj dialect of San Sebastián Coatán is described as basically VSO; both are nevertheless HIGH-ABS and exhibit the EEC (Maxwell 1981; Buenrostro 2013).

The factors governing postverbal word order in Mayan are complex (England 1991; Clemens and Coon 2018), and we cannot do justice to the full range of patterns here. Clemens and Coon (2018) argue, for example, that LOW-ABS Ch'ol is *syntactically* VSO, but that a postsyntactic prosodic constraint forces bare NP objects to appear adjacent to the verb, resulting in frequent VOS. On the flip side, Coon et al. (2014) suggest that in the HIGH-ABS VSO language Q'anjob'al, the object consistently moves to Spec,*v*P, but that the choice of whether to pronounce the higher (presubject) or lower (postsubject) copy is governed by phonological factors. Phonologically-small Set B clitics are pronounced in the higher position, and full DPs are pronounced in the lower position, as illustrated by the alternation in (20). Recall that there is no overt 3rd person Set B morpheme, and 1st and 2nd person pronouns do not appear postverbally (see appendix A), meaning that we find *either* an overt clitic, as in (20a), *or* a full DP, as in (20b), but not both.

(20) a. Max-**in** h-el-a' __.
PFV-B1S A2S-see-TV
'You saw me.'

b. Max __ h-el **naq winaq**.
PFV A2-see CLF man
'You saw the man.' (Q'anjob'al; Coon et al. 2014, 212)

As noted above, morphophonological factors are clearly responsible for the position of the Set B morpheme in some Mayan languages, lending plausibility to this proposal. While further work is needed on postverbal word order alternations across the Mayan family, we conclude here that because factors outside of the core syntactic domain are involved in word order alternations, we do not expect a perfect correlation between HIGH/LOW-ABS and VOS/VSO order.

2.3 Agent Focus and variation

Though the focus of this article is on languages of the K'ichean and Q'anjob'alan subfamilies—on which much recent theoretical discussion focuses—Agent Focus has been claimed to be present in all five of the subfamilies in (8) above. As noted above, we focus here on constructions which share the properties in (21) (repeated from (7)).

(21) *Characteristics of Mayan Agent Focus*
- a. AF is used when the transitive subject is Ā-extracted;
- b. AF constructions involve dyadic predicates in which neither subject nor object DP is oblique;
- c. Set A (ergative) φ-marking is absent;
- d. a special Agent Focus suffix appears on the stem;
- e. if a status suffix appears, it is an intransitive status suffix.

[9] See Douglas et al. 2017 and Little 2020 for proposals which relate postverbal word order to the EEC.

An example from K'iche' illustrating these characteristics is shown in (22).

(22) Aree ri at x-at-ch'ay-ow-ik.
FOC DET PRON2S PFV-B2S-hit-AF-ITV
'You hit him.' (K'iche'; Larsen 1988, 504)

Despite the consistent characteristics in (21), there is also variation in AF across the family, and this variation will play an important role in our analysis of AF constructions in section 5. A first point of reported variation concerns whether and how the person features of the subject and object DPs are involved in the choice between AF and transitive stems in agent-extraction environments, summarized in (23).

(23) *Person features and AF in agent extraction environments*
a. at least one DP must be 3rd person in order for AF to occur (e.g. K'iche');
b. the *agent* must be 3rd person in order for AF to occur (e.g. Q'anjob'al);
c. *both* agent and patient must be 3rd person in order for AF to occur (Tsotsil).

This is discussed in appendix A, where we propose that this variation is only apparent, and does not provide counter-evidence to the EEC generalization in (4) above. Namely, we claim that the EEC is not affected by the person features of the subject and object DPs (contra Stiebels 2006; Watanabe 2017). The restriction in (23a) is morphological; the pattern in (23b) connects to the special status of 1st and 2nd person pronouns in Q'anjob'alan; and we suggest (in line with Aissen 1997), that the Tsotsil pattern in (23c) is related to obviation, which we in turn connect to the relative position of the subject and object.

Second, while AF constructions share in common the absence of Set A (ergative) marking, there is variation as to *which* argument (the subject or the object) is cross-referenced by the remaining Set B morphology, which we discuss in the remainder of this section. Stiebels (2006) and Watanabe (2017) describe three different patterns of Set B cross-referencing in Mayan Agent Focus, summarized in (24). Here we argue against the existence of (24c) for true AF; our analysis in section 5 accounts for the variation between (24a) and (24b).

(24) *Set B patterns in AF*
a. consistent object agreement (e.g. Q'anjob'al);
b. variable agreement (e.g. K'iche');
c. consistent subject agreement (e.g. Poqom).

The first type of pattern is exemplified by AF in languages of the Q'anjob'alan branch, as shown by Q'anjob'al in (25). Characteristic of Agent Focus, the Set A agreement which would normally cross-reference the transitive subject is absent. The Set B absolutive morpheme remains, and always co-indexes the internal argument. Recall that there is no third person Set B form, as in (25c).

(25) a. Maktxel max-**in** il-on-i?
who PFV-B1S see-AF-ITV
'Who saw me?' (Q'anjob'al; Coon et al. 2014, 223)
b. Maktxel max-**ach** il-on-i?
who PFV-B2S see-AF-ITV
'Who saw you?' (Q'anjob'al; Coon et al. 2014, 180)
c. Maktxel max il-on naq winaq.
who PFV see-AF CLF man
'Who saw the man? (Q'anjob'al)

Languages in the K'ichean Proper subbranch of the K'ichean group (see (8c) above)—K'iche', Kaqchikel, Tz'utujil, Sakapultek, and Sipakapense—show hierarchy-based agreement (Dayley 1978; Norman and Campbell 1978; Smith-Stark 1978; Davies and Sam-Colop 1990; Preminger 2014). Specifically, the single Set B morpheme on the Agent Focus stem may cross-reference *either* the subject or the object DP, according to the descriptive hierarchy in (26).

(26) 1st person / 2nd person ≫ 3rd person plural ≫ 3rd person singular

Examples are shown in the K'iche' focus pairs in (27) and (28). The roles of the argument DPs are reversed in the pairs below, but note that the verb form remains identical. In (27) the Set B morpheme indexes the 1st person DP regardless of whether it is the subject or the object. Similarly, in (28) the Set B morpheme indexes the 3rd person plural DP regardless of its grammatical function.

(27) a. In x-**in**-il-ow le ak'al-ab'.
PRON1S PFV-B1S-see-AF DET child-PL
'I saw the children.'

b. E are' le ak'al-ab' x-**in**-il-ow in.
PL FOC DET child-PL PFV-B1S-see-AF PRON1S
'THE CHILDREN saw me.' (K'iche'; Davies and Sam-Colop 1990, 531)

(28) a. Ri ak'al-ab' x-**e**-tzuq-uw ri a Lu'.
DET child-PL PFV-B3P-feed-AF DET Peter
'THE CHILDREN fed Peter.'

b. Ri a Lu' x-**e**-tzuq-uw ri ak'al-ab'.
DET Peter PFV-B3P-feed-AF DET child-PL
'PETER fed the children.' (K'iche'; Davies and Sam-Colop 1990, 531)

We offer an analysis of the appearance of the hierarchy effect precisely in AF contexts in section 5.3 below.

Finally, both Stiebels (2006) and Watanabe (2017) describe a third pattern in AF: consistent subject agreement. Watanabe lists Q'eqchi' and Mam; Stiebels also lists Poqom and Poqomchi'. However, as Stiebels (2006, 528) notes: "In general, subject agreement seems to correlate with the oblique realization of the internal argument." A Poqom example is given in (29). Note here that the patient is preceded by a relational noun (RN), used to introduce oblique nominals across the family; the verb takes an intransitive status suffix *-a* and the subject triggers Set B morphology on the stem.

(29) Re' han x-in-tiin-sa-n-a [$_{OBL}$ aw-eh].
FOC PRON1S PFV-B1S-bathe-CAUS-ANTIP-ITV A2-RN
'I bathed you.' (Poqom; Benito Pérez 2016, 57)

We gloss the suffix on the verb in (29) as antipassive ('ANTIP') rather than AF because Benito Pérez (2016, 55) notes that the morphology found on verbs in which the agent (i.e. underlying external argument) is focussed is *identical* to that found in antipassive: *-n* for derived transitives, *-w* for underived "root" transitives.

Compare the forms in (30). In (30a) we see a sentence with no extraction, typically described as an antipassive, while in (30b) we find a sentence with extraction, described as Agent Focus.

(30) a. X-to'-**w**-a [$_{OBL}$ r-eh ma' Tojin] la k'ayaneel.
PFV-help-ANTIP-SS A3S-RN CLF Tojin DET salesman
'The salesman helped Tojin.' (Poqom; Benito Pérez 2016, 53)

b. Re' la k'ayaneel x-to'-**w**-a [$_{\text{OBL}}$ r-eh ma' Tojin].
FOC DET salesman PFV-help-ANTIP-SS A3S-RN CLF tojin
'THE SALESMAN helped Tojin.' (Poqom; Benito Pérez 2016, 56)

In both forms in (30), the patient is oblique, the verb is formally intransitive, and the subject is marked with Set B. Given that the agent, *la k'ayaneel*, is an intransitive Set B-triggering subject, it is unsurprising that it may undergo extraction, as in (30b). We contend that (30b) simply *is* an antipassive form; because extraction of intransitive subjects is not restricted, these types of constructions—though interesting in their own right—do not pose a puzzle for the question of how the EEC is obviated.

Similar facts are described for Mam (England 1983), which does not appear to possess a distinct AF form, but instead uses antipassive forms to extract agents: "The antipassive is used for various functions, including unknown or unmentioned patient, *agent promotion*, object (patient) incorporation into the verb, and lexical functions" (England 1983, 110, emphasis ours); see also Pérez Vail 2014 on the Mam antipassive. The use of an antipassive form to circumvent an ergative extraction restriction is a typologically-common pattern in languages with which restrict the extraction of transitive subjects (see e.g. Deal 2016; Polinsky 2017), and is also independently available in many languages which *do* have a distinct AF form.

Finally, Berinstein (1998) describes two different constructions with demoted objects in Q'eqchi'. One corresponds to what has been described as an "incorporation antipassive" in other Mayan languages (e.g. Maxwell 1976; Coon 2019 on Chuj), shown in (31a). Here the internal argument must be a bare non-referential NP, the verb stem bears the antipassive suffix and is formally intransitive, and the subject behaves as other intransitive subjects in triggering Set B morphology. The second construction, in (31b), shows the same antipassive morphology, an intransitive verb stem, and an oblique object. However, unlike a regular antipassive, it is apparently *restricted* to contexts when the agent is Ā-extracted (Berinstein labels this construction "2–3 Retreat", in the framework of Relational Grammar).

(31) a. T-oo-lok'-o-k wa.
FUT-B1P-buy-ANTIP-SS tortilla
'We will buy tortillas.'
b. Laa'o t-oo-lok'-o-k [$_{\text{OBL}}$ r-e li wa].
PRON1P FUT-B1P-buy-ANTIP-SS 3S-RN DET tortilla
'WE will buy the tortillas.' (Q'eqchi'; Berinstein 1998, 212)

As discussed in Aissen 2017b, while it is interesting that the antipassive form in (31b) is restricted to contexts of agent extraction (Aissen labels these AF$_{\text{OBL}}$), this form again does not present the same type of puzzle as canonical AF constructions: because the object is demoted to oblique status (and presumably does not raise), and the clause is intransitive, it is unsurprising that the subject triggers Set B morphology and can extract. Contrast the antipassive schema in (32) with the ungrammatical (33), repeated from (5) above.

(32) *Antipassive subject extraction*
[$_{\text{CP}}$ __ … [$_{v\text{P}}$ SUBJECT [$_{\text{VP}}$ V [$_{\text{OBL}}$ OBJECT]]]]
✓

(33) *Transitive EEC*
[$_{\text{CP}}$ __ … [$_{v\text{P}}$ OBJECT [SUBJECT [$_{\text{VP}}$ V ~~OBJECT~~]]]]
✗

In our analysis of AF in section 5, we analyze the AF morpheme as the realization of a v^0/Voice^0 head which, among other special characteristics described below, imposes a selectional restriction on the agent

in its specifier, requiring it to bear an [Ā] feature. This correctly restricts the use of AF to agent extraction environments. We suggest that the special antipassives which are dedicated to Ā-extraction, like the Q'eqchi' form in (31b), impose a similar selectional restriction on the external argument as in AF clauses, but differ in terms of their treatment of the patient. We return to this in section 5.

We thus find the two basic agreement patterns in the AF constructions under consideration here from (24a) and (24b) above, summarized in (34). We return to the analysis of these in section 5

(34) *AF agreement patterns*

Set B = object	e.g. Q'anjob'al, Chuj, Popti'
Set B = variable	e.g. K'iche', Kaqchikel, Tz'utujil

As noted by Stiebels (2006), consistent subject agreement (from (24c) above) is limited to contexts in which objects are demoted. Though these antipassive constructions are interesting, they do not present the same type of puzzle for how the EEC is circumvented and are not discussed further here.

Finally, note that variation has been described for some languages in *which* types of preverbal ergatives require AF. Heaton, Deen, and O'Grady (2016) report on an experimental study comparing AF in *wh*-questions and relativization in Kaqchikel, finding that AF is preferred for *wh*-questions but not relativization; see also Stiebels 2006 for a summary of similar variation in other Mayan languages. We return to this type of variation below, suggesting that it could be due either to (i) frequent use of topicalization for subjects (§4, and see Henderson and Coon 2018); or (ii) variation in probe structure (§3.2, and fn. 10). The important generalization to take from this section is that despite variation, the EEC occurs in transitive configurations in which the object has raised above the subject, and Agent Focus constructions provide an alternative means for extracting the transitive subject. We formalize these patterns below.

3 The extraction problem

As stated at the outset, we propose that the source of the EEC is *intervention*. Recall from section 2.2 above that the direct object of a transitive clause in all HIGH-ABS Mayan languages moves to a position above the ergative subject; we take this movement to be triggered by an [EPP] feature on v^0. In this configuration, the direct object establishes an Agree relationship with Infl^0, resulting in Set B morphology. Set B morphology is correctly expected to correlate with the presence or absence of finite Infl^0 in verbal clauses in HIGH-ABS languages (see (15) above); we turn to additional evidence for the high position of objects in section 4.3. The relevant configuration is diagrammed in (35).

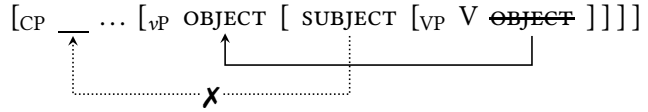
(35) $[_{vP}$ OBJECT $[$ SUBJECT $v^0_{[EPP]}$ $[_{VP}$ V ~~OBJECT~~ $]]]$

In (35), the direct object asymmetrically c-commands the subject, and therefore stands in a more local relationship with probes on higher functional heads. We contend, following previous authors, that this configuration is the source of the ban on Ā-extraction of the ergative subject (Coon et al. 2014; Assmann et al. 2015). By virtue of moving above the subject, the object alone is a licit target for Ā-movement to Spec,CP, schematized in (36). Ergative subject Ā-movement is ill-formed as illustrated in (37), repeated from (5).

(36) *Object can extract*

$[_{CP}$ __ … $[_{vP}$ OBJECT $[$ SUBJECT $[_{VP}$ V ~~OBJECT~~ $]]]]$ ✓

(37) *Subject cannot extract*



Insofar as an intervening DP causes problems for subject extraction, the present analysis is similar to previous analyses of extraction restrictions, for example Campana 1992, Coon et al. 2014, and Assmann et al. 2015 on Mayan and Aldridge 2004, 2008b on Austronesian. Our formalization of exactly what goes wrong departs from these works. Specifically, we claim that the extraction problem arises from conflicting demands on movement imposed the nature of the Ā-probe in Mayan.

Ā-movement is generally taken to obey Relativized Minimality (Rizzi 1990b), and therefore is able to skip over or ignore elements that structurally intervene between an Ā-probe and its accessible goal, but which crucially lack the requisite Ā-feature sought by the probe—for example, the plain object DP in the configuration in (37). Building on the analysis of K'ichean in Levin 2018, however, we claim that (38) holds in Mayan:

(38) Relativized probing in Mayan Ā-movement
The Ā-probe on C^0 is bundled to search for [Ā] and [D] features.

Adopting (38), Ā-probes in Mayan languages are expected to always target the first accessible DP in their c-command domain because all DPs bear [D]-features (see e.g. Nevins 2007, 2011, Béjar and Rezac 2009, Preminger 2014 for discussion of feature-relativized probing). We propose below that it is the combination of (i) movement of the transitive object above the ergative subject as in (37), and (ii) relativization of the Ā-probe to [D], as in (38), that conspire to yield the EEC.

Before we discuss the details, we note that relativization of an Ā-probe to [D] connects to recent work on extraction asymmetries outside of the Mayan family. Legate (2014) proposes that only a single specifier exists at the left edge in Austronesian languages with extraction asymmetries, relating this to a collapsing of Ā and A-positions and their associated features; this connects to her previous work on syntactic ergativity in Dyirbal (Legate 2012), in which she suggests that an Ā-feature driving relativization is "bundled" with Case. In a related vein, Aldridge (2017a,b) argues that Austronesian movement to Spec,CP is driven by φ-features, while Erlewine (2018) (building on proposals on the relationship between T^0 and C^0 in Martinović 2015 and work in Erlewine, van Urk, and Levin 2017) proposes that the locus of nominal case licensing in Toba Batak is a bundled C^0–T^0 head. This line of work blurs the division between the roles and features typically associated with T^0 and C^0 (and relatedly, between A-movement and Ā-movement; van Urk 2015), with potential connections to the notion of Feature Inheritance more generally (Richards 2007; Chomsky 2008; Martinović 2015). Importantly, however, many of these works also relate asymmetries in extraction to a problem of nominal licensing (as in e.g. Coon et al.'s and Assmann et al.'s accounts of Mayan discussed above). For Legate, Aldridge, and Erlewine, only the DP which Ā-extracts may receive abstract structural case (i.e. nominative/absolutive). We will argue in section 4 that in Mayan, nominal licensing cannot be the problem: finite Infl^0 *may* enter into Agree with the object, even when the ergative subject extracts.

In the remainder of this section, we present a formal account of the Mayan EEC which relies on (38), but which crucially does not require reference to nominal licensing; nominal licensing may or may not be independently necessary, and we take no stand on this issue here. In section 3.1, we introduce Coon and Keine's (to appear) derivation of φ-feature-driven hierarchy effects in terms of *feature gluttony*, a configuration in which a probe agrees with multiple goals. While their account focuses on configurations of multiple agreement involving φ-features, we show in section 3.2 how, by extending their analysis to larger feature sets including Ā-features (building on Baier 2018), we can straightforwardly derive the EEC. Specifically, an articulated probe on C^0 causes the probe to enter into Agree with both the subject and the

object in EEC-inducing configurations, resulting in an irresolvable conflict for movement. The nature of the articulated probe—which searches simultaneously for both [uĀ] and [uD] features—is directly relatable to the discussion of Feature Inheritance (or a possible lack thereof) and the blurring of C⁰/T⁰ divisions in the works referenced above. Our focus is on the formalization of the probe and resulting Agree relations, though connections to Feature Inheritance and C⁰–T⁰ relations, as well as the relation to extraction patterns in Austronesian and other languages with extraction restrictions, are all interesting topics for future work; we return to this briefly in section 4.1.. Finally, in section 3.3 we consider adjunct extraction.

3.1 Relativized probing and Feature Gluttony

Coon and Keine (to appear) develop an account of φ-feature driven *hierarchy effects*, or configurations containing two DPs whose grammaticality or surface realization depends on the ranking of the two DPs with respect to some grammatical hierarchy, such 1>2>3 for person, or PL>SG for number. The core intuition of their proposal is that such hierarchy effects are the result of having too much Agree. Specifically, they argue that ungrammatical structures with respect to a particular hierarchy may arise when a probe participates in more than one valuation relation, entering into Agree with multiple goals. They refer to this configuration as *feature gluttony*, illustrated in (39).

(39) *Feature Gluttony* (Coon and Keine to appear)
[Probe^0 [… DP_1 … [… DP_2 …]]]

Feature gluttony is not itself ungrammatical. Instead, Coon and Keine propose that it is the way the grammar processes such a structure that may lead to ungrammaticality. When it comes to morphological agreement, if the probe in (39) copies back different φ-values, this may pose a problem for spell-out during the morphological component. If, on the other hand, the φ-probe induces cliticization, Agree with more than one DP may cause an irresolvable conflict for movement. Below, we extend this to Ā-movement: when the Ā-probe on C^0 enters into Agree with more than one DP, a movement conflict arises—detailed further below—resulting in the EEC. First we examine the system which results in a single probe entering into Agree with multiple goals.

The first necessary ingredient to Coon and Keine's account is the arrangement of features into geometries (Harley and Ritter 2002; Béjar 2003). An abstract feature geometry is given in (40).

(40) $\begin{bmatrix} x \\ | \\ y \\ | \\ z \end{bmatrix}$

Such geometries encode entailment relations among features; features on lower nodes entail the features on higher nodes. A syntactic object specified for a given feature on a hierarchy is also specified for any features the first entails. Thus, given the hierarchy in (40), an element with feature [y] has the feature specification [x[y]], and an element with feature [z] has the specification [x[y[z]]].

Second, Coon and Keine assume that probes may be articulated to varying degrees. In Deal's (2015) terms, probes may vary as to what kinds of features they are *satisfied by*, that is, what kinds of features have to be matched in order for the probe to stop searching for a goal (Béjar 2003; Béjar and Rezac 2009; Preminger 2014). Specifically, following previous work, Coon and Keine assume that complex probes consist of hierarchically organized *segments*, and that these segments are arranged according to the same geometry as the relevant set of features on goals (Béjar and Rezac 2009). Examples of probes that would interact with the hierarchy in (40) are given in (41).

(41) *Articulated probes*

a. $\begin{bmatrix} u\text{x} \end{bmatrix}$ — fully satisfied by any goal bearing [x]

b. $\begin{bmatrix} u\text{x} \\ | \\ u\text{y} \end{bmatrix}$ — fully satisfied by any goal bearing [x[y]]

c. $\begin{bmatrix} u\text{x} \\ | \\ u\text{y} \\ | \\ u\text{z} \end{bmatrix}$ — fully satisfied by any goal bearing [x[y[z]]]

Finally, Coon and Keine's formalization of Agree is given in (42).

(42) Agree (Coon and Keine to appear, 15)
A probe segment [uF] agrees with the closest accessible DP in its domain that bears [F]. If Agree is established, the hierarchy of segments containing [F] is copied over to the probe, valuing and thus removing [uF].

The definition of Agree in (42) states that a segment of a complex probe will enter into Agree with the closest accessible DP that matches it. Importantly, the definition of Agree in (42) allows for different segments on a complex probe to enter into Agree with *distinct* goals. Consider the diagram in (43).

(43) $[\,\text{P}\begin{bmatrix} ux \rightarrow \boxed{1} \\ | \\ uy \rightarrow \boxed{2} \end{bmatrix} \ldots [\,\ldots\,\text{DP}_{[x]\boxed{1}} \ldots [\,\ldots\,\text{DP}\begin{bmatrix} x \\ | \\ y \\ | \\ z \end{bmatrix}\boxed{2}\,]\,]\,]$

In (43), an articulated probe P with the unvalued segments $[ux[uy]]$ probes a structure that contains two DPs. The higher DP bears only the feature $[x]$; the lower DP bears the feature hierarchy $[x[y[z]]]$. By (42), both $[ux]$ and $[uy]$ probe the structure and enter into Agree with the closest goal that contains a matching segment. The segment $[ux]$ thus agrees with the higher DP, while the segment $[uy]$—finding no match on the higher DP—agrees with the lower DP. As a result of these Agree relations between the probe and the two DPs, the feature hierarchies containing $[x]$ and $[y]$ are copied over to the probe, valuing $[ux]$ and $[uy]$. Here, we follow Coon and Keine in depicting feature copying by means of the identifiers $\boxed{1}$ and $\boxed{2}$. So, "$ux \rightarrow \boxed{1}$" encodes that that Agree for segment $[x]$ results in the copying of the feature hierarchy $\boxed{1}$ and the valuation of $[ux]$, and "$uy \rightarrow \boxed{2}$" encodes that that Agree for segment $[uy]$ results in the copying of the feature hierarchy $\boxed{2}$.

The Agree relations in the derivation in (44) result in the feature geometries of *both* DPs being copied back to the probe P. The content of P after these relations is represented as in (44). P in (44) is *gluttonous* because it has agreed with, and hence acquired values from, two DPs.

(44) $P = \left\{ [x]\boxed{1}\,,\ \begin{bmatrix} x \\ | \\ y \\ | \\ z \end{bmatrix}\boxed{2} \right\}$

Crucially, feature gluttony only arises when the lower potential goal is *more* highly specified featurally than the higher potential goal with respect to the probe, as was the case in (43) above. If the lower DP has

fewer features than the higher DP, or an identical set of features, gluttony does not arise.

First consider (45), an example in which the lower DP has fewer of the features sought by the probe. The higher DP matches both segments on the probe, [ux] and [uy], leading to Agree. Because there is no closer DP that matches either segment, P only agrees with a single goal in this structure. The entire feature geometry from the higher DP, [x[y[z]]], is copied over onto the probe. [ux] and [uy] are valued, causing probing to stop.

(45) [P$_{\begin{bmatrix} ux \rightarrow \boxed{1} \\ | \\ uy \rightarrow \boxed{1} \end{bmatrix}}$ … [… DP$_{\begin{bmatrix} x \\ | \\ y \\ | \\ z \end{bmatrix}\boxed{1}}$ … [… DP$_{\begin{bmatrix} x \\ | \\ y \end{bmatrix}}$]]]

Similarly, only a single Agree relationship is established in (46), where both DPs bear identical feature sets, [x]. The probe agrees with the closest DP, leading to copying of [x] and valuation of [ux] on the probe. Even though [uy] remains on the probe, neither DP contains a matching feature [y]. Search for that segment fails and no other Agree is established. Following Preminger (2014), a probe with unvalued features must initiate a search operation, but failure to enter into Agree does not cause the derivation to crash. Consequently, the fact that [uy] is left over in (46) is not fatal.

(46) [P$_{\begin{bmatrix} ux \rightarrow \boxed{1} \\ | \\ uy \end{bmatrix}}$ … [… DP$_{[x]\boxed{1}}$ … [… DP$_{[x]}$]]]

With this system in place, we show in the next section how the system of Agree just sketched can be used to derive the Mayan EEC.

3.2 Extension to the EEC

As shown above, feature gluttony only arises in configurations in which the lower of two DPs in a probe's search domain contains *more* features that match the probe's unvalued segments than the higher DP, creating the opportunity for an articulated probe to enter into Agree with more than one DP. We contend that exactly such an environment exists in configurations of would-be ergative extraction in Mayan, albeit with an expanded set of features. We propose that feature gluttony on C^0 leads to the EEC. Recall that we take the following constraint on Ā-probes to hold in Mayan:

(47) Relativized probing in Mayan Ā-movement
The Ā-probe on C^0 is bundled to search for [Ā] and [D] features.

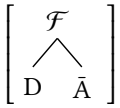
More precisely, we take (47) to mean that the Ā-probe on C^0 in Mayan searches for *both* the feature [D] and one of the features involved in Ā-movement, such as [Wh], [Foc], or [Rel]. Here, we notate this set of features together as [Ā]. In a high-abs configuration, the higher DP object will have the feature [D], while the lower Ā-subject will have both [D] and [Ā] features, giving rise to gluttony, as shown in (48).

(48) *Feature gluttony configuration in Ā-probing*
[C$^0_{[uD,\, u\bar{A}]}$ [… DP.Object$_{[D]}$ … [… DP.Subject$_{[D,\, \bar{A}]}$ …]]]

The question now is how it is possible for C^0 to probe for both [D] and [Ā] at the same time. We suggest that the key to understanding this property is the ability for features to be arranged into geome-

tries. Specifically, following Baier (2018) on anti-agreement effects cross-linguistically, we propose that the feature [D] and the [Ā] in Mayan are part of *the same* feature geometry, which we label $\mathcal{F}$, shown in (49).

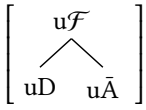
(49) *Feature geometry $\mathcal{F}$*



According to the geometry in (49), the feature [D] entails [$\mathcal{F}$], as does the feature [Ā]. This means that a constituent bearing the feature [D] does not bear just [D], but is specified as [$\mathcal{F}$[D]]. Likewise, a constituent bearing the feature [Ā] is specified [$\mathcal{F}$[Ā]].[10]

XPs bearing these features will therefore match any probe searching for [$\mathcal{F}$]. We propose that the C^0 head involved in Ā-extraction in Mayan bears a fully articulated $\mathcal{F}$-probe, as shown in (50).

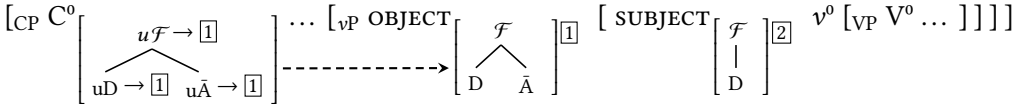
(50) *Probe on C^0 in Mayan Ā-extraction*



As noted above, the idea that Ā-probes may be relativized to a feature like [D] is found elsewhere in recent literature on special extraction patterns. For example, van Urk (2015) argues that in Dinka, C^0 probes for [φ] and [Ā] simultaneously, Legate (2014) and Aldridge (2017a,b) propose that Austronesian movement to Spec,CP is driven by [φ]- or [A]-features, and Erlewine (2018) argues that in the Austronesian language Toba Batak, C^0 and T^0 can be bundled into a single head and probe together. Here we offer a concrete formalization of this joint probing.

The probe in (50), combined with the assumption that the object moves to a position above the subject, is able to derive the Mayan EEC. Consider first what happens in object extraction contexts, shown in (51).

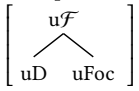
(51) *Object extraction; C^0 agrees with the object*



Here, the probe on C^0 agrees only with the object. This is because there is no closer goal which bears any of the segments of the probe. The complete [$\mathcal{F}$] feature geometry is copied over to the probe, as indicated by the identifiers 1, valuing the matching segments [u$\mathcal{F}$], [uD], and [uĀ] on the probe. Across Mayan, Ā-elements undergo obligatory movement to the left periphery, commonly taken to be Spec,CP. Therefore, after the Agree relation between C^0 and the object DP is established in (51), the object moves to Spec,CP,

[10] We assume that the feature sets [D] and [Ā] are also internally structured. See Abels 2012 and Aravind 2018 for proposals regarding the structure of the [Ā] feature set. Articulation of Ā-features could provide a means of accounting for variation in different types of Ā-extraction patterns. For example, Stiebels (2006) lists some HIGH-ABS Mayan languages as using AF in *wh*-questions and focus, but not in relativization (see also Heaton et al. 2016 and Deal 2016 for cross-linguistic discussion). Patterns in which ergative extraction is restricted in some, but not all, Ā-contexts could be handled by appealing to more fine-grained specifications in the probe's feature structure. Consider the two articulated C^0 probes in (i) and (ii).

(i) *Focus probe restricted*

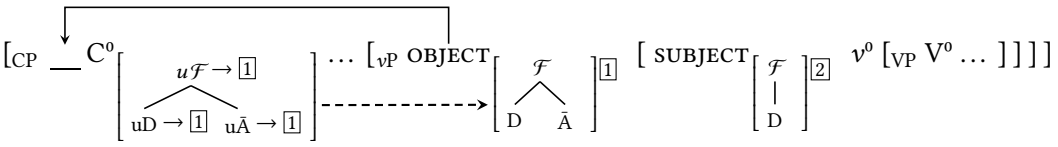


(ii) *Relativization probe unrestricted*

The probe in (i) derives focus movement that is restricted by the EEC because the probe contains the segment [uD] while the probe in (ii) derives relativization that is not restricted by the EEC.

as shown in (52). Object Ā-movement is unproblematic, as C⁰ has entered into only one Agree relation in (52), and therefore there is only one DP that can potentially move to Spec,CP.

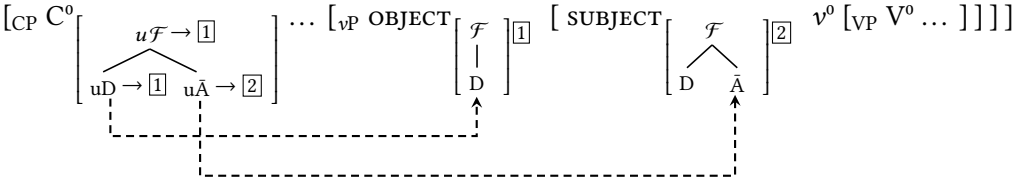
(52) *Ā-movement of the object*



Intransitive subjects, having no intervening DP, extract similarly. With respect to the extraction of transitive *objects* in LOW-ABS languages, we assume that (as in any account of cyclic Ā-movement) these must raise to the phase edge in order to extract and therefore no extraction problem will arise.

Consider next what happens in structures where a transitive subject has an [Ā] feature and the object does not, as in the would-be agent extraction configuration shown in (53).

(53) *Ā-feature located on subject ⟶ gluttony*



In this scenario, the probe on C⁰ agrees with *both* the object DP and the subject DP. The object DP is the closest goal matching segments [uℱ] and [uD] on the probe, and the subject DP is the closest goal matching segment [uĀ] on the probe.[11]

The configuration in (53)—in which a lower element contains more of the features sought by the probe than a higher element—gives rise to feature gluttony. We propose that the ungrammaticality of ergative extraction in the structure in (53) results from conflicting requirements on movement that are brought about by the fact that (i) C⁰ has entered into Agree relationships with two DPs, and (ii) the Ā-probe on Mayan C⁰ requires elements with which it has agreed to undergo movement. This latter requirement is stated in (54), mirroring Coon and Keine's requirement for cliticization.

(54) If a segment of a movement-inducing probe on a head H has agreed with an XP, this XP must undergo movement to the specifier of H.

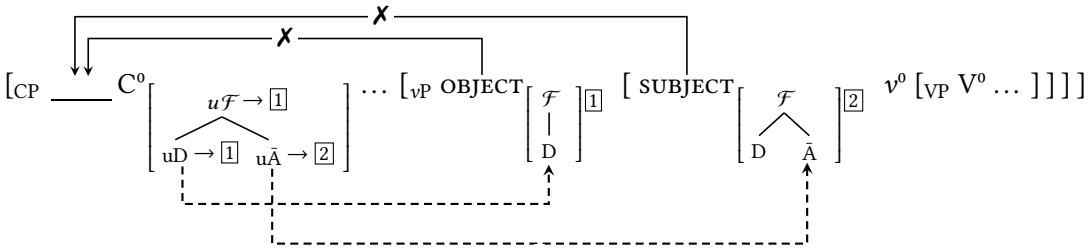
There is broad evidence that the requirement for Ā-elements to move is strong in Mayan. Mayan languages prohibit in-situ *wh*-words in interrogative contexts, and generally disallow multiple *wh*-questions and foci. This generalization appears to be robust across the family; see Aissen 1996 and Polian and Aissen (2020) on Tsotsil and Tseltal; AnderBois and Chan Dzul (2020) on Yucatec Maya; Can Pixabaj (2020) on K'iche'; Mateo Toledo (2020) on Q'anjob'al; Royer (2020a) on Chuj; and Vázquez Álvarez and Coon (2020) on Ch'ol.

The requirement in (54) poses no problem for Ā-probes which are not gluttonous—as in the Ā-object in (52)—but causes an irresolvable conflict in gluttony environments like the one illustrated in (53). Moving only one of the DPs, or moving neither DP, poses a clear violation of (54). A second possibility would be to move the two DPs one at a time: for example, first move the higher object DP, and then next move the lower subject. However, the first step in this sequence would already violate (54). We assume that every

[11] A reviewer asks what happens under our analysis when *neither* the object nor the subject bear [Ā]. We suggest that the C⁰ in extraction contexts is different than the C⁰ in non-extraction contexts, with the later lacking a probe altogether. This avoids concerns of the probe moving [D]-bearing elements to Spec,CP in non-interrogative contexts, and is in line with attested variation between different realizations of C⁰ heads (e.g., interrogative vs. non-interrogative) cross-linguistically.

step in the derivation must be well-formed, and a sequential movement option is therefore also ruled out. Finally, we consider the possibility that both DPs move *simultaneously*. While this would not violate the requirement in (54), simultaneous movement of two DPs would require a Merge operation which connects three elements. We follow standard approaches to Merge which take it to be a binary operation, rendering the structure in (53) ineffable (see Coon and Keine to appear on the same conflict in cliticization). This derives the EEC.

(55) *Ā-feature located on subject ⟶ gluttony*

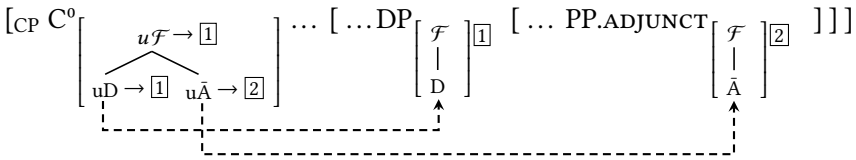


Stepping back, the analysis above formalizes our claim that the EEC is the result of an *intervention* problem. Specifically, in HIGH-ABS languages the DP object raises to a position above the Ā-subject, resulting in a gluttony configuration: the object bears only [D], causing the complex Ā-probe to enter into Agree with both the object and the lower subject. The Mayan Ā-probe mandates that all agreed-with goals undergo movement, an impossibility for two goals which have been agreed with by the same head. In the next section, we examine environments in which transitive subjects can be extracted from regular transitive (non-AF) verb forms. We show that these environments support the intervention-based approach, and we offer a proposal for how our analysis can derive these exceptions to the EEC in terms of relativized probing and feature gluttony. First, however, we briefly address the question of non-argument extraction.

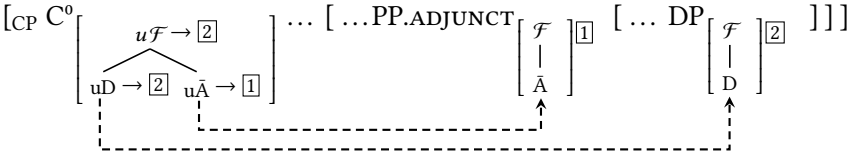
3.3 Adjunct extraction

In the system developed above, an XP which successfully undergoes Ā-extraction must be the only XP with which the complex probe on C⁰ enters into Agree. This state of affairs holds when there is no intervening DP between the probe and the Ā-element, as in licit object extraction in (52). It does not hold in would-be transitive subject extraction, because the object DP intervenes, as in (55). Having captured the asymmetry between subjects and objects, we now turn briefly to adjunct extraction. At least two questions arise with respect to adjunct extraction: (i) is it possible to extract adjuncts across an intervening [D]-bearing element? and (ii) is it possible to *ever* extract non-DP adjuncts? All else being equal, the system laid out above predicts negative answers to both of these questions. With respect to (i), a DP intervening between the complex probe and the Ā-adjunct will enter into Agree with C⁰, causing gluttony, as shown for a low PP in (56). On the other hand, even if the adjunct is high, if it does not itself satisfy the [uD] segment of the probe (for example, it is a PP and does not bear [D]), then the [uD] segment of the probe will enter into Agree with a *lower* DP, again resulting in gluttony, illustrated in (57).

(56) *Ā-feature located on a low PP adjunct with intervening DP ⟶ gluttony*



(57) *Ā-feature located on a high PP adjunct ⟶ gluttony*



We thus predict that extracting adjuncts must themselves bear a [D] feature, and must not be intervened by other [D]-bearing XPs. While we do not offer a full account of adjunct extraction here, several types of data suggest this these predictions are on the right track.

First, consider the case of low adjuncts, generated below one or more of the DP arguments. We assume that all [Ā]-bearing elements generated below *v*P must undergo movement to the edge of *v*P in order to extract, placing them above argument DPs.[12] As potential support for this proposal, note that in some EEC Mayan languages, special verbal morphology is found precisely in contexts of Ā-extraction of *low* adjuncts; see Ayres 1983 on the "instrumental voice" in Ixil, and Henderson 2007, Can Pixabaj 2015, and Mendes and Ranero 2020 for the appearance of a postverbal particle *wi* in contexts of low-adjunct extraction in Kaqchikel and K'iche'. If we take this morphology to signal movement of low adjuncts to a higher *v*P-edge position—either along the lines of Rackowski and Richards' (2005) account of Tagalog "voice" morphology or Mendes and Ranero's (2020) *wh*-copying account—then we have added support for the proposal that the configuration in (56) simply does not arise. Coon et al. (2014, §5.3) also discuss the potential extraction of low adverbs in Q'anjob'al, arguing that preverbal manner adverbs have not extracted, but rather, following Mateo Toledo (2003), serve as predicates embedding a lower clause.

Next consider the potential extraction of a high PP adjunct, positioned above the core arguments as in (57). If a high [Ā]-bearing adjunct does not have a [D] feature, then the [uD] segment of the probe will continue searching and enter into Agree with a DP argument, resulting in feature gluttony. Again, we suggest that this configuration does not arise in Mayan languages: elements which Ā-extract must have a [D] feature. Most oblique nominals in Mayan are introduced by one of a set of *relational nouns*, noted by Grinevald and Peake (2012) to be a "pan-Mayan trait" (see also Coon 2016; Aissen et al. 2017a). These relational nouns function like prepositions insofar as they introduce nominals, "but unlike prepositions they are formally possessed nouns with the following object noun phrase being formally the possessor of the relational noun" (Larsen 1988, 127). Assuming that relational nouns bear [D], they will serve as goals for *both* segments of the complex probe in contexts of Ā-extraction, avoiding a gluttony configuration.[13]

In some Mayan languages, all obliques are introduced with relational nouns (see England 1983, 195 on Mam). However, in addition to relational nouns, many Mayan languages also have a small number of "true" (i.e. non-agreeing) prepositions (Law 2013). In at least some Mayan languages, however, the preposition cannot combine with a DP complement. Aissen (1987, pg. 74, fn. 2) describes Tsotsil's preposition *ta* as tending to combine only with indefinite complements, and both Tseltal's preposition *ta* and Ch'ol's preposition *tyi* are described as incompatible with determiners or demonstratives in their complements (Polian

[12] A reviewer points out that it should in principle be possible for EPP movement to follow successive cyclic movement, thereby placing the absolutive DP in a higher Spec,vP than the extracting adjunct. We suggest that this is ruled out because EPP movement of the object to Spec,vP is A-movement while successive cyclic movement of the adjunct Ā-movement. Assuming that A-movement precedes Ā-movement, the adjunct will always land in a higher Spec,vP. Alternatively, it could be the case that both orders are possible, but only derivations in which successive cyclic movement follows EPP movement converge.

[13] As noted by a reviewer, this analysis also makes the prediction that bare NPs should not be able to Ā-extract if they do not have a [D] feature. For some Mayan languages, like Chuj, bare NPs are not permitted as true arguments (Royer 2019); bare NP internal arguments may be incorporated, but may not extract. In other languages, apparently-bare nominals may undergo focus fronting. We suggest that nominals bearing [Ā] features always have at least a D⁰ layer, possibly covert (see Koopman 2012 for the proposal that focused elements must be DPs in Samoan). Note that some Mayan languages have overt focus particles (see e.g., *are* in (3b), *ha* in (6b), and *re'* in (29); see AnderBois 2017 for general discussion); these particles could plausibly be analyzed as having [D] features. See also footnote 16 below on evidence for covert DPs in relation to bare NPs interpreted as specific. On the related prediction that bare NPs should not *intervene* for extraction of lower DPs, see §4.2.

2013, 666, Vázquez Álvarez and Coon 2020). Dayley (1981, 384) examines environments in which bare NPs appear in Tz'utujil, and notes that the tendency for bare nominals "seems to be strongest in prepositional and relational noun phrases indicating oblique sentential arguments." Robert Henderson (p.c.) confirms that a corpus search of Kaqchikel's preposition *pa* produced roughly 5,000 instances of *pa*, none of which were followed by the determiner *ri*. This does not hold in all languages (e.g. it is easy to find examples of *pa* followed by a determiner in K'iche' in Can Pixabaj 2015). Neverthelss, we tentatively suggest that these apparent P^{0}s in fact bear a [D] feature themselves. This would explain the fact that—at least in some languages—they resist DP complements, and would avoid the problem shown in the configuration in (57) (see Grimshaw 2005 for the claim that P^0 is in the nominal extended projection). Alternatively, it could be that features of the nominal complement to the preposition are accessible to the probe. This topic of course deserves more detailed investigation in the individual languages in question. We note for now that our account above is compatible with general patterns found in Mayan adjunct extraction.

4 Evidence for an intervention-based account

Our account of the Mayan extraction restriction laid out above is based on two main ingredients: (i) an intervention problem caused by the object c-commanding the subject; and (ii) the relativization of the Ā-probe to search for [D] and [Ā] features simultaneously. The present account predicts that transitive subject extraction out of a clause that does not contain an intervening DP object will be licit. This is generally the case in LOW-ABS languages, in which objects remain low and the EEC is absent (§2.2). If on the other hand, in a LOW-ABS language, special factors cause the object to raise above the subject, we predict—all else being equal—that an extraction restriction should arise. We suggest that Tsotsil presents evidence that this prediction is borne out, discussed in appendix A. By the same token, if in a HIGH-ABS language we find specific environments which do *not* involve an intervening DP object, we predict subject extraction to be well formed.

There are three environments in which transitive subjects appear preverbally in HIGH-ABS languages *without* the use of the special AF form, summarized in (58) and examined in turn below. First, when *both* subject and object DPs appear preverbally in SOV order, transitive (non-AF) verb forms are attested. Second, transitive clauses with bare NP objects have been noted to permit ergative subject extraction in some Mayan languages. Finally, constructions with reflexive and "extended reflexive" objects permit transitive subject extraction. In all of these cases, we provide evidence that either (i) the agent has not extracted, or (ii) no DP object intervenes.

(58) *Environments in which the EEC is lifted in HIGH-ABS languages*

a. both subject and object appear pre-verbally, in the order SOV (§4.1)
b. the object is a bare NP (§4.2)
c. the object is a reflexive or extended reflexive (§4.3)

In the remainder of this section we examine these patterns in HIGH-ABS Mayan languages, arguing that they provide support for our intervention account.

4.1 Topicalized subjects and SOV order

In many Mayan languages, both subject and object DPs can appear in preverbal position, with a noted asymmetry: while OSV order requires the use of Agent Focus, SOV order does not. This has been described in a number of K'ichean languages, including for K'iche' (Larsen 1988; Velleman 2014), Tz'utujil (Dayley 1981), Kaqchikel (García Matzar and Rodríguez Guaján 1997; Broadwell 2000), and Sipakapense (Barrett

1999). An example from K'iche' is shown in (59).[14]

(59) a. [$_{\text{SUBJ}}$ Lee ch'oh], [$_{\text{OBJ}}$ atz'yaq] x-ki-k'ux-uj.
DET mice clothes PFV-A3P-eat-TV
'The mice, they ate CLOTHES.' SOV→transitive verb

b. [$_{\text{OBJ}}$ Lee atz'yaq], [$_{\text{SUBJ}}$ ch'oh] x-ee-k'ux-uw-ik.
DET clothes mice PFV-B3P-eat-AF-ITV
'The clothes, MICE ate them.' OSV→AF verb
(K'iche'; Larsen 1988, 335)

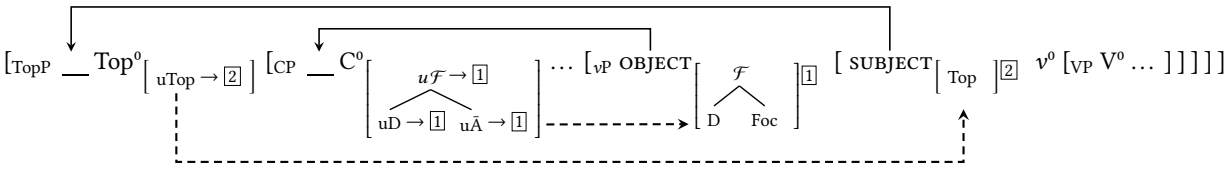
The standard analysis of this alternation is the following: the initial element occupies a topic position, while the immediately preverbal element occupies the focus position (see §2.2, and description of these orders in the works cited above). Since ergative topics are independently observed to not require AF (see example (13b) above), this pattern is expected. The sentence in (59a) involves focus of an object, and no AF is required; (59b) involves focus of the agent, and we correctly predict the AF form of the verb.

The question now becomes: why do preverbal foci require Agent Focus, while preverbal topics do not? Two different solutions to this puzzle present themselves, and given differences in topic positions described by Aissen (1992)—recall the discussion of "internal" and "external" topics in §2.2—we suggest that both may be available in the grammars of Mayan languages. First, for external topics base-generated in a high clause-peripheral position, AF is predicted to not occur because *no extraction has taken place*. Instead, the topic is externally merged to a clause-peripheral position and is co-indexed with a resumptive pronoun in the base argument position (see Aissen 1992 on the ability of external topics to cross island barriers). Q'anjob'alan languages, which feature overt classifier pronouns, provide evidence that this option must be a possibility. Bielig (2015) demonstrates that in SOV configurations, a resumptive classifier pronoun is required in the base position of the subject, as shown in (60).

(60) [$_{\text{SUBJ}}$ Ha ix Elsa$_i$], [$_{\text{OBJ}}$ ha te' k'atzitz] ix-s-xik ***(ix$_i$)**.
TOP CLF Elsa FOC CLF firewood PFV-A3-chop CLF
'As for Elsa, she cuts FIREWOOD.' (Chuj; Bielig 2015, 19)

If, on the other hand, some topics undergo movement to a clause-initial topic position, all that is required under our account is that the probe triggering topicalization *is not* bundled with [uD] in the way that the probe triggering focus movement is. An SOV derivation involving topicalization by movement is sketched in (61).

(61) *SOV: object moves to Spec,CP; subject moves to Spec,TopP*



In the derivation in (61), the high Ā-object first extracts to Spec,CP; because it is the highest DP in the clause, no feature gluttony arises (see (51) above). Next, the Top⁰ head merges with a [uTop] feature which

[14] An anonymous reviewer points out that Assmann et al. (2015, 375) provide an example of OSV in Kaqchikel with a transitive verb form, from their notes. We do not have an explanation of this form, but note that it runs counter to descriptions of Kaqchikel elsewhere in the literature (García Matzar and Rodríguez Guaján 1997; Broadwell 2000). Thanks to Robert Henderson and Rodrigo Ranero for discussion.

will target the subject. Crucially, because the probe is not articulated to search for any other features, it will not interact with intervening material and the subject is free to move.[15]

Though the proposal that [uĀ] but *not* [uTop] features are bundled with [uD] may seem ad hoc, a natural explanation for this pattern arises directly from the fact that the projections housing topics sit *above* CP. Specifically, in connection with the work discussed in section 3 above, which relates Feature Inheritance (or a lack thereof) to Ā-extraction asymmetries in unrelated languages, we take the [uD] feature to be generated on C^0. This feature may be inherited by T^0, as in languages like English, or kept by C^0, as in Mayan languages (Chomsky 2005; Ouali 2008). When C^0 keeps [uD], that feature may be bundled with other probes on C^0. However, because inheritance is always downward, Top^0 will never inherit [uD], and therefore [uD] will never be bundled with [uTop].

In sum, while transitive subjects fronted to Spec,CP require the use of Agent Focus, transitive subjects in the higher topic position do not. Following work which has proposed that only a single focus position exists (Norman 1977; Aissen 1992; Velleman 2014), SOV order necessarily involves an agent in topic position. Two possible analyses were presented for the fact that topics do not trigger AF, compatible with the variation recognized for topics across Mayan languages (Aissen 1992). Either the topic has not extracted in the first place (and so no extraction problem will arise), or the topic has extracted to a distinct projection, triggered by a simplex probe which—searching for only [Top] features—will not cause the feature gluttony problem outlined in section 3.2 above.

4.2 NP complements

The intervention-based approach pursued here receives further support from the behavior of bare NP complements in the HIGH-ABS language K'iche'. Under our account, if the transitive object is an NP, not a DP, it is predicted to not be a viable target for the [D]-relativized Ā-probe, even if it occupies a position in the clause that is structurally superior to that of the subject. As demonstrated by Aissen (2011), transitive clauses with bare NPs in K'iche' permit Ā-movement of the ergative subject. This is shown for a *wh*-subject in (62a) and a negative existential subject in (62b).

(62) a. Jachiin x-u-loq' (*rii) uuq?
WH PFV-A3S-buy DET cloth
'Who bought cloth?'

b. Maj-juun k-u-loq' (*lee) ojeer siik'.
NEG-INDF IPFV-A3S-buy DET old cigarette
'No one is going to buy old cigarettes.' (K'iche'; Aissen 2011, 12)

This pattern of variation is found in K'iche' because K'iche' crucially allows bare NP objects of transitive clauses, in alternation with full transitive DP objects. In many other HIGH-ABS Mayan languages—for example Chuj and Q'anjob'al—bare NP objects trigger an intransitive "incorporation antipassive" construction (Pascual 2007; Coon 2019), independently predicted to permit the agent to extract.

We maintain that the obligatory absence of determiners in (62) indicates that objects in this construction are structurally reduced; they lack D^0 and its concomitant [D]-feature.[16] These objects are nevertheless

[15] Erlewine (2016) discusses multiple extraction patterns in Kaqchikel, including patterns which he analyzes as involving multiple focus positions. He argues that *anti-locality* is responsible for the absence of AF in SOV clauses. The patterns he presents run counter to the generalization noted above that Mayan languages appear to feature a single focus or *wh*-position (Norman 1977; Aissen 1992; Velleman 2014); see Henderson and Coon 2018 for arguments against an anti-locality approach. Nevertheless, if some speakers of Mayan languages do permit multiple foci, we can account for the grammar of such speakers without an appeal to anti-locality, under the proposal that the *trace* of the object would not intervene for ergative subject extraction. See Levin 2018 for details and discussion.

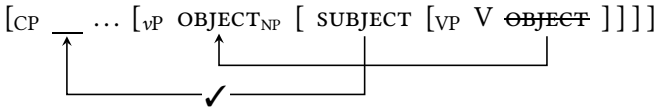
[16] Aissen (2011) presents a fuller picture of the alternation here. Namely, while bare NP objects *permit* ergative subject extraction from a transitive clause, AF constructions are also found with apparently-bare NP objects. Aissen shows that this variation

phrasal. They can be modified by adjectives, as in (62b). In fact, these reduced noun phrases are at least as big as NumP, because they can bear plural marking. In such cases 3rd person plural Set B agreement appears on the verb, as in (63).

(63) Ma jun achi taj k-**e'**-u-b'oq alaj **taq** chee'.
NEG INDF man IRR INC-B3P-A3S-uproot DIM PL tree
'It's not A MAN that is uprooting little trees.' (K'iche'; Aissen 2011, 12, citing López Ixcoy 1997)

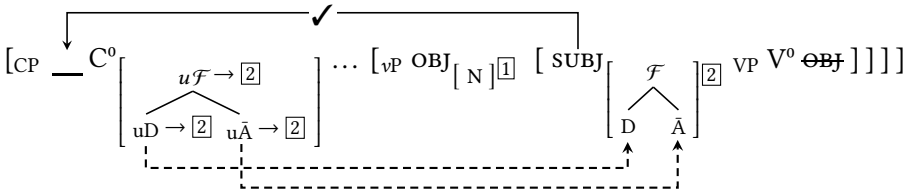
Sentences like those in (63) are important to the analysis proposed here. Recall that the realization of Set B morphology in HIGH-ABS languages like K'iche' requires the transitive object to undergo movement to a position above the transitive subject; from this higher position, the object is able to enter into Agree with Infl^0, resulting in Set B marking (see §2.2). The presence of the 3rd person plural Set B marker *e'*- in (63) indicates Agree between Infl^0 and the bare NP object *has* taken place. This presents a problem for the analysis in Coon et al. 2014, where it is proposed that these bare NP objects permit ergative extraction because they remain in their low base-generated positions. Under the proposal developed here, on the other hand, the bare NP object, just like a full DP object, stands in a more local relationship to higher functional heads, shown in (64).

(64) *Subject can extract if object is NP*



In the proposed structure in (64), the NP object is accessible to the Set B-generating φ-probe on Infl^0, correctly permitting the appearance of a Set B morpheme. However, due to the NP object's lack of a [D] feature, it is *not* an accessible goal for the Ā-probe on C^0, which—as we proposed in section 3—probes simultaneously for [D] and [Ā]. In a configuration with a raised bare NP object, the Ā-probe on C^0 will skip the object entirely, since it bears none of the features sought by the probe, and enter into Agree with the ergative subject. No gluttony arises, as in (65), and ergative extraction is correctly predicted to be possible.

(65) *Subject can move to Spec,CP across NP object*



In sum, the licit Ā-extraction of the ergative subject from a canonical transitive verb in the presence of a structurally-reduced nominal object is expected if DP-intervention is the operative constraint in the EEC. When the high object is a DP, it is targeted by the [uD] segment of the complex probe, resulting in a gluttony configuration and thus ungrammaticality (see (53) above). However when the raised object is *not*

connects to a semantic contrast: in ergative-extraction contexts with bare NP objects, the object is interpreted as nonspecific if the verb is transitive, and as specific if the verb is in the AF form. We suggest that the semantic difference relates to the presence of covert DP structure on specific objects; these specific objects would then intervene in the same way that DP objects with overt D^{0}s would, explaining the requirement for AF in these configurations. The presence of null D^0 structure might also provide an account of Tz'utujil, which permits apparently bare NP objects in transitives, but unlike K'iche' appears to consistently require AF when ergative subjects are extracted. If our analysis is on the right track, we predict that K'iche' permits both DP objects with null D^0 (specific NPs) as well as truly bare NP objects (nonspecific); Tz'utujil would consistently have null DP structure for true transitive objects. Further work is needed to determine if independent support can be found for such a contrast.

a DP, it is a not an eligible goal for the [uD] segment of the complex probe. The probe enters into Agree with only the subject, no gluttony arises, and the EEC is correctly predicted to be lifted.

4.3 Reflexives and extended reflexives

The third environment in which ergative subject Ā-extraction has been described as exceptionally well-formed is when the subject binds the possessor of the object in both reflexive and "extended reflexive" constructions (e.g. Craig 1977; Mondloch 1981; Ordóñez 1995; Aissen 1999, 2011, 2017b; Pascual 2007; Coon and Henderson 2011; Hou 2013; Velleman 2014; Coon et al. 2014). These effects are robust across a number of Mayan languages that display the EEC (see e.g. Aissen 2017b). Examples of ergative subject Ā-extraction from reflexive and extended reflexive configurations in Q'anjob'al and K'iche' are provided in (66) and (67).

(66) *Reflexive objects permit ergative extraction*

a. Maktxel max y-il **s-b'a**?
who PFV A3-see A3-self
'Who saw herself?' (Q'anjob'al; Coon et al. 2014, 225)

b. Aree jun kumatz u-b'aq'ati-m **r-iib'**.
FOC one snake A3S-roll-PERF A3S-self
'A SNAKE coiled itself (around the tree).' (K'iche'; Mondloch 1981, 233)

(67) *Extended reflexive objects permit ergative extraction*

a. Maktxel max s-bon **s-na**?
who PFV A3-paint A3-house
'Who$_1$ painted his$_{1/*2}$ house?' (Q'anjob'al; Coon et al. 2014, 226)

b. Aree lee a Xwaan x-u-k'at **r-aqan**.
FOC DET CLF Juan PFV-A3S-burn A3S-foot
'JUAN$_1$ burned his$_{1/*2}$ foot.' (K'iche'; Mondloch 1981, 237)

Reflexive constructions like those in (66) involve a transitive verb stem and a nominal anaphor, often described as a relational noun or a body-part noun, in object position; the anaphor treated as a 3rd person object insofar as no Set B agreement is visible on the transitive verb. Like other relational nouns, the reflexive noun appears with obligatory Set A marking (recall that Set A prefixes co-index both transitive subjects and possessors). As the examples in (66) show, transitive subjects may Ā-extract from a transitive verb when the object is a reflexive. The so-called "extended reflexives" in (67) appear structurally similar, but the possessed object is a regular (non-anaphoric) nominal (Aissen 1999). In the examples in (67), the subject binds the possessor of the object and a transitive subject again appears Ā-extracted in the absence of AF marking. We contend the in these configurations, too, the bound object does not act as an intervener.

Evidence that it is specifically the *binding* of the object's possessor that is at issue comes from the sentence in (68), a minimal pair with the extended reflexive in (67a) above. In both sentences, the object is the possessed nominal *sna* 'his house'. In (67a), when the verb form is transitive, the object's possessor is interpreted as bound by the subject—an extended reflexive. In (68), the verb is in the AF form and the object's possessor must be interpreted as disjoint from the subject.

(68) Maktxel max bon-on s-na?
who ASP paint-AF A3-house
'Who$_1$ painted his$_{*1/2}$ house?' (Q'anjob'al; Coon et al. 2014, 226)

What we see in the minimal pair in (67a) and (68), therefore, is a difference in the *semantics* of a clause having a *syntactic* effect. That is, in Q'anjob'al the presence of AF morphology on the verb in (68) forces disjoint reference between the subject and the object's possessor, while the presence of a transitive verb

form in (67a) forces a bound interpretation.[17] Our proposal below is designed to capture this interaction between semantic interpretation and syntactic extraction.

Extended reflexive objects display two important properties relevant to our analysis. First, the possible appearance of 3rd person plural Set B morphology on the predicate provides evidence that extended reflexive objects *do* undergo movement to a position above the subject. In Kaqchikel, for example, the possessor of the plural object, *ri rak'wala* 'his children', is bound by *Juan* in (69a) and by the subject *wh*-word in (69b). In both, the object triggers the realization of the overt 3rd plural Set B morpheme *-e*.[18]

(69) a. Ja ri a Juan x-**e**-b'e-ru-kano-j **ri r-ak'wal-a**.
FOC DET CLF Juan PFV-B3P-DIR-A3S-look.for-DTV DET A3S-child-PL
'JUAN$_1$ that went to look for his$_{1/*2}$ children.'

b. Achike x-**e**-b'e-ru-kano-j **ri r-ak'wal-a**?
WH PFV-B3P-DIR-A3S-look.for-DTV DET A3SG-child-PL
'Who$_1$ went to look for his$_{1/*2}$ children?' (Kaqchikel)

We propose that the ability for the bound objects to trigger Set B morphology in (69) indicates that the bound object has, like other objects, undergone movement above the subject, where it establishes an Agree relationship with finite Infl^0 (on par with the bare NPs from §4.2 above). Second, observe that extended reflexive objects in Kaqchikel may be full DPs—not structurally reduced NPs—as evidenced by the presence of the determiner *ri*. The question is thus: how can a raised DP object be accessible to the φ-probe on Infl^0 (permitting the realization of Set B), but then *not* act as an intervener for the Ā-probe on C^0—precisely in contexts in which the subject binds into the object? We propose that semantic binding of the object requires it to reconstruct, removing it as an intervener for the subject.

Before turning to the details of our proposal, we note that this account focuses on extended reflexives, like those in (67) and (69), because the syntactic position of regular reflexives is less clear. Unlike in English reflexives, the anaphoric relational 'self' nouns, like *-b'a* and *-iib'* in (66) do not inflect for number. Therefore, we are unable bring the presence of plural Set B agreement to bear on whether reflexive objects have moved above the ergative subject or not. Moreover, reflexive objects do not appear to be able to co-occur with elements associated with D^0, such as determiners or nominal classifiers, and in some languages they have been noted to necessarily appear adjacent to the predicate, even when the canonical word order is VSO (see Coon et al. 2014 on Q'anjob'al; in VSO Mam, reflexive objects appear verb-adjacent and require the use of antipassive, England 1983).

We thus have multiple viable options for accounting for regular reflexives like the ones in (66). One possibility is that they are structurally reduced, and that the grammaticality of transitive subject extraction is connected to their reduced [D]-less status, as with the NP objects discussed in section 4.2 above, or to the possibility that they never raise above the subject (Ordóñez 1995; Coon et al. 2014; Royer 2020b). Alternatively, they could be full DPs, but as with extended reflexives discussed below, they are required to reconstruct to their base position below the subject for binding purposes. Multiple options may exist within Mayan, and we note that any of these possibilities are correctly predicted to obviate the EEC.

4.3.1 Proposal: reconstruction feeds subject extraction

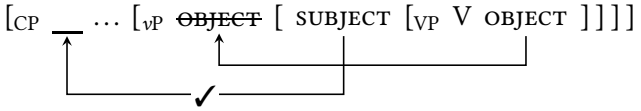
We claim that while the EPP-driven movement of the object to its position above the subject is necessary to trigger the realization of Set B morphology, as in (69) above, it is problematic from the point of view of

[17] Similar alternations can be found in some of the languages above, while in some other languages, AF is described as optional in bound contexts (see Aissen 2017b, 747). We return to how to capture this optionality in our analysis of AF in section 5.

[18] We are grateful to Filiberto Patal Majzul and Rodrigo Ranero for Kaqchikel data and discussion of these patterns. Similar data cannot be replicated in Q'anjob'alan languages where 3rd person plural DPs do not trigger Set B morphology on the predicate (see e.g. Mateo Toledo 2008).

binding. In order to be bound by the subject, the high object must reconstruct to its base position. In these scenarios, the higher copy of the object is deleted *before* C⁰ probes, meaning that the higher copy does not act as an intervener to that probe, as shown in (70).[19]

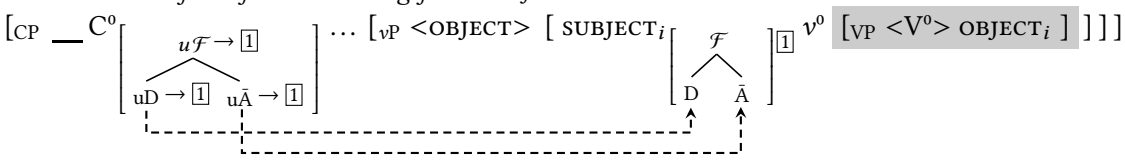
(70) *Object reconstruction for binding feeds subject extraction*



Specifically, our proposal relies on the following assumptions about the nature of phases and spell-out to the interfaces. First, we assume that the Phase Impenetrability Condition (PIC) reduces to transfer to the interfaces: until a domain has been transferred, anything in that domain is visible to probes on heads outside it. Second, following Chomsky (2001), we take the spell-out of a phase to be delayed until the next phase head is merged. Here, this means that the *v*P phase is not spelled out until C⁰ is merged, and therefore anything inside *v*P is potentially accessible to the probe on Infl⁰. We assume that after spell-out, the phase head complement is transferred to the interfaces, thereby becoming inaccessible to higher operations (the phase head and its specifiers remain accessible). Finally, to derive the invisibility of reconstructed copies to the probe on C⁰, we propose that reconstruction occurs during spell-out of a phase. Specifically, when a phase is spelled out, chains in that phase are evaluated, and all but one copy in a chain is deleted. We assume that by default the highest copy in a chain will be kept and lower copies will be deleted. However, in the case when a lower copy is necessary for legibility at LF, a higher copy may be deleted. This is exactly what happens in the case of reconstruction for reflexive binding at issue here.

This proposal derives the circumvention of the EEC by extended reflexive objects in the following way. First, the bound object in question undergoes the usual EPP-driven movement to the edge of *v*P. Second, Infl⁰ is merged and probes, finding the object in the higher specifier of *v*P and triggering Set B morphology (as in (69) above). Next, C⁰ is merged, triggering the spell-out of the *v*P phase; the higher copy of the object is deleted while the lower copy is kept for binding by the subject. Therefore, the higher copy of the object is *not* a licit target for the articulated probe on C⁰, as shown in (71). Once the *v*P phase has been spelled out, the phase head v^0 and its complement are invisible to further operations (indicated by shading in (71)). Specifiers at the phase edge remain accessible; recall that the verb moves to the head of the phrase hosting the status suffix, above *v*P.

(71) *Reconstruction for reflexive binding feeds subject extraction*



In (71), the articulated probe on C⁰ agrees only with the subject DP, which matches and removes [uD] and [uĀ] from the probe. Neither copy of the object DP is a licit target for C⁰: the higher copy has been deleted, and the lower copy is inside the phase head complement of v^0, VP, which has been transferred to the interfaces.[20]

[19] Note that subsequent movement of the subject to a higher position above the object—i.e., Spec,CP—will not suffice for binding. Movement to Spec,CP is uniformly Ā-movement, which does not create new antecedents for binding.

[20] Note that this theory of reconstruction applied equally to all languages would make the wrong prediction for the grammaticality of English object extraction in ditransitives like (i):

(i) [Which picture of herself$_1$] did you give Mary$_1$ ___?

Under standard assumptions regarding the structure of double object constructions, the indirect object *Mary* is merged higher than the direct object; the *wh*-phrase direct object subsequently moves over *Mary* to Spec,*v*P to be eligible for Ā-extraction. At

4.3.2 Further predictions and evidence for object raising

Because semantic binding is the relevant factor in causing reconstruction, our account makes two predictions. First, we might expect reconstruction to be forced in more complex constructions involving bound pronominals inside raised objects, such as when the subject binds into a relative clause modifying the object. This is true in Chuj—but only if the object is also possessed by a bound possessor. If the object is unpossessed, or has an unbound possessor, the AF form is required. Extraction of an ergative *wh*-word from a transitive verb is shown in (72) (the presence of absence of the -TV status suffix is governed by whether there is the following pronoun is overt or null; Royer to appear).

(72) Mach$_1$ ix-y-awt-ej [ch'anh **s**-libro $\boxed{\text{Ø}_1/{}^{*}\text{ix}_2}$ [$_{\text{RC}}$ ix-s-man(-a') $\boxed{\text{Ø}_1/\text{ix}_2}$]]?
who PFV-A3-read-DTV CLF A3-book PRON PFV-A3-buy-TV PRON
'Who$_1$ read her$_{1/*2}$ book that she$_{1/2}$ bought?' Chuj

Chuj is an especially good language in which to test this contrast, because there is an independent difference visible in bound versus unbound pronominals. While most Mayan languages are robustly *pro*-drop, Q'anjob'alan languages like Chuj possess a series of nominal classifiers which function like pronouns (Craig 1986; Zavala 2000). In Chuj, nominal classifier pronouns like the feminine *ix* in (72) are generally obligatory in definite contexts (Royer 2019), but are impossible in bound pronominal contexts; in (72) the overt classifier forces a nonbound interpretation. In (72) we observe that a bound possessor for the head of the relative clause is required for the transitive form of the verb, regardless of the interpretation of the subject pronoun in the relative clause. We suggest that this receives a natural explanation under the assumption that the relative clause is itself a phase, and/or the relative clause is merged late (Lebeaux 1988; Takahashi and Hulsey 2009); material inside the relative clause would thus not have an effect on object reconstruction.

Second, the analysis proposed above makes a prediction about binding and the Ā-extraction of *objects*. Specifically, because an object into which the subject binds must be spelled out in the *v*P phase (see (71)), bound objects should themselves be banned from undergoing regular Ā-extraction to Spec,CP. Data from several languages with the EEC initially appear to provide striking confirmation for this prediction.[21] First consider extraction of a non-bound object in VOS Chuj, shown in (73).

(73) [Mach te' pat]$_i$ ix-s-chonh ___$_i$ [ix Malin]?
WH CLF house PFV-A3-sell CLF Malin
'Which of the houses did Malin sell?' (Chuj)

the point C^0 is merged, the structure of the lower phase in (i) is analogous to (71): the bound object is higher than its binder and therefore should have to reconstruct. However, this would make the object inaccessible to the Ā-probe on C^0, meaning further Ā-movement to Spec,CP should be ungrammatical.

We caution here, however, that the theory of reconstruction adopted to explain extended reflexive effects need not be a general theory of reconstruction in all languages. Rather, we contend that in Mayan languages that display amelioration of the EEC in the presence of extended reflexives, *both* LF and PF must privilege the lower copy. It is this simultaneous LF- and PF-privileging of the lower copy that renders the higher copy as an illicit agreement target. We will see additional evidence for a tight coupling between LF- and PF-realization for higher copies in (76) below, and this is in line with the more general observation that scope-bearing elements must overtly raise to Spec,CP in Mayan languages. We take the many well-known cases, including (i), of reconstruction effects in English to indicate that the LF/PF-coupling in English is looser, and therefore maintain that the higher copy of the bound direct object need not be deleted at spell-out of the *v*P. We thank Ethan Poole for raising this concern, and leave further discussion of the implications of this proposed cross-linguistic variation to future investigation.

[21]We are grateful to Magdalena Torres and Mateo Pablo for discussion of Chuj in this section; to Telma Can Pixabaj for K'iche; to Juan Jesús Vázquez Álvarez and Morelia Vázquez Martínez for Ch'ol; to Jaime Pérez González for Tseltal; to Henry Sales and Tessa Scott for Mam; to Hugo Héctor Vázquez López for Tojol-ab'al; and Judith Aissen and Justin Royer for discussion of these patterns more generally.

If we add a bound possessor to the object, object extraction becomes ungrammatical, as shown in (74a) (a minimal pair with the grammatical (73)). Recall from (72) that bound possessors must be null in Chuj, represented as 'Ø'. If an overt classifier appears in possessor position, the sentence is grammatical—but now the possessor of the object must be interpreted as disjoint from the subject, shown in (74b).

(74) a. *[Mach te' **s**-pat Ø$_1$]$_i$ ix-s-chonh ___$_i$ [ix Malin]$_1$?
WH CLF A3-house PRON PFV-A3-sell CLF Malin
intended: 'Which of her$_1$ houses did Malin$_1$ sell?'

b. [Mach te' **s**-pat **ix**$_2$]$_i$ ix-s-chonh ___$_i$ [ix Malin]$_1$?
WH CLF A3-house PRON PFV-A3-sell CLF Malin
'Which of her$_{2/*1}$ houses did Malin$_1$ sell?' (Chuj)

In order to express the intended meaning in (74a), with an interpretation in which the subject binds into an object which has extracted, we find sentences like the one in (75).

(75) [Mach te' s-pat ix Malin$_1$]$_i$ ix-s-chonh-o' ___$_i$ [Ø$_1$]?
WH CLF A3-house CLF Malin PFV-A3-sell-TV PRON
'Which of her$_1$ houses did Malin$_1$ sell?' (lit.: 'Which of Malin's$_1$ houses did she$_1$ sell?') (Chuj)

These data initially appear to follow directly from the theory of reconstruction we sketched above: objects into which the subject binds cannot extract because the higher copy at the edge of *v*P is deleted, and therefore the probe on C^0 will never be able to access that copy for extraction. Instead, an R-expression is base-generated in the object, object reconstruction is not forced, and the object may now extract. In the remainder of this section, we show that things are more complicated than this. The result is that while forms like (75) have no direct bearing on our reconstruction account, they *do* provide striking support for object raising, and thus for a deep syntactic division between LOW-ABS and HIGH-ABS Mayan languages (Royer 2020b).

First, as pointed out by a reviewer, note that the examples in (74)–(75) could involve accidental coreference, rather than true semantic binding. Ideally, we would want to test sentences of the form: *Which of her$_1$ books did [every girl]$_1$ read?*, in which a quantificational subject binds a variable in the object. But here we run into a confound: quantificational elements which bind variables must front to the *same* preverbal focus position that Ā-extracted elements occupy. In (76a), for example, the quantificational *masanil* forces the subject to appear fronted in an AF form; leaving the quantifier in postverbal subject position results in ungrammaticality, as in (76b). Because only a single focus position exists, sentences in which *an object containing a bound variable fronts to Spec,CP* seem to be simply ineffable, at least in Chuj.

(76) a. [$_{SUBJ}$ Masanil heb' ix ix]$_i$ ix-y-awt-ej [$_{OBJ}$ ch'anh s-libro Ø$_i$] ___$_i$.
every PL CLF woman PFV-A3-read-DTV CLF A3-book PRON
'Every woman$_1$ read her$_1$ book.'

b. *Ix-y-awt-ej [$_{OBJ}$ ch'anh s-libro Ø$_i$] [$_{SUBJ}$ masanil heb' ix ix].
PFV-A3-read-DTV CLF A3-book PRON every PL CLF woman
intended: 'Every woman$_1$ read her$_1$ book.' (Chuj)

We have not yet been able to test this across a wider range of HIGH-ABS Mayan languages, and this is an important topic for future work.

Second, there is reason to believe that a more general constraint holds, accounting for the surprising distribution of overt and null arguments in the sentence in (75). Aissen (2000) argues—drawing on Craig (1977) and Hoekstra (1989)—that for the closely related Q'anjob'alan language Popti', *linear precedence*

governs the distribution of null anaphoric pronouns. Specifically, Aissen proposes a prosodic constraint, which requires the anaphoric null pronoun to *linearly follow* its antecedent nominal in a specific domain: the intonational phrase. As Aissen shows for Popti', and Royer (2020b) confirms for Chuj, no c-command relation is necessary between the two co-indexed nominals:

(77) Tz-s-cham-k'ol-ej [$_{\text{OBJ}}$ nok' s-tz'i' **ix** **Malin**] [$_{\text{SUBJ}}$ ix ix ix-lolon y-et'ok **Ø**].
IPFV-A3-die-stomach-DTV CLF A3-dog CLF Malin CLF woman PFV-speak A3-with PRON
'The woman that spoke with Malin$_1$ likes her$_1$ dog.' (Chuj)

Royer (2020b) makes two important advances beyond Aissen's initial proposal. First, he demonstrates that the surface constraint against cataphora is not limited to the distribution of null versus overt classifiers in Q'anjob'alan languages. Rather, it appears to be a more general feature of HIGH-ABS Mayan languages, as shown by the Mam and Kaqchikel examples in (78). These examples mirror the Chuj sentence in (75) above: when coreference obtains between the subject and the possessor of the fronted object, the overt nominal must appear as the (linearly-first) possessor, and the subject must be null.

(78) a. [$_{\text{OBJ}}$ A t-chej Xwan$_1$]$_i$ o tz'-ok t-b'yo-'n [$_{\text{SUBJ}}$ Ø$_1$] ___$_i$.
DET A3S-horse Juan PFV B3S-DIR A3S-hit-DS PRON
'Xwan$_1$ hit HIS$_{1/*2}$ HORSE.' (San Juan Atitan Mam; HIGH-ABS)
b. [$_{\text{OBJ}}$ Ja ri ru-wakx ri xta Ana$_1$]$_i$ x-u-k'ayi-j ___$_i$ [$_{\text{SUBJ}}$ Ø$_1$].
FOC DET A3S-COW DET CLF Ana PFV-A3S-sell-DTV PRON
'Ana$_1$ sold HER$_{1/*2}$ COW.' (Kaqchikel; HIGH-ABS)

Strikingly, the reverse pattern holds in LOW-ABS languages like Ch'ol and Tojol-ab'al in (79). Here, the null pronoun appears in the possessor position of the fronted object, and the postverbal coreferential subject is overt. Reversing the null and overt nominals results in an obligatorily disjoint interpretation.

(79) a. [$_{\text{OBJ}}$ Ja' ja s-wakax Ø$_1$]$_i$ x-chon-a ___$_i$ [$_{\text{SUBJ}}$ ja Jwan-i'$_1$].
FOC DET A3-COW PRON A3-sell-TV DET Jwan-DET
'Jwan$_1$ sold HIS$_{1/*2}$ COW.' (Tojol-ab'al; LOW-ABS)
b. [$_{\text{OBJ}}$ I-wakax Ø$_1$]$_i$ tyi i-choñ-o ___$_i$ [$_{\text{SUBJ}}$ aj-Ana$_1$].
A3-COW PRON PFV A3-sell-TV CLF-Ana
'Ana$_1$ sold HER$_{1/*2}$ COW.' (Ch'ol; LOW-ABS)

Second, Royer (2020b) argues that the constraint against surface cataphora holds in HIGH-ABS languages precisely because the object has raised to a position above the subject. Assuming this movement to be A-movement, and following work which takes A-movement to not necessarily reconstruct (Chomsky 1995; Lasnik 1999), this results in *the absence of a c-command relation between the subject and the possessor of the object* in HIGH-ABS languages. Precisely when no c-command relation can be established between two coreferring nominals, a surface condition deletes the linearly second of the two arguments. This proposal follows closely the spirit of Aissen's, but provides an explanation as to *why* linear precedence should play a role in the distribution of arguments and anaphors in some Mayan languages, but not others. In LOW-ABS languages, the object remains low and the possessor is c-commanded by the subject. Assuming that DPs which can be interpreted as bound variables must be (Reinhart 1983; Grodzinsky and Reinhart 1993), we derive the fact that the null bound variable surfaces in object position in Ch'ol and Tojol-ab'al in (79).

Finally, Royer (2020b) argues that traditional semantic binding under c-command need not be abandoned in HIGH-ABS languages. When objects contain an element which must *necessarily* be interpreted as a bound variable, they either (i) are forced to reconstruct, permitting extraction of the subject which semantically binds them as in the extended reflexives in (67), or (ii) remain in their base positions, as he

argues is the case for reflexive objects in Chuj.

4.3.3 Tying together binding, anaphora, and extraction

We began with the widely attested observation that transitive subjects which semantically bind into an object may exceptionally undergo Ā-extraction from a transitive verb form, circumventing the EEC in a variety of HIGH-ABS languages. For extended reflexives, the possibility of Set B agreement with the object in forms like (69) provides evidence that the object undergoes the regular EPP-driven movement above the subject; this led us to propose that it is *reconstruction* of the object that permits ergative extraction. Specifically, when the raised object in a HIGH-ABS language contains an element which must be interpreted as a bound variable, it reconstructs when the *v*P phase is spelled out, deleting the higher copy. As a result, because the Ā-probe on C^0 does not have access to the higher copy of the object, no gluttony arises, and the subject successfully extracts.

Importantly, this occurs just in cases of variable binding, not coreference. Investigation of coreference patterns between subjects and the possessors of objects in section 4.3.2 was argued to support our account, albeit indirectly. Specifically, while we cannot test whether an object with a *bound variable* possessor can extract (because the binder in subject position must itself occupy Spec,CP; see (76)), we observe that when an object with a possessor that *corefers* with the subject appears in Spec,CP, a surprising pattern appears in HIGH-ABS languages. Namely, a surface constraint against cataphora mandates that only the linearly first of coreferring expressions in a specific prosodic domain be pronounced (Aissen 2000; Royer 2020b). Royer (2020b) connects this constraint precisely to the difference in the syntactic difference between HIGH-ABS and LOW-ABS languages: in HIGH-ABS languages, no c-command relationship can be established between a possessor in the A-moved object and the lower subject. While objects must reconstruct in cases of true semantic binding, they do not reconstruct under coreference. The reversal in anaphora patterns between HIGH-ABS languages and LOW-ABS languages in (78)–(79) thus provides further support for a deep syntactic difference between two types of Mayan languages. We expand our table from (17) above to that in (80).[22]

(80) *HIGH-ABS vs. LOW-ABS languages*

	LOW-ABS	HIGH-ABS
source of Set B	v^0	Infl^0
Set B available in nonfinite clauses?	yes	no
ergative extraction constraint?	no	yes
surface constraint against cataphora	no	yes

Finally, while we are unable to expand this investigation outside of the Mayan family in the present work, we note that in Chamorro, an Austronesian language with an EEC, transitive subjects are described as exceptionally extractable precisely when the object contains a bound pronoun (Chung 1989, discussed in Campana 1992, 113), and that linear precedence plays a role in the distribution of anaphoric pronouns in Chamorro (Chung 1989).

[22] A reviewer asks about other binding predictions we might make for HIGH-ABS Mayan languages. For example, given that the raised object c-commands the ergative subject, can a reflexive anaphor appear in subject position? To our knowledge, this is impossible in Mayan languages, however, we contend that this is independently predicted. The Anaphor Agreement Effect (Rizzi 1990a) is the observation that reflexive anaphors do not occur in syntactic positions construed with agreement. Since transitive subjects and possessors across Mayan trigger obligatory Set A agreement, the absence of ergative reflexives as subjects bound by c-commanding objects or possessors of subjects bound into by c-commanding objects is independently expected (recall that 3rd person Set B agreement never has an overt reflexive, making it impossible to determine whether agreement occurs with reflexive objects). Furthermore, 'picture of' noun phrases are not attested in Mayan. It is thus also independently expected that logical possessors realized as complements to noun phrases that could serve as potential anaphors in the absence of Set A agreement should not exist.

4.4 Interim summary and comparison with other accounts

In section 3, we proposed that the ergative subject is restricted from undergoing Ā-extraction in HIGH-ABS languages because the object has moved above it (see (37)). This configuration permits finite Infl^0 to enter into Agree with the object (§2.2), but it also makes the object a more local goal for the [D]-relativized Ā-probe (see (38)). If, as we propose, this intervention by the object explains the ungrammaticality of ergative subject Ā-extraction, we expect to find instances of exceptionally well-formed ergative subject Ā-extraction just in case the transitive object does *not* act as an intervener. In this section, we investigated three environments in which ergative subject Ā-extraction is exceptionally well-formed: sentences with topicalized subjects (§4.1); transitives with bare NP objects (§4.2); and transitives in which the subject binds into the object (§4.3). In the first environment, we noted that topics occupy a distinct clause-initial position. In some languages, they are base-generated high; in others, they may undergo movement, but driven by a nonarticulated probe. Either way, the EEC is predicted to not hold. For the latter two environments, we proposed that both cases provide evidence that *intervention of a DP object* is behind the EEC.[23]

Not only do the facts discussed in section 4 lend support to the idea pursued here, they also prove problematic for alternative accounts of the EEC in Mayan. These previous accounts fall into two main groups: (i) the nature of the *ergative subject* prevents extraction; and (ii) ergative extraction creates a problem for *licensing of the object*.[24] In the interest of space we do not summarize these alternatives in full, but briefly highlight the issues raised by the facts above.

[23]One environment not discussed above is the behavior of ergative subject extraction from transitive clauses that take a CP-complement. We might imagine that, like bare NP-complements, CP-complements would permit ergative subject Ā-movement, because CPs, like NPs, lack [D]. This is not the case. Ergative subject extraction from clauses with CP-complements employ AF, as shown (i). Corresponding examples without AF are ungrammatical, as in (ii).

(i) a. Achike x-b'i-**n** [chin ri a Juan yawa]?
WH PFV-say-AF COMP DET CLF Juan sick
'Who said that Juan is sick.' (Kaqchikel; Erlewine 2013, 43)

b. Maktxel max hal-**on** [tol max toj ix Anixh]?
who PFV say-AF COMP PFV go CLF Anixh
'Who said that Anixh left?' (Q'anjob'al; Pedro Mateo Pedro p.c.)

(ii) a. *Achike x-u-b'ij [chin ri a Juan yawa]?
WH PFV-A3S-say COMP DET CLF Juan sick
'Who said that Juan is sick.' (Kaqchikel; Erlewine 2013, 43)

b. *Maktxel max y-al [tol max toj ix Anixh]?
who PFV A3-say COMP PFV go CLF Anixh
'Who said that Anixh left?' (Q'anjob'al; Pedro Mateo Pedro p.c.)

At first blush, this behavior would appear problematic for the present account. Lacking a [D]-feature, CP-complements should not intervene. Nevertheless, there a few ways to understand this apparent contradiction. It may be the case that CPs are DPs (e.g. Rosenbaum 1967, Emonds 1976, Davies and Dubinsky 2000); note for example that in Mayan, *wh*-possessors obligatorily appear preceding the head noun, on par with the obligatorily preverbal position of Ā-elements in the CP (Aissen 1996; Coon 2009). Alternatively, CPs might be base-generated in Ā-positions and be co-referential with a DP in argument position (e.g. Alrenga 2005, and Royer to appear on Chuj specifically). On either of these views, transitive clauses with putative CP complements should behave identically to those with DP complements, blocking ergative subject extraction.

[24]One recent analysis not discussed here at all is Erlewine's (2016) anti-locality account of the EEC. See Henderson and Coon 2018 for a critique of that proposal. We similarly do not provide a detailed discussion of the account in Stiebels 2006, though see appendix A. Newman (2020) argues that the EEC is only superficial: transitive subjects extract in the same way other arguments do, but *morphological* interactions between agreement and extraction result in different surface forms (i.e. transitive vs. AF stems). While this captures the basic alternation, it is less clear how to link the variation we find in AF between Q'anjob'alan and K'ichean, discussed in §5. Finally, Tollan and Clemens (2019) propose in recent work that the EEC arises due to a grammaticalized processing constraint against crossing movement dependencies. Specifically, they adopt the same background assumption that in EEC-exhibiting Mayan languages, the object has raised to a position above the ergative subject. Ā-movement of the subject to Spec,CP would then create a crossing dependency. Though fundamentally different in approach, the core pieces of their analysis are compatible with ours insofar as intervention by the moved object is taken to underlie the basic cases of the EEC.

First, it has been claimed that in at least some languages with syntactic ergativity effects, like the EEC, should be attributable to properties of the ergative subject itself (Deal 2016; Polinsky 2016). Under these accounts, some ergative subjects are proposed to not be viable targets for Ā-probes. This could be because ergative subjects are embedded inside an inaccessible PP (possibly with a null P^0; Polinsky 2016), or because ergative subjects do not meet the case discrimination requirements of Ā-probes (Deal 2016). The exceptional cases considered above are problematic for the application of such analyses to Mayan languages. These demonstrate that extracting ergative subjects is not, in and of itself, a problem. Rather, the availability of ergative subject extraction is sensitive to the nature of the *direct object* (see also discussion in Henderson and Coon 2018). Under proposals which attribute ergative extraction restrictions to properties of the ergative DP, the exceptional well-formedness of ergative subject Ā-extraction in environments in which the object is a non-intervener—as with NP objects and bound objects in sections 4.2 and 4.3 above—is not expected.

The licensing-based accounts of Coon, Mateo Pedro, and Preminger (2014) and Assmann, Georgi, Heck, Müller, and Weisser (2015) also face problems in accounting for the data above. In both accounts, the EEC is connected to the licensing needs of the object. For Coon et al. (2014), the movement of the object above the subject is required in order for the object to be licensed by Infl^0, but results in the lower subject being trapped inside the *v*P phase. For Assmann et al. (2015), all DPs must pass through Spec,InflP en route to Spec,CP; if the transitive subject moves through Spec,InflP, however, it *maraudes* the licensing abilities of Infl^0, leaving the object without an available licenser. For both accounts, extraction of the ergative subject is predicted to be incompatible with the object entering into Agree with Infl^0. The crucial data points from above are repeated in (81); in both, the subject has extracted from a full transitive clause and the object triggers Set B (3rd plural) marking on the verb. Taking Set B to indicate that Agree with Infl^0 has taken place, and given that these accounts take Infl^0 to be the source of object licensing, these sentences demonstrate that ergative extraction should not be incompatible with object licensing.

(81) a. Ma jun achi taj k-**e'**-u-b'oq **alaj taq chee'**.
NEG INDF man IRR INC-B3P-A3S-uproot DIM PL tree
'It's not a man that is uprooting little trees.' (K'iche'; =(63))

b. Achike x-**e**-b'e-ru-kano-j **ri r-ak'wal-a**?
WH PFV-B3P-DIR-A3S-look.for-DTV DET A3SG-child-PL
'Who$_i$ went to look for his$_{i/*j}$ children?' (Kaqchikel; =(69b))

Coon, Mateo Pedro, and Preminger's account focuses on Q'anjob'al, where similar facts are independently unavailable. However, if a unified account of the Mayan EEC and AF is desired, these facts show that nominal licensing is not a viable approach.

5 How AF circumvents the EEC

Finally, we turn to the Agent Focus construction and how it circumvents the EEC. To foreshadow, we propose that the AF morpheme is the realization of a special v^0/Voice^0 head (v^0_{AF}). While regular transitive v^0 (v^0_{TV}) triggers raising of the object above the subject in HIGH-ABS languages, v^0_{AF} does not. As a result, the movement conflict described in section 3 does not arise.

While some properties of AF are shared across the family, there are also important points of variation, which we attribute to differences in the details of the features on v^0_{AF}. We begin here in section 5.1 with a short review of the properties that a successful account of AF must handle, and sketch an analysis of what the v^0_{AF} heads have in common across Mayan languages which exhibit the EEC. We turn to the details of the Q'anjob'alan AF construction in 5.2, followed by K'ichean Proper in 5.3.

5.1 Shared AF properties

The core properties of AF to be accounted for are repeated in (82).

(82) *Characteristics of Mayan Agent Focus*

a. AF is used when the transitive subject is Ā-extracted;
b. AF constructions involve dyadic predicates in which neither subject nor object DP is oblique;
c. Set A (ergative) φ-marking is absent;
d. a special Agent Focus suffix appears on the stem;
e. if a status suffix appears, it is an intransitive status suffix.

As noted at the outset, this section focuses on AF in languages of the K'ichean Proper and Q'anjob'alan branches of the Mayan family. This is due first to the fact that most recent work on AF and the EEC focuses on these languages, and second to the observation that for some other Mayan languages, constructions used to extract agents appear to be *intransitive* (e.g. Poqom and Q'eqhchi'; see §2.3 above). While these antipassive constructions are interesting in their own right, given the independent extractability of intransitive subjects, they do not pose a puzzle for how the EEC is circumvented.

Q'anjob'al and K'iche' AF constructions are shown in (83).

(83) *Agent Focus*

a. A naq Xhwan max-ach kol-**on**-i?
FOC CLF Xhwan PFV-B2S help-AF-ITV
'XHWAN helped you.' (Q'anjob'al; Mateo Toledo 2008, 334)

b. Are ri sis x-in-ti'-**ow**-ik.
FOC DET coati PFV-B1S-bite-AF-ITV
'THE COATI bit me.' (K'iche'; Can Pixabaj 2004, 55)

Both constructions in (83) share all of the properties in (82) above: AF is used only when the transitive subject is Ā-extracted (here for focus), and neither subject nor object appears demoted. Focusing on the stems themselves, we find that Set A marking is absent entirely, an AF suffix appears on the stem, and the intransitive status suffix appears stem-finally.

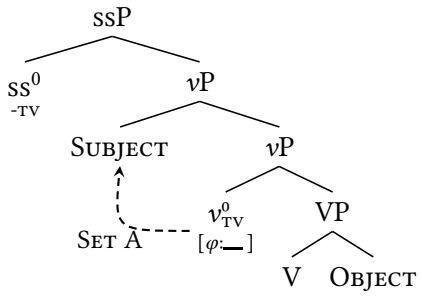
An important point of variation, discussed in section 2.3 above, concerns *which* DP the Set B morpheme co-indexes, repeated in the summary table in (84). In Q'anjob'alan, the Set B morpheme consistently tracks the object. In K'ichean Proper, on the other hand, Set B is hierarchically governed. In (83b) Set B tracks the 2nd person object, but Set B may also track the subject if it is higher ranked, discussed further in section 5.3 and appendix B below.

(84) *AF agreement patterns*

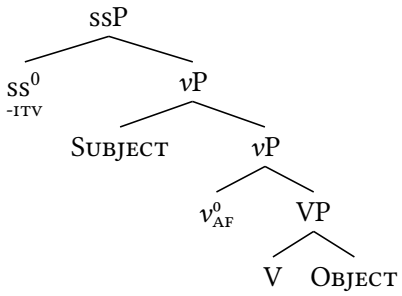
Set B = object	e.g. Q'anjob'al, Chuj, Popti'
Set B = variable	e.g. K'iche', Kaqchikel, Tz'utujil

As foreshadowed above, we propose that the AF morpheme—i.e. *-on* in (83a) and *-ow* in (83b)—is the overt morphological realization of a v^0 head (v^0_{AF}). Like v^0_{TV}, it introduces the transitive subject in its specifier position. However *unlike* the transitive subject, it does not enter into an agreement relationship with the subject, accounting for the absence of Set A agreement. Setting aside for now the differences in behavior of the object, transitive and Agent Focus clauses are diagrammed in (85) and (86).

(85) *Transitive*



(86) *Agent Focus*



Following Coon et al. 2014, we take the choice of status suffix—i.e. the head of ssP—to be determined based on the direct selectional relationship with *v*P. Specifically, the transitive form of the status suffix is conditioned by merge with ergative/Set A-assigning (transitive) *v*Ps, as in (85), while the intransitive suffix is conditioned by non-ergative/Set A-assigning *v*Ps, as in (86). The latter category includes intransitive verbs in the languages in question, but also the Agent Focus *v*P. The picture so far accounts for several of the AF properties in (82) above: it connects the appearance of a special suffix (82d) to the absence of Set A morphology (82c) and the choice of an intransitive status suffix (82e).

We now turn to the property in (82a): AF is limited to constructions in which the external argument has extracted. Ordóñez (1995), Coon et al. (2014), and Assmann et al. (2015) characterize AF as a type of "Last Resort" strategy, proposing that it is available only in situations in which failure to to use AF results in a licensing failure. Note, however, that under the proposal advanced here—that all of the special properties of AF can be traced back to features of v^0—an alternative which does not require reference to Last Resort mechanisms is available. Here we propose that v^0_{AF} has a selectional requirement which mandates that the DP merged in its specifier bear an [Ā] feature. Selectional requirements on external arguments are not without precedent; for example, external arguments in Blackfoot must be animate, which Ritter and Rosen (2010) also attribute to a selectional requirement of v^0. A selectional requirement of this sort immediately derives the fact that AF is only possible with Ā-subjects.

Attributing the use of AF to selection of [Ā]-bearing subjects permits an explanation of two other puzzles. First, recall from section 2.3 above that in some languages, constructions described as Agent Focus appear with oblique objects. In certain languages, these constructions may be best considered simple antipassives, since they may be used whether or not the agent has extracted. However, some Mayan languages also have constructions which appear to be antipassives insofar as they select oblique internal arguments, but which are like AF in that they are *restricted* to use with [Ā]-bearing agents. Aissen (2017b) labels these "AF_{OBL}"; see Q'eqchi' in (31b) above, as well as discussion in Aissen 2017b for K'iche' and Tz'utujil and in Heaton 2017 and Ranero 2019 for Kaqchikel. Assuming antipassives to also be a specific type of v^0/Voice^0 head—i.e. heads which select an agent but do not license the appearance of DP internal arguments—the same selectional requirement can be proposed for these cases.

Second, recall from section 4.3 that while bound objects consistently permit extraction of ergative subjects without the use of AF, in some languages AF appears to be optional in these reflexive and extended reflexive environments (Aissen 2017b). This type of optionality is unexpected if AF is truly a Last Resort operation. However, a selectional account handles this optionality straightforwardly: v^0_{AF} is restricted to use with [Ā]-bearing external arguments; v^0_{TV}, in contrast, is in principle free to merge external arguments *with or without* [Ā]-features. Such derivations will only converge if the object then does not intervene for agent extraction, allowing for the possibility of v^0_{TV} in transitives with the binding configuration outlined in section 3 above.

The general properties of v^0_{TV} and v^0_{AF} discussed thus far are summarized below in (88). We adopt Longenbaugh's (2019) notation in (87), drawn from Müller (2010).

(87) *Agree and merge feature notation*

a. Agree features [X:__], trigger Agree with a YP with feature X

b. Merge features [•X•], trigger external merge or A-movement of a YP with feature X

(88) *Transitive and AF* v^0

	v^0_{TV}	v^0_{AF}
external argument	$\left[\begin{smallmatrix}\bullet DP\bullet \\ \varphi{:}\_\_\end{smallmatrix}\right]$	[•DP$_{\bar{A}}$•]
internal argument	[•DP•]	

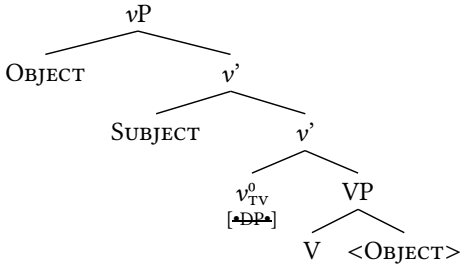
In the table in (88), both v^0_{TV} and v^0_{AF} have a merge feature, triggering external merge of the external argument in their specifier; only v^0_{AF} restricts the external argument to [Ā]-bearing DPs (annotated [•DP$_{\bar{A}}$•] below). A further difference between the two heads is in the presence or absence of Set A agreement: v^0_{TV} triggers Set A agreement, while v^0_{AF} does not. Following Aissen 2010 and Coon 2017, we assume that Set A agreement is the result of a spec–head agreement relation between the external argument and the v^0 head (see §2.2); we annotate this inherent agreement relationship as $\left[\begin{smallmatrix}\bullet DP\bullet \\ \varphi{:}\_\_\end{smallmatrix}\right]$. As discussed above, the internal argument DP in HIGH-ABS language raises to a position above the subject, which we take to be triggered by an additional merge feature on v^0_{TV} (i.e. what we called an "[EPP]" feature above), as shown in (88).[25, 26]

The crucial question now becomes accounting for the property in (82b): what about the AF construction permits the transitive subject to Ā-extract from a regular dyadic predicate? We propose that this connects to the interaction between v^0_{AF} and the *internal* argument—i.e. the shaded cell in (88). Specifically, we argue that the AF construction does *not* trigger raising of the internal argument above the subject. Details of the construction, however, vary across subfamilies, discussed in turn for Q'anjob'alan and K'ichean in the sections below.

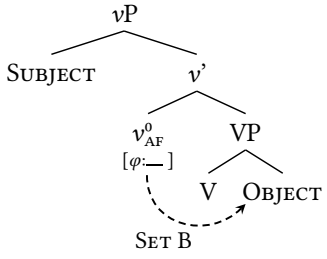
5.2 Q'anjob'alan

Our analysis of AF in Q'anjob'alan follows in broad strokes the account in Coon et al. 2014: Q'anjob'alan v^0_{AF} differs from v^0_{TV} both in not triggering Set A subject marking, as shown in (86) and summarized in (88), but also in having a φ-probe which enters into Agree with the transitive *object*, creating the Set B/absolutive morpheme. While v^0_{TV} triggers raising of the transitive object to a position above the subject (§2.2), v^0_{AF} does not and the object remains low. The features of v^0_{TV} and v^0_{AF} relevant to the internal arguments are shown in (89) and (90) below.

(89) *Transitive object raises*



(90) *AF object remains low*



[25] We represente the [EPP] feature driving A-movement of the object as "[•DP•]", but note that at least in K'iche', bare NP objects must also move above the object, as discussed in §4.2. This suggests that a more general nominal feature must be involved in driving object movement in K'iche', like [•NP•]. Because the other languages discussed either do not allow NP objects, or do not show the same properties as K'iche', we leave [•DP•] as the default in the discussion, but nothing hinges on this.

[26] For now we set aside questions of whether the features on a head may be ordered, as for example in Müller 2010, or whether economy conditions determine in the order in which features are discharged, as for example in Longenbaugh 2019 and work discussed there. We are grateful to Elise Newman for discussion of these and related matters.

The source of Set B morphology thus differs in Q'anjob'alan transitive and AF clauses. In a transitive clause, the object raises above the subject and from this position is accessible to the high φ-probe on Infl^0, as in HIGH-ABS languages more generally. In an AF clause, the object remains low, and v^0_{AF} has the φ-probe responsible for triggering the Set B morpheme.

The relevant features on v^0_{TV} and v^0_{AF} in Q'anjob'alan are summarized in (91). Importantly, transitive and AF v^0 differ in their treatment of the object: v^0_{TV} has a merge feature which causes the object to raise, but does not have a φ-probe. In a transitive clause, the Set B marking comes from the high probe on finite Infl^0 (HIGH-ABS), as discussed in section 2.2 above. In contrast, v^0_{AF} does have a φ-probe triggering a Set B morpheme, and the object remains in situ.[27]

(91) *Transitive and AF* v^0 *in Q'anjob'alan*

	v^0_{TV}	v^0_{AF}
external argument	$[^{\bullet\text{DP}\bullet}_{\varphi:\_\_}]$	[•DP$_{\bar{\text{A}}}$•]
internal argument	[•DP•]	[φ:__]

A couple of further notes are in order here. First, under the proposal that Set B is triggered by different heads in transitive and AF clauses, one might wonder why the form of Set B remains constant, as in the transitive and AF forms in (92).

(92) a. Max-**ach** y-il-a'.
PFV-B2S A3S-see-TV
'She saw you.'
b. Maktxel max-**ach** il-on-i?
who PFV-B2S see-AF-ITV
'Who saw you?' (Q'anjob'al; Coon et al. 2014)

While we do not take a stance on the nature of Set B marking across the family, in Q'anjob'alan languages Set B morphemes are morphophonological clitics. In clauses containing an overt TAM morpheme, the Set B morpheme appears attached high, as in (92). But in clauses lacking overt aspect marking, as with the non-verbal predicates in (93), the Set B morpheme appears after the predicate, written as a free-standing morpheme (orthographic <h> represents the absence of an initial glottal stop).

(93) a. Chot-an **hach** ayoq.
sitting B2S DIR
'You are sitting down.' (Q'anjob'al; Mateo Toledo 2008, 54)
b. Man kuywom-oq **hach**.
NEG student-IRR B2S
'You are not a student.' (Q'anjob'al; Mateo Toledo 2008, 69)

Following Coon et al., we take these Set B morphemes to be syntactic pronominal clitics, triggered by φ-Agree with a probe (see e.g. Kramer 2014 for discussion). Given that we are dealing with a case of pronominalization, the fact that the φ-probes on both Infl^0 (in a transitive) and v^0 (in AF) trigger identical forms is unsurprising. Similarly, the fact that the Set B morpheme is a clitic whose placement is governed

[27] Note that in an AF clause Infl^0 does not trigger a (second) Set B clitic. One possibility is that the φ-probe on Infl^0 in an AF clause is optional, and simply not merged (see e.g. Kalin 2018). Alternatively, it is possible that Infl^0 *does* enter into Agree with the higher subject in an AF clause, but that a morphological constraint prevents the spell-out of two Set B morphemes (see also Oxford 2019, 2020 for discussion of related effects). Some support for this view will be found in independently-needed morphological constraints on multiple Set B morphemes in K'ichean in §5.3 and appendix B.

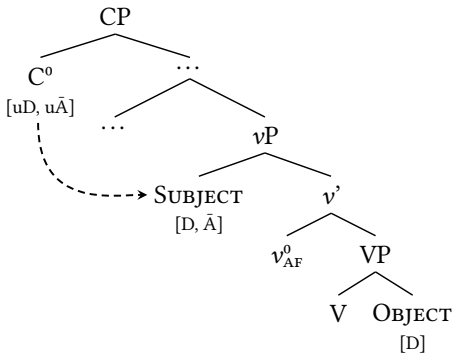
by morphophonological factors (see also §2.2 above) makes it unsurprising that the clitic's linear position does not directly reflect the functional head responsible for creating it (i.e. it appears "high" in (92b), despite the fact that a low head is proposed to generate it in AF clauses).

Second, as discussed in Coon et al., the proposal that v^0_{AF} has a Set-B-generating φ-probe offers an immediate explanation for an otherwise puzzling fact in Q'anjob'alan languages: the AF morpheme is obligatory in *nonfinite embedded transitives*. Recall from section 2.2 above that many HIGH-ABS languages disallow nonfinite embedded transitives altogether. In Q'anjob'alan, embedded transitives are possible, but only with the AF morpheme. This strategy is expected under this account, in which v^0_{AF} provides a low source for Set B morphology.[28]

(94) Chi uj [hach y-il-**on**-i].
IPFV be.able.to B2S A3S-see-AF-ITV
'She can see you.' (Q'anjob'al; Coon et al. 2014, 180)

Finally, and most relevant to the discussion at hand, the proposal that the object remains low offers an immediate account of the ability for an [Ā]-bearing transitive subject to extract from an AF clause. As illustrated in (95), the articulated probe on C⁰ will find the high subject DP. The subject will fully satisfy the probe, and probing will halt, permitting the subject to Ā-extract.

(95) *Probe on C⁰ finds subject in Spec,vP*



In sum, the AF corner of Q'anjob'alan behaves as a LOW-ABS language in permitting the object to remain low, and in providing a low source for the generation of the Set B clitics. In turn, this results in the lack of an extraction problem for the ergative subject—again, as in LOW-ABS languages. This system further accounts both for the consistent pattern of object-triggered Set B morphology, as well as for the fact that the AF morpheme is used in nonfinite embedded clauses, where Set B would otherwise be unavailable. Finally, recall from section 2.3 that some Mayan languages show an overlap between Agent Focus morphology and *antipassive* morphology (see e.g. Smith-Stark 1978; Stiebels 2006). Under our proposal, v^0_{AF} in Q'anjob'al lacks the [•D•] feature which triggers movement of the internal argument; given that antipassives have oblique internal arguments, they would be expected to lack this feature as well, offering a potential connection between these constructions.

[28] We follow Coon et al. (2014) in taking the appearance of Set A marking in the embedded clause to be related to nominalization, a common process in nonfinite embedded clauses across Mayan (see also Coon and Carolan 2017 on the same pattern in related Chuj). Specifically, we follow these authors in proposing that in these and other nonfinite clauses, the subject is a null PRO in Spec,vP. The embedded clause is nominalized above the vP layer, and a possessor is introduced to bind the subject in its thematic position. Given that Set A morphology indexes both possessors and ergative subjects, the appearance of Set A marking on these and other embedded clauses is explained. Note that the embedded v^0 must differ from main clause v^0_{AF} in not requiring its specifier to have an [Ā] feature. Thus, a better unified characterization of the morpheme *-on* is as an exponent of any v^0 that introduces both a non-oblique internal argument and an external argument, but which does not inherently agree with its external argument.

5.3 K'ichean

We now turn to AF in the K'ichean Proper branch. Recall that like in Q'anjob'alan, AF clauses lack Set A, have a special AF suffix, and appear with an intransitive status suffix (when one is present), accounted for with the basic structure in (86) above. However, we find two important differences between K'ichean Proper and the Q'anjob'alan AF discussed just above. First, Set B person marking indexes the highest-ranked DP on the hierarchy in (96), repeated from (26) above.

(96) 1st person / 2nd person ≫ 3rd person plural ≫ 3rd person singular

A pair illustrating combinations of 1st and 3rd person singular DPs is provided in (97). Note that Set B indexes the 1st person DP regardless of whether it is the subject (97a) or the object (97b).

(97) a. In x-**in**-il-ow le achi.
1PRON PFV-B1S-see-AF DET man
'I saw the man.'
b. Le achi x-**in**-il-ow in.
DET man PFV-B1S-see-AF 1PRON
'THE MAN saw me.' (K'iche'; Davies and Sam-Colop 1990, 523)

Second, while in Q'anjob'al the AF morpheme is required in order to embed a nonfinite transitive clause, embedded transitives in K'ichean Proper are simply ungrammatical and a detransitivized verb form must be used instead (see (15) and discussion in §2.2 above).

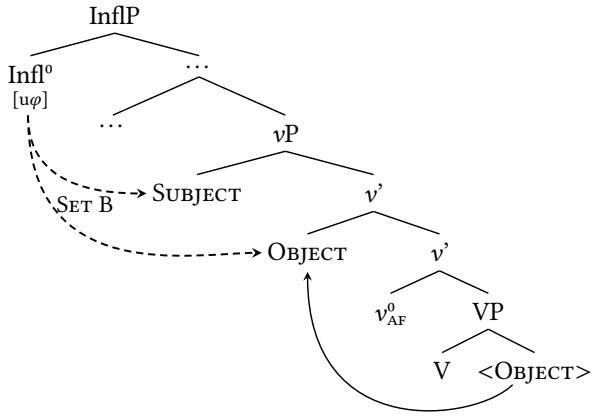
Our analysis of AF in this group of languages again relies on differences in the specification of the v^0_{AF} head, shown in the column added to the comparison table in (98). Specifically, K'ichean AF is like Q'anjob'alan AF—and different from full transitive v^0 in both subfamilies—insofar as v^0_{AF} does *not* enter into φ-Agree with the transitive subject merged in its specifier position. However, following the proposal in Levin 2018, K'ichean v^0_{AF} is closer to v^0_{TV} insofar as it *does* trigger raising of the object. The differences in AF features in the two subfamilies are highlighted in (98) below.

(98) *Transitive and AF* v^0 *in Q'anjob'alan and K'ichean compared*

	v^0_{TV}	v^0_{AF} (Q'.)	v^0_{AF} (K'.)
external argument	$\left[\begin{smallmatrix}\bullet DP\bullet\\ \varphi{:}\_\_\end{smallmatrix}\right]$	[•DP$_{\bar{A}}$•]	[•DP$_{\bar{A}}$•]
internal argument	[•DP•]	[$\varphi{:}\_\_$]	[•DP•]

The proposed featural content of the K'ichean v^0_{AF} head immediately provides a path to account for the two facts above. First, because K'ichean v^0_{AF} lacks [$\varphi{:}\_\_$] and is therefore not able to create a Set B/absolutive morpheme, it is unsurprising that it is unavailable as a strategy for embedding a full transitive in a nonfinite environment. Second, we propose that raising of the object places it in a specifier of v^0_{AF}. Following the proposal in Levin 2018, the fact that both subject and object occupy specifiers of the AF vP, and neither DP has entered into φ-Agree with v^0 (as evidenced by the absence of Set A), results in a configuration in which both the subject and the object are accessible to the Set B-generating φ-probe on Infl^0, as illustrated in (99). The proposal that Infl^0 access the subject and object simultaneously provides the environment needed to account for the hierarchy effect, discussed in greater detail in appendix B.

(99) *K'ichean AF: subject and object both accessible to Infl⁰*

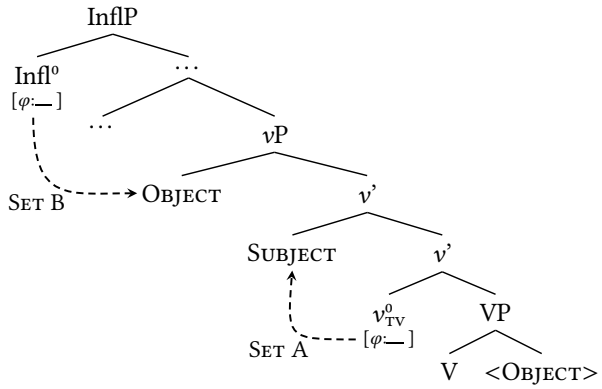


Concretely, we propose that the subject and object DPs in K'ichean AF are *equidistant* to higher functional projections. There are arguments in the literature both for (Reinhart 1981; Ura 1996; Chomsky 2000; Hornstein 2009; Oxford 2019) and against (Chomsky 2001; Hiraiwa 2001; Doggett 2004) equidistance of multiple specifiers, and we are unable to address these in detail here. This account of the K'ichean hierarchy effect builds specifically on work by Oxford (2019), who employs a structure comparable to that in (99) for the transitive paradigm across the Algonquian family. For Oxford, the consistent equidistance of subject and object DPs, combined with an articulated probe on Infl⁰, derives the robust hierarchy effects across those languages.

Oxford cites Richards' (2001) suggestion that multiple specifiers created by A-movement result in equidistance. Importantly for the account here, we stipulate that multiple specifiers are equidistant only in the *absence* of inherent Set A agreement between v^0 and the thematic subject. In regular transitives, the v^0_{TV} head enters into Agree with the subject externally merged in its specifier position. We suggest that the spec–head agreement creates a relationship between v^0_{TV} and the subject, which is distinct from that between v^0_{TV} and the not-agreed-with object. As a result, the A-moved object unambiguously c-commands the subject, as in (100). Note that under the proposal that Set A agreement takes place immediately upon Merge ($\left[\begin{smallmatrix}\bullet\text{DP}\bullet\\ \varphi{:}\_\_\end{smallmatrix}\right]$), there will always be a recoverable record of which DP has merged first in a transitive clause like (100): since the subject has valued the φ-probe on v^0_{TV}, it merged with v^0_{TV} first, before remerge of the internal argument with v^0_{TV}. The higher probe has access to this difference, resulting asymmetric c-command between the moved object and the subject.[29]

[29] Alternatively, it could be the case that multiple specifiers of a single head created by A-movement are *always* equidistant (Richards 2001; Oxford 2019), and that the DP object in a transitive is actually moved to a higher functional projection, above the *v*P containing the subject, ensuring an asymmetric c-command relationship in transitives. See Ranero 2019 for arguments from licit and illicit voice mismatches in Kaqchikel ellipsis constructions for evidence in favor of the view that a higher functional projection exists in active, transitive clauses but not in Agent Focus clauses.

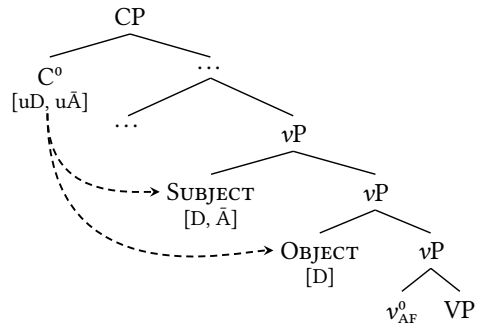
(100) *Transitive: OBJ≫SUBJ*



On the other hand, v^0_{AF} does not enter into Agree with the external argument, and we propose that when it attracts the object, both DPs are viewed as equidistant to higher probes. Note that Algonquian consistently lacks inherent ergative agreement, compatible with the proposal that the absence of inherent agreement results in equidistance of multiple v^0 specifiers. This proposal provides a means to understand why hierarchy effects are language-wide in Algonquian, but confined to the AF corner of K'ichean.[30] We offer a concrete account of the K'ichean hierarchy effect in appendix B, turning now to the main question of this section: what about the K'ichean AF construction permits the transitive subject to extract?

While in Q'anjob'alan AF the object remained low, here the object is attracted to a specifier of *v*P. Crucially, the same equidistance of subject and object used to derive the hierarchy effect just above offers an immediate account of the extractability of the agent DP. The relevant configuration with the Ā-probe on C⁰ is shown in (101).

(101) *Probe on C⁰ finds both arguments in Spec,vP*



Here we again draw on Oxford's (2019) account of Algonquian. Concretely, we adopt his formulation of *Best Match* in (102):

(102) *Best Match* (Oxford 2019, 970)
When a probe P is faced with two equally local goals, P agrees with the goal that matches the most of P's unvalued features.

Oxford uses this to derive the complex system of hierarchy-based agreement and portmanteaux forms

[30] A reviewer asks about broader crosslinguistic predictions. For example, do we expect that languages with hierarchical alignment systems should not have (inherent) ergative case or agreement? Given the range of patterns found in hierarchy systems (e.g. Zúñiga 2006), and in ergative alignment systems (e.g. Coon, Massam, and Travis 2017), more would need to be understood about how any given system arises before predictions could be made. For example, one would first want to know the syntactic positions of the relevant arguments, and which functional head is responsible for creating the hierarchically-governed morphemes.

across the Algonquian family; here we argue that the same principle allows us to capture not only the hierarchical nature of Set B realization (see appendix B), but also the extractability of Ā-subjects from transitive verb forms. We adopt the idea underlying (102) that a probe is able to evaluate multiple goals without entering into Agree with them, and propose that this is what happens in the case of the equidistant subject and object goals in K'ichean AF. Specifically, when a probe segment [uF] simultaneously encounters multiple instances of [F], [uF] will Agree with the goal bearing [F] that also matches the most of the probe's other segments. In (101), because the subject has both [D] and [Ā] features, it is a better match for the complex probe on C^0. C^0 then enters into Agree only with the subject, the gluttony problem described in section 3 does not arise, and the subject successfully extracts.

6 Conclusion and cross-linguistic outlook

6.1 Summary

This paper reexamined the empirical landscape of the Ergative Extraction Constraint found in a subset of Mayan languages, and offered a proposal for its source. Specifically, we argued that the EEC is the result of an intervention problem, in which a DP object intervenes between a complex Ā-probe on C^0 and the ergative subject. Following previous work on Mayan, DP objects in a subset of languages raise to a position above the subject in order to be targeted by a φ-probe on Infl^0, causing intervention between the ergative subject and the probe on C^0. We argued that this intervention problem arises specifically because the probe responsible for Ā-extraction is an articulated probe, relativized to search for both [D] and [Ā] features simultaneously. This was formalized in section 3 by adopting a specific implementation of Agree in which individual segments of a complex probe may enter into Agree with multiple goals, precisely in scenarios in which the lower goal has *more* of the features sought by the probe than the higher goal. Extending Coon and Keine's (to appear) analysis of hierarchy effects in the domain of φ-features into a larger set of features ([$\mathcal{F}$], following Baier 2018), we proposed that the offending configurations in Mayan involve constructions in which the lower DP (the Ā-subject) has *more* of the probe's features than the higher DP (the DP object). Mirroring the derivation of PCC effects in inverse configurations, we proposed that these multiple Agree relationships cause an irresolvable conflict for movement.

The proposal that *intervention* of the DP object between the complex probe on C^0 and the Ā-subject is the source of the extraction problem received further support from environments in which properties of the object—i.e. a lack of a D^0 head, or a need to be bound by the subject—permitted ergative subjects to extract from full transitive clauses (§4). The relevance of the nature of the object to the extractability of the ergative subject, as well as evidence that the object *may* enter into Agree even when the subject extracts, provided evidence against the applicability of previous accounts which rely either on a problem of object licensing (Coon et al. 2014; Assmann et al. 2015), or on properties of ergative subjects (Deal 2016; Polinsky 2016). While nothing in our proposal—which focuses specifically on the EEC in Mayan—rules out the possibility that features of ergative subjects may underlie extraction restrictions in other languages, here we provided evidence that this cannot be the source of the EEC in Mayan.

We next turned to the special Agent Focus constructions used to circumvent the EEC. Again following previous work in Mayan, we proposed in section 5 that the AF morpheme is a particular instantiation of v^0, v^0_{AF}, which differs from transitive v^0_{TV} in important respects. What AF constructions have in common—as expected on our account—is that they solve the intervention problem by *not* causing the object to raise above the subject. However, the exact features on v^0_{AF} vary across the family, in a way that we connected directly to the independent variation observed in AF. We adopted the general proposal for Q'anjob'alan AF in Coon et al. 2014: v^0_{AF} does not cause the object to raise, and instead the Set B morpheme is generated by a low functional head, on par with regular transitives in LOW-ABS languages. This accounts for (i) the fact that Set B consistently targets the object in Q'anjob'alan, and (ii) the use AF morphology in nonfinite

environments which would otherwise lack a source for Set B. Our account of K'ichean AF drew on the analysis in Levin 2018, in which v^0_{AF} *does* cause raising of the object, but to a *v*P specifier which does not asymmetrically c-command the subject, accounting for the hierarchy effects found in Set B marking in these languages. Both the Set B hierarchy effect and the availability of extraction are directly connected to the fact that higher functional probes access the equidistant subject and object DPs simultaneously. Best Match mandates that the probe enter into Agree with the DP that matches more of the probe's features. This gives rise to the φ-feature hierarchy effect for the Infl^0 probe, and to the extractability of the more featurally-specified Ā-subject by the composite C^0 probe. Crucially, in AF in both Q'anjob'alan and K'ichean Proper, the DP object no longer intervenes for subject extraction, accounting for the use of this construction to circumvent the EEC.

6.2 Cross-linguistic outlook

The present paper focuses specifically on the EEC in the Mayan language family. While we leave it as an open question whether it is appropriate to extend a similar account to extraction restrictions elsewhere, we discuss some possible avenues for cross-linguistic comparison here. Specifically, as noted above, our account relied on two special properties argued to be present in Mayan: (i) the high position of the object in a regular transitive clause in HIGH-ABS languages, and (ii) a composite probe on C^0, which probes for [Ā] and [D] simultaneously.

We suggest that the high position of the object connects directly to the fact that ergative extraction asymmetries appear in a *subset* of morphologically ergative languages (see e.g. Comrie 1978; Dixon 1979, 1994 and Larsen and Norman 1979; Aissen 2017b on Mayan specifically). On the account here, the Mayan EEC is correlated with morphological ergativity: objects in HIGH-ABS languages raise to a high position from which they can enter into Agree with Infl^0, while agreement with transitive subjects occurs in situ (i.e. inherent ergative agreement; Coon 2017). All else being equal, we do not expect to find these effects in morphologically nominative-accusative languages, in which *subjects* are generally taken to establish a relationship with finite T^0. Furthermore, the fact that not all morphologically ergative languages show EEC effects can be tied to independent variation in the source of "absolutive" (Legate 2008), but with more nuance than reported in Coon et al. 2014. Specifically, in a language where finite T^0/Infl^0 is responsible for absolutive clitics/agreement, we expect (all else being equal) the object to raise above the subject. In Mayan languages in which the source of absolutive is low, we don't find an EEC. Note however that nothing in principle rules out the possibility that objects which receive absolutive case or agreement low could nonetheless raise above the subject (see discussion of Tsotsil in appendix A). This is compatible, for example, with the account of Dyirbal in Legate 2012; Legate proposes that absolutive has a *low* source but that the language nonetheless shows effects of an EEC. See also Aldridge 2004 on variation in Austronesian.[31]

With respect to the mixed probe on C^0, we noted above that the proposal that C^0 probes for [Ā] and [D] builds on a line of work on the nature of Ā-movement in languages not genetically related to Mayan—see discussion in Legate 2014, Aldridge 2017a,b, Erlewine et al. 2017, and Erlewine 2018 for Austronesian languages, and van Urk 2015 for Dinka. Though our account differs crucially from some of these in not relying on licensing, it shares with these works a blurring of the line between A- and Ā-movement, as well as the roles associated with T^0 and C^0 in driving this movement. We note in closing that Mayan languages conspicuously lack processes associated movement to T^0/Infl^0: there are no raising verbs, no evidence

[31] An anonymous reviewer observes that we do not completely rule out a nominative-accusative language with a Mayan-like Ā-probe on C^0 and movement of the object to a position above the subject, since these are independent properties under our analysis. In principle, this could result in a nominative-accusative language with a restriction on extracting transitive subjects. Note, however, that in nominative-accusative languages the subject typically undergoes A-movement to agree with T, placing the subject back *above* the object at the point at which C^0 probes. On the other hand, Deal (2016) provides evidence that extraction restrictions may be more diverse than typically described, which may suggest that some flexibility should remain in the system.

that unaccusative or passive subjects undergo A-movement, and in general no evidence for [EPP]-driven movement to Spec,TP; unsurprisingly, these languages are thus generally verb initial. If A-movement is triggered by nominal features like [D] or [φ] (van Urk 2015), then the fact that C^0 is the locus of [D] probing in Mayan could perhaps be connected to this absence. For example, if features on $Infl^0$ originate on C^0 (Chomsky 2001), perhaps in Mayan we find evidence that the [uD] feature is not passed down, instead becoming entangled with the $\bar{A}$-probe, as discussed in many of the works cited above. We leave this and many other future possible directions as topics for cross-linguistic investigation.

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A Which arguments trigger AF?

Variation has been described in which arguments, or combinations of arguments, trigger AF. As noted in section 2.3, three different patterns have been described with respect to the relevance of the person features of the two nominal arguments (Stiebels 2006; Aissen 2017b; Watanabe 2017), summarized in (103).

(103) *Argument features and AF*
- a. at least one DP must be 3rd person in order for AF to occur (e.g. K'iche');
- b. the *agent* must be 3rd person in order for AF to occur (e.g. Q'anjob'al);
- c. *both* agent and patient must be 3rd person in order for AF to occur (Tsotsil).

Here we propose that things are in fact simpler than they appear, and that this apparent variation can be traced back to independent differences among the languages in question. Specifically, we maintain that the EEC holds *whenever* an (interpreted) DP object moves to a position above the subject in a Mayan transitive clause—regardless of the person features of either argument. This is repeated from (4) in (104) below.

(104) Mayan EEC generalization
When an interpreted DP object structurally intervenes between the subject and the Ā-probe on C^0, the subject is restricted from undergoing Ā-extraction.

We discuss each pattern from (103) in turn below, arguing that none presents a counterexample to the generalization in (104).

Our account contrasts explicitly with the proposal in Stiebels 2006, in which the variation seen in (103) is taken to represent a trajectory of development, as in (105), formally regulated by variation in morphological constraint rankings (here and below, 'PART' = 1st or 2nd person discourse participant).

(105) *Stiebels' (2006, 538) proposed development of AF for object>subject settings*

STAGE I	→	STAGE II	→	STAGE III	→	STAGE IV
3>3		3>3		3>3		3>3
		PART>3		PART>3		PART>3
				3>PART		3>PART
						PART>PART
(e.g. Tsotsil)		(e.g. Q'anjob'al)		(e.g. K'iche')		("generalized")

As Stiebels notes, due to the lack of case marking on nominals, together with basic verb-initial word order across the family, a DP–V–DP configuration with two 3rd person DPs is potentially ambiguous in languages which lack AF entirely between SVO and OVS (see e.g. Vázquez Álvarez 2011 on Ch'ol). Stiebels, drawing on earlier work such as Dayley 1981, proposes that Agent Focus developed as a morphological means to disambiguate between subject and object extraction, with "Stage I" being a language which *only* uses AF in potentially ambiguous 3–3 scenarios. According to Stiebels, Q'anjob'al would present the next stage, with AF used any time the subject is 3rd person, followed by K'iche' which disallows AF only in combinations of local participants. Eventually, after completely generalizing AF in Stage IV, the final stage is the complete loss of AF, as in the LOW-ABS languages described above.[32] Stiebels (2006) formally accounts for the variation between transitive and AF forms through Optimality Theoretic constraint rankings governing surface morphology: the AF morpheme competes with the Set A morpheme in transitive clauses. Differences in the syntax of the two constructions are not developed (see Aissen 2017b for discussion).

While we do not fully engage with Stiebels' analysis here, we maintain that abandoning our stronger restriction in (104) above in favor of a violable-constraints approach comes at the cost of missing important patterns in the languages in question, and also runs the risk of overgenerating. As one example, Stiebels accounts for the preference of Set B to cross-reference objects in AF through high-ranking of the constraint "DEF(AULT)/[+hr]", which requires that the Set B morpheme index the object by default. This is intended to capture the Q'anjob'alan morphological pattern (in which Set B always indexes the object; see §5.2), and she extends it to account for the fact that 3>[PART] configurations require AF in Q'anjob'al, but not [PART]>3. Our account in section 5 above, in contrast, ties object agreement in AF to the functional head responsible for generating Set B and the relative position of the object: in Q'anjob'al, the low v^0_{AF} head generates the Set B morpheme. Our account offers a means of capturing the fact that this strategy has been extended to nonfinite clauses in Q'anjob'al, which lack the head normally used for generating Set B morphology. As discussed in section 5.3, the same strategy is correctly predicted not to be available in K'ichean, in which Infl^0 remains the Set B-generating head. On the other hand, the fact that K'ichean AF is hierarchically governed is, for us, a direct consequence of the higher source of Set B marking. These connections are not obviously capturable by a Stiebels-style constraint-based morphological approach.

Possibly more problematic, is that Stiebels' account cannot account for cases in which the EEC is exceptionally obviated. It lacks a developed-enough syntax to make clear predictions about which languages and constructions should require AF (see also Preminger 2014, Aissen 2017b, and Levin 2018 for discussion). In the present account, the lack of AF in LOW-ABS languages is tied directly to the height of the object, which in turn makes testable predictions for nonfinite embedding (§2.2). We further capture variation internal to HIGH-ABS languages based on properties of the object (§4). Stiebels does address obviation of the EEC in reflexive configurations, noting that such cases are unambiguous with respect to subject

[32] While it is generally accepted that Proto-Mayan had Agent Focus, and that the absence of AF in Lowland languages like Ch'ol and Tseltal is an innovation (Smith-Stark 1978; Law 2013), we are not aware of strong historical evidence for the scale in (105).

versus object extraction; however, it is not clear that this could extend to the full range of data around bound pronouns introduced in section 4.3.2 above. The case of bare NPs discussed above is also less easily captured under her account. The bare NP object is predicted to trigger AF in the same way as DP objects. Below, we propose that each of the patterns in (105) can be captured in terms of independently-observable syntactic properties of the languages in question.

At least one DP must be 3rd person. First, we examine the at-least-one-third-person restriction in (103a). Recall from above that section 2.3 that the Set B morpheme in languages of the K'ichean Proper branch is hierarchically governed: either the subject or the object may control the Set B morphology, according to the hierarchy in (26) above. Note, however, that this hierarchy does not determine which argument is indexed in combinations of 1st and 2nd person arguments, and such combinations are generally reported to be impossible in AF clauses (Dayley 1978; Larsen 1988; Preminger 2014). In the Kaqchikel example in (106), for example, the AF form is ungrammatical regardless of the choice of Set B morpheme.

(106) *Ja rat x-{in/at/Ø}-ax-an yïn.
FOC PRON2S PFV-B1S/B2S/B3S-hear-AF PRON1S
intended: 'YOU hit me.' (Kaqchikel; Preminger 2014, 22)

We follow Aissen (2017b) and other previous work which analyzes this as a *morphological* problem: both 1st and 2nd person forms compete for the Set B slot, and the grammar is unable to resolve the conflict (see also Stiebels 2006; Watanabe 2017). One piece of evidence in favor of this analysis comes from Aissen (2017b), who notes that K'iche' has a second person formal (polite) pronominal category, expressed as *lah* in singular and *alaq* in plural. These morphemes belong to neither the Set A nor the Set B paradigm, and instead cliticize to the right of the verb. Combinations of a 2nd person formal argument with a 1st person argument are grammatical in AF clauses, as shown in (107).

(107) In x-in-ch'aab'e-n **alaq**.
PRON1S PFV-B1S-talk.to-AF PRON2P.FORMAL
'I talked to you.' (K'iche'; Mondloch 1981, 221)

As Aissen notes, forms like (107) suggest that the ban is not strictly about combinations of 1st and 2nd person DPs, but rather on the clash of two competing Set B morphemes; since the formal 2nd person morphemes do not occupy the Set B "slot", no conflict arises (we return to this in appendix B).

There are at least three possibilities reported for realizing a focussed agent in combinations of 1st and 2nd person DPs with overt Set B exponents. The first and least surprising, shown in (108), is to instead use an antipassive construction. Here the object appears in an oblique form and the now-intransitive agent is free to extract (see §2.3 above).

(108) Atet x-at-ch'ey-o w-xiin.
PRON2S PFV-B2S-hit-ANTIP A2S-RN
'YOU hit me.' (Tz'utujil; Dayley 1978, 38)

Aissen (2017b) reports that all speakers of Tz'utujil and some speakers of K'iche' have such an antipassive in their grammars, and simply use this independently-available strategy to focus an agent in contexts with two local arguments.

Second, López Ixcoy (1997) reports that some K'iche' speakers permit the AF construction to be used in combinations of local arguments with Set B indexing the *internal* argument, as in (109). Note that since the agent has extracted, it will always be realized by the full 1st or 2nd person focussed pronoun; Set B indexes the remaining argument.

(109) At x-in-xibi-n pa b'ee.
PRON2S PFV-B1S-scare-AF PREP path
'You scared me in the path.' (K'iche'; López Ixcoy 1997, 369)

Finally, for K'iche' speakers who do *not* have an antipassive form, as well as for at least some Kaqchikel speakers (Preminger 2014), we find the appearance of an extracted agent from a regular transitive verb form, as shown in (110).

(110) In k-at-in-to'-oh.
PRON1S IPFV-B2S-A1S-help-SS
'I will help you.' (K'iche'; Mondloch 1981, 223)

Assuming, following previous work, that the ban on multiple morphologically-realized local persons is indeed a morphological problem specific to the AF construction—related to competing overt realizations of person features in a construction with a single morphological slot for φ-marking—the next question is: what, if anything, does this have to do with the EEC? Our proposal is that this is *not* directly related to the EEC. That is, the restriction on extracting ergative subjects from transitive clauses is not lifted in the K'ichean Proper subbranch when both arguments are local. Rather, we propose that the EEC is maintained, and that when faced with the need for agent extraction in these local contexts, speakers must make use of an alternative strategy: either an antipassive (108), an AF form with special agreement (109), or—most surprisingly from the point of view of the EEC—apparent extraction from the transitive form as in (110).

It is important to note that at least in Kaqchikel, recent work has observed a higher degree of variation in the use of AF versus transitive clauses in apparent agent-extraction contexts, especially among younger speakers (Clemens 2013; Heaton et al. 2016; Henderson and Coon 2018). One possibility is that some speakers are making more frequent use of an initial topic position, independently noted to not trigger the use of AF (see §4.1). Recall that while in Q'anjob'alan languages, topicalized subjects require a resumptive classifier pronoun in postverbal base position, this is not the case for K'ichean languages, where it is more difficult to distinguish topics from foci on purely morphological grounds (see e.g. (13) above). Velleman (2014) notes that speakers of the Central Nahualá variant of K'ichee' did not accept forms like (110) in focus contexts, preferring instead antipassive forms like (108). Given that only some speakers permit full transitives like (110), we might predict that these are speakers who are more generally permissive with SVO in the absence of Agent Focus—perhaps making more frequent use of topicalization. Future work is needed to test whether forms like (110) correlate with a more general optionality of the AF construction.

An alternative possibility is that speakers which permit clauses like (110) have access to a Last Resort mechanism (see e.g. Rezac 2011), allowing a transitive verb form to function as an AF stem in terms of extraction (see §5), exactly when an irresolvable morphological problem prevents the regular AF from being used. While we do not offer further details for this possibility here, we contend that the K'ichean Proper pattern in which AF is only possible in which one argument is 3rd person singular (i.e. triggers no overt Set B form) does not necessarily imply a pattern in which the Ergative Extraction Constraint is lifted for combinations of non-3rd persons. Rather, an independent morphological conflict creates a problem for the use of AF, which the syntax must resolve through other means. Our account correctly ties the "at least one DP must be 3rd person" restriction directly to the hierarchical pattern of Set B marking, analyzed in section 5.3 and appendix B.

The agent must be 3rd person. In Q'anjob'alan languages, Agent Focus occurs only with 3rd person agents; 1st and 2nd person agents appear to extract directly from transitive forms, as shown by the pair in (111). In (111a), the extracted 3rd person agent appears with the expected AF form of the verb. In (111b), however, we find an apparently-focussed 1st person pronoun and a transitive verb form.

(111) a. A Juan max maq'-on no tx'i'.
FOC Juan PFV hit-AF CLF dog
'JUAN hit the dog.'
b. Ayin max hin-maq' no tx'i'.
PRON1S PFV A1-hit CLF dog
'I hit the dog.' (Q'anjob'al; Coon et al. 2014, 223)

The Q'anjob'al pattern, we claim, is fundamentally different from the K'ichean Proper pattern discussed above (in contrast with Stiebels 2006; Erlewine 2016; Watanabe 2017, who analyze these person patterns in (103) as being different "strengths" of the same type of restriction). First, note that this restriction cannot be attributed to a morphological source; the Set B morpheme in the Q'anjob'alan AF construction consistently targets the object (see (34) above). Here we follow Coon et al. (2014), who propose that the apparent 1st and 2nd person pronouns in Q'anjob'al are base-generated in a high clause-peripheral position, and that AF is not used because no true agent extraction has taken place. At motivation for this special behavior of local person forms, Coon et al. cite Baker (2008), who—following previous work—takes the indexical content of 1st and 2nd person pronouns to be generated in Spec,CP, with lower 1st/2nd person forms anaphoric to the high operators. Applying this to Q'anjob'alan, we claim that only the high element is pronounced; this clause-peripheral 1st/2nd person form binds a null pronoun in base position.

Mateo Pedro (2001) proposes that these 1st and 2nd person "pronouns" like *ayin* in (111b) are in fact comprised of the Q'anjob'al focus marker (*a*), plus the Set B absolutive clitic (*=in* in the first person singular examples above); see also Pascual 2007 and Scharf 2016 for the same conclusion and further related discussion. While free-standing pronouns across Mayan show a formal connection to the Set B series, in Q'anjob'al the 1st and 2nd person singular and plural pronouns (*ayin* '1SG', *ayach* '2SG', *ayon* '1PL', *ayex* '2PL') are *exactly identical* to the focus marker combined with the Set B series (*=in*, *=ach*, *=on*, *=ex*), plus an epenthetic glide. We thus follow Mateo Pedro, Scharf, and others in analyzing these as synchronically complex forms, not as true extracted pronouns. As further support, note that the 1st and 2nd person pronouns in Q'anjob'al are ungrammatical in postverbal argument position, as shown by the intransitive and transitive pairs in (112) and (113).[33]

(112) a. **Ay=in** max-in way-i.
FOC=B1S PFV-B1S sleep-ITV
'I slept.'
b. *Max-in way **ayin**.
PFV-B1S sleep PRON1S
intended: 'I slept.'

(113) a. **Ay=in** max hin-watx'ne-j aj te' na.
FOC=B1S PFV A1S-build-DTV DIR CLF house
'I built the house.'
b. *Max hin-watx'-ne-j aj **ayin** te' na.
PFV A1S-build-CAUS-DTV DIR PRON1S CLF house
intended: 'I built the house.' (Q'anjob'al; Pedro Mateo Pedro, p.c.)

While we set aside the details of the structure of forms like (111b), (112), and (113a), the fact that these "pronouns" do not appear in postverbal argument position, and can be clearly decomposed into the focus

[33]Similar facts can be replicated for Chuj, another language which does not show AF when local agents extract. Scharf (2016) describes an additional set of 1st and 2nd person forms in Q'anjob'al which occur together with the demonstrative *ti'*; these may appear to the right of the verb, but he provides semantic evidence that the *ti'*-forms are high external topics, and are not in low base-generated position.

marker plus Set B clitic, points to the conclusion that Ā-extraction simply has not taken place; the 1st and 2nd person forms are base-generated in the left edge. We follow Coon et al. 2014 in maintaining that all Ā-extracted DPs in Q'anjob'alan require AF, and that 1st and 2nd person elements like *ayin* in (111b) have not Ā-extracted from underlying subject position, in line with the generalization in (104) above.

A reviewer points out that the relatively more limited distribution of 1st and 2nd person pronouns compared with 3rd person forms, as well as the formal resemblance of the 1st and 2nd person forms to a focus marker plus Set B form, is not limited to Q'anjob'alan languages, but is found more widely in the Mayan family. If 1st and 2nd person pronouns across the family share these properties, it raises the question of why AF is required for 1st and 2nd person preverbal agents in other Mayan languages, for example those of the K'ichean branch. First, we note that while 1st and 2nd person forms bear a clear formal resemblance to the Set B series in languages across the family, in Q'anjob'alan languages the forms are exactly *identical* to the focus marker plus the Set B marker. Furthermore, while the focus marker cooccurs with 1st and 2nd person fronted pronouns in languages like Kaqchikel, this is not the case in Q'anjob'al, where the focus marker—which is obligatory with preverbal 3rd person arguments—is necessarily absent with preverbal 1st and 2nd person forms, adding support to the claim that these already include the focus particle; see Scharf 2016 for further arguments that these forms are *synchronically* decomposed in Q'anjob'al.

Second, while it is widely noted that full 1st and 2nd person pronouns have a limited distribution in Mayan, the restriction appears to be stronger in Q'anjob'alan. For example, Dayley (1985) notes that in Tz'utujil, free-standing pronouns are only used in emphatic or contrastive focus environments (as is common in *pro*-drop languages); they typically appear preverbally, but Dayley (1985, 303) notes that they may appear postverbally as well. Postverbal 1st and 2nd person pronouns can be found throughout K'ichean languages; see for example (27b) above. Though further comparative work is needed in this area, there seems to be general support for the proposal that what is special about Q'anjob'alan 1st and 2nd person pronoun forms is that they have a more limited distribution than in K'ichean, supporting the proposal that they are not pronouns in the synchronic grammar, have not Ā-extracted, and thus do not trigger AF.

Both agent and patient must be 3rd person. Finally, we turn to Tsotsil. Tsotsil is an outlier in the Greater Tseltalan branch in having an Agent Focus construction. Like the other members of its subfamily, it has a series of stem-final Set B markers, which at least in some environments appear to be available in TAM-less environments, as in (114a)—hallmarks of LOW-ABS languages.[34]

(114) a. X-tal [a-tek'-ik-**on**].
ASP-come A2-step-2PL-B1
'You (all) will come and step on me.' (Tsotsil; Aissen 1984, 561)

b. Ak'-o [s-mala-**otikotik**] li Maruch-e.
let-IMP A3-wait.for-B1PL.EXCL DET Maruch-CL
'Let Maruch wait for us.' (Tsotsil; Aissen 1987, 222)

Nonetheless, Agent Focus in Tsotsil shares the properties from (21) above: it is limited to contexts of transitive subject extraction, neither DP is oblique, Set A marking disappears, and a cognate form of the AF suffix appears on the stem. As Aissen (1999, 456) notes, like AF in other languages, the Tsotsil AF stem appears with intransitive status suffixes in certain environments.[35] However, Tsotsil AF occurs only when *both arguments are 3rd person* (Haviland 1981; Aissen 1999, 2017a). Compare the 3>3 forms in (115a) and (115b), with the ungrammatical form in (115c).

[34] Tsotsil also has a reduced set of "high" Set B morphemes; see Aissen 1987 and Woolford 2011 for discussion.

[35] Aissen (1999, 457) describes the Set B marker in the AF construction as preferentially targeting the object but with subject agreement also attested, repeated in Stiebels 2006. Aissen (2017a, 150), however, states that it is in fact only possible with objects.

(115) a. Buch'u i-maj-**on** li Petul-e?
who PFV-hit-AF DET Pedro-ENC
'Who hit Pedro?' (Tsotsil; Aissen 1999, 456)

b. J-bankil i-maj-**on**.
A1-older.brother PFV-hit-AF
'My older brother hit him.'

c. *Vo'on l-i-maj-**on**.
PRON1S PFV-B1-hit-AF
intended: 'I hit him.' (Tsotsil; Aissen 1999, 456)

To express the meaning in (115c), a transitive form is used, as in (116). AF forms are similarly impossible when the object DP is 1st or 2nd person.

(116) Vo'on i-j-maj.
PRON1S PFV-A1-hit
'I hit him.' (Tsotsil; Aissen 1999, 456)

While AF is limited to agent extraction in 3>3 contexts in Tsotsil, not all 3>3 environments with extracted agents require AF. This means that in certain contexts, there is ambiguity as to whether the subject or object DP has extracted, as in (117).

(117) Buch'u i-s-kolta li tzeb-e?
who PFV-A3-help DET girl-ENC
'Who helped the girl? / Who did the girl help? (Tsotsil; Aissen 1999, 459)

Aissen notes that while this kind of optionality is possible in elicited material, in practice it is generally quite clear whether a certain 3>3 construction will make use of AF. Specifically, the choice between a transitive or AF form depends on a variety of factors related to the *relative prominance* of subject and object DPs, including animacy, definiteness, individuation, and discourse role. Specifically, "the AF form requires that the object be more prominent than the subject; the TV form requires roughly the opposite" (Aissen 1999, 459). To give one example related to the property of animacy, consider the question in (118).

(118) K'usi i-s-ti'?
what PFV-A3-bite/eat
'What did he eat?' / *What bit him?' (Tsotsil; Aissen 1999, 459)

While the verb *ti'* can mean either 'eat' or 'bite', the transitive verb form in (118) is unambiguously interpreted as a case of patient extraction (cf. the optionality in (117)). This is because an AF form is required when the patient outranks the agent on the animacy scale, as would be the case in the ungrammatical reading of (118).

Further examples are given by Aissen (1999), who draws parallels between AF in Tsotsil, and systems of *obviation* in languages like those in the Algonquian family. Because AF occurs when the lower-ranked argument is the subject, AF forms in Tsotsil are thus like inverse forms in languages with systems of obviation (Aissen 1997). We suggest, following work in Algonquian syntax (e.g. Bruening 2009 and discussion there), that obviation systems relate to binding. Specifically, in strings with more than one third person argument, the proximate nominal must c-command the obviative nominal. This means that if the proximate argument is generated as the patient, it must move to a position above the agent—effectively mirroring the general syntax of HIGH-ABS languages discussed in section 2.2 above. Compare the "direct" form in (119), in which the subject is proximate and the object is obviative, with the inverse form in (120).

(119) [SUBJ$_{\text{PROX}}$ [$_{\text{VP}}$ V OBJ$_{\text{OBV}}$]] *direct*

(120) [OBJ$_{\text{PROX}}$ [SUBJ$_{\text{OBV}}$ [$_{\text{VP}}$ V ~~OBJ$_{\text{PROX}}$~~]]] *inverse*

Again, the generalization from (24c) above is descriptively correct: AF in Tsotsil only occurs when both arguments are third person. However, this restriction can once again be reduced to a language-specific property. Systems of obviation operate only with two third person arguments, and exactly in inverse contexts, the object moves above the subject, mirroring the normal syntax of a HIGH-ABS language, consistent with our generalization from (104).[36]

B The K'ichean hierarchy effect

The K'ichean hierarchy which governs the realization of the single Set B morpheme in the AF construction is visually represented in (121); Set B morphemes from one K'ichean language, Kaqchikel, are provided for reference in (122).

(121) *K'ichean person hierarchy*[37]

	combination of DPs	Set B
a.	[PART] ↔ [3SG/PL]	[PART]
b.	[PART] ↔ [PART]	*
c.	[3PL] ↔ [3SG]	[3PL]
d.	[3PL] ↔ [3PL]	[3PL]

(122) *Kaqchikel Set B series (Bennett et al. 2018)*

	SINGULAR	PLURAL
1ST	*i-/in-*	*öj-*
2ND	*a-/at-*	*ïx-*
3RD	Ø	*e-/e'-*

Recall from appendix A that the hierarchy effect is not about 1st or 2nd person arguments, per se, but rather the competition for Set B marking. As discussed in Aissen 2017b, the second person formal pronouns have clitic forms which do not belong to the Set B series, and do not participate in this hierarchy (see (110) above). We do not offer an account about the source of 2nd person formal morphology, but simply note here that from the point of view of the Set B hierarchy patterns, 2nd person formal pronouns behave as 3rd person arguments do in not triggering any morphology in the Set B slot. Because our analysis below ties the ungrammaticality of combinations of non-formal [PART] forms to this morphological competition, we correctly expect forms like (110) above to be grammatical.

With respect to the Set B morphemes in (122), the facts to be accounted for in (121) can be stated as follows: in any combination of 1st or (non-formal) 2nd person [PART] DP with a 3rd person DP, the [PART] Set B morpheme will be realized, regardless of the number features of either DP (row a). Combinations of two Set B-triggering [PART] DPs are simply ineffable in the Agent Focus construction (§A); again, this is irrespective of their number features (row b). In combinations of 3rd person arguments, if there is a 3rd person plural DP, the 3PL Set B marker will be realized; combinations of two 3rd plural DPs are acceptable and result in a (single) plural exponent (rows c–d).

[36] Aissen (2017a) argues that some dialects of Tsotsil have reanalyzed the AF form as a passive, noting functional motivation for this collapse. Specifically, transitive verb forms are generally impossible in Tsotsil inverse environments: a transitive verb may not appear with indefinite inanimate A and a definite animate P, irrespective of extraction. In sentences *without* Ā-extraction of the subject, a passive form is required when P outranks A on the obviation scale; in extraction contexts, the AF form is used. This might suggest that v^0_{TV} is not able to raise the object above the subject, as shown in (120). We are not able to offer a full account of Tsotsil AF, but simply note that whatever the ultimate analysis, the restriction to 3rd person environments can be connected to systems of obviation more generally, in line with our claim that apparent restrictions on person features of arguments can be traced to independent properties of the languages in question.

[37] See Preminger 2014, pg. 64 for a full table of combinations and outputs, not included here for space.

As in the derivations above, we take the probe responsible for generating the Set B morphemes to be located on Infl^0. In order to account for the privileged role of person features in the hierarchy, we take the probe to be an articulated person probe, shown in (123); on splitting φ-probes into distinct person (π) and number (#) probes, see Taraldsen 1995; Sigurðsson 1996; Anagnostopoulou 2003; Béjar and Rezac 2003, among others.[38]

(123) *Articulated person probe on Infl^0*

$$\begin{bmatrix} u\pi \\ | \\ u\textsc{part} \end{bmatrix}$$

We assume that the K'ichean Set B morphemes—for example, those from Kaqchikel in (122)—are morphological agreement, that is, the spell-out of φ-features copied to Infl^0 when the φ-probe on Infl^0 enters into Agree with a goal DP, possibly a null *pro*.[39] Following previous work on agreement (Béjar and Rezac 2009; Deal 2015; Coon and Keine to appear), we assume that feature-copying is coarse: when an unvalued probe segment [uF] enters into Agree with a DP, the entire feature geometry that contains [F] is copied back to the probe. What this means in the present system is that while probing is driven by unvalued *person features*, as in (123), Agree with a goal DP will result in both person and number features being copied back to the probe. See Deal 2015 for a related account of agreement in Nez Perce.

Our account of the hierarchy effect in K'ichean also relies on the principles of feature gluttony used to derive the EEC in section 3 above. Because the specifiers of *v*P are equidistant from Infl^0, as shown above in (99), when the articulated person probe probes, it will have access to the subject and object simultaneously; Best Match (see §5.3) will ensure that if one DP is a better match for the features of the probe, only that DP will enter into Agree. If both goals are equally good matches, a gluttonous configuration will arise. We continue to assume that a gluttonous configuration is not in itself problematic, but that the way such a configuration interacts with other aspects of the grammar may be. Above to derive the EEC, the problem resulted from a conflict for syntactic movement. Here we propose, following Coon and Keine to appear on gluttony in morphological agreement, that a morphological problem may arise when conflicting Vocabularly Items (VIs) compete for insertion into a single node. We demonstrate below how these assumptions derive the pattern in (121), tackling each combination in turn.

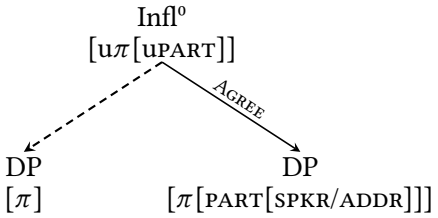
[PART] ↔ [3SG/PL]. When one argument is 1st or (non-formal) 2nd person, and the other is 3rd person (row a in the table in (121)), the articulated person probe in (123) will enter into Agree with only the 1st or 2nd person DP, as shown in (124) (borrowing Oxford's representation for probing equidistant DPs). This is because a [PART] DP will always have *more* of the features sought by the probe in (123) than a 3rd person DP, and thus will qualify as the Best Match. This is the case regardless of whether the [PART]-bearing DP is the subject or the object. The number specification of either DP is similarly irrelevant because Best Match is only calculated with respect to the features of the probe. The probe will copy back all features of the

[38] It is possible that there are distinct person ([uπ]) and number ([u#]) probes, with [uπ] ordered before [u#], as in Preminger's account. In our system, there will be no role for the number probe and we set it aside here.

[39] Preminger (2014) proposes that the 1st and 2nd person Set B morphemes in Kaqchikel are pronominal clitics, while the 3rd person plural is morphological agreement. Preminger uses this distinction to account for the preference of [PART] over 3rd person, via a stipulation that the realization of clitics is privileged over the realization of agreement. As support for this division, Preminger cites the fact that the 1st and 2nd person Set B forms look morphologically *more* similar to full pronouns than the 3rd person plural morpheme. However, it has been noted that morphological similarity is not a sufficient diagnostic for the distinction between clitics and agreement (Bennett et al. 2018; Yuan 2018), and we are unaware of other evidence for a distinction in status among the Set B forms. Furthermore, there is an independent explanation of the morphological distinction that Preminger discusses (see Preminger 2014, 26)—namely, the addition of the segment <j> in the 3rd person pronouns is likely historically related to the focus marker *ja*. Under our account, the Set B morphemes have the same status, which we take to be an advantage.

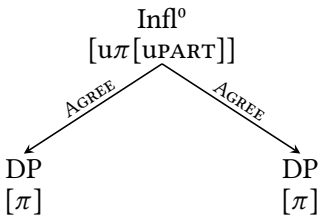
[PART]-bearing DP, spelling them out as the Set B morpheme.[40]

(124) *One argument is 3rd person*

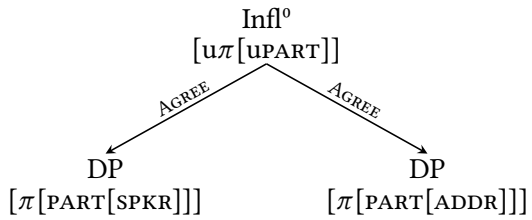


[PART] ↔ [PART] and [3] ↔ [3]. In other combinations of DPs—i.e. rows (b)–(d) in (121) above—Best Match will fail to pick one DP over the other. This follows from the assumption that the π-probe only considers *person* features when calculating Best Match. In combinations of two 3rd person DPs, both will only have the feature [π], and therefore will be equal with respect to Best Match, as in (125). In combinations of 1st and 2nd person arguments, both DPs are again equally good matches for the [uπ[uPART]] probe on Infl⁰, as in (126).[41] Following Oxford (2019) for Algonquian agreement, we propose that in these scenarios, *both* DPs enter into Agree with the probe on Infl⁰, as shown in (125)–(126).

(125) *Both arguments are 3rd person*



(126) *Both arguments are 1st/2nd person*



Strikingly, though the syntax of the constructions in rows (b)–(d) of the table in (121) is proposed to be identical, the outcomes of the configurations in (125) and (126) are different. All possible combinations of 3rd persons are grammatical—with the 3rd person plural morpheme exponed if present on either or both DPs—while all possible combinations of (nonformal) [PART] DPs are ineffable.

To account for this contrast we adopt the general line of approach to gluttony in morphological agreement in Coon and Keine to appear, §4. Specifically, when a probe enters into Agree with more than one DP, the full feature geometries from each DP are copied back to the probe. Each set of features will demand a specific Vocabularly Item (VI), and only a single VI may be inserted to a given head (Halle and Marantz 1993, 1994; Arregi and Nevins 2012). These assumptions, together with the assumption that 3rd person singular in K'ichean corresponds to the *absence* of a VI (vs. a null VI; see Baker 2006 on this distinction), correctly derives the patterns above. We walk through each of the remaining three cases in turn.

Beginning in row (b), when two [PART] DPs have entered into Agree with Infl⁰, each will copy back a set of φ-features. Note that these will always be two *distinct* sets of features (e.g., a 1st person combined with a 2nd person), since reflexive constructions are formally different; see §4.3. Each set of features will

[40] The general thrust of our analysis is similar to the morphological account in Watanabe 2017 insofar as agreement forms are competing for a single slot, but the two accounts also differ in important respects. For Watanabe, the preferential insertion of [PART] over 3rd person agreement is governed by the Subset Principle (Halle 1997). Watanabe formulates the ban on two non-3rd-person DPs as a variant of the Obligatory Contour Principle, relativized specifically to [+PART]. Our account of the ungrammaticality of multiple [PART] DPs (row (b) of (121)), but the grammaticality of multiple 3PL DPs (row (d) of (121)), relies directly on their morphological forms, and does not require this type of additional stipulation.

[41] Note that since Best Match is evaluated against the features of the probe, 1st and 2nd person DPs will be equally good matches for this [uπ[uPART]] probe regardless of whether both 1st and 2nd person are fully specified, as represented in (126), or whether one is underspecified (i.e. if 2nd person is missing the [ADDR] node; e.g. as in Harley and Ritter 2002).

thus demand a different VI from the top two rows of the table in (122). Since only a single VI may be inserted, the derivation will crash, resulting in ineffability of these forms (see appendix A). See Coon and Keine to appear and references cited there for precedents of competing VIs resulting in ungrammaticality from a variety of syntactic domains.

In cases where two 3rd person arguments have entered into Agree, no such conflict arises. Since [3SG] corresponds to the absence of a VI, combinations of two [3SG] DPs result in no VI being inserted. In a similar vein, for a combination of a [3PL] and a [3SG] DP, only [3PL] corresponds to a VI; the single [3PL] VI is inserted and again, no conflict arises (row (c) in (121)). Finally, for the case of two [3PL] DPs, each DP will copy back its feature geometry to the probe. Here, however, each set of features demands insertion of *the same* VI—3rd person plural *e-/e'-* in Kaqchikel—and no morphological conflict arises. This state of affairs finds precedent in resolution of morphological conflicts via syncretism, also discussed in Coon and Keine to appear.

The outcomes of the various argument combinations, along with a summary of how the outcome is formally achieved, are summarized in (127). Notably, our morphological account successfully derives the fact that combinations of two [PART] DPs and combinations of two [3PL] DPs differ in their outcomes. We connect this directly to the fact that two [PART] DPs will always be distinct (resulting in a morphological conflict and hence ineffability), while two [3PL] DPs will demand the same form, resulting in the insertion of a single [3PL] Set B morpheme.

(127) *Constraints in the K'ichean hierarchy*

	combination of DPs	Set B	Account
a.	[PART] ↔ [3SG/PL]	[PART]	Best Match = [PART]; only [PART] enters into Agree
b.	[PART] ↔ [PART]	*	both Agree; conflicting VIs result in ineffability
c.	[3PL] ↔ [3SG]	[3PL]	both Agree; only [3PL] demands a VI
d.	[3PL] ↔ [3PL]	[3PL]	both Agree; a single VI is compatible with both

In sum, the proposed configuration in which both the subject and object DPs in K'ichean Agent Focus are equidistant to the higher functional probes allows us to capture both the ability for an [Ā]-bearing subject to extract (see §5.3), and to capture the fact that hierarchy effects are found in AF clauses, but not in regular transitive constructions. Positing that the φ-probe on Infl^0 is articulated to [PART], and that agreement with equidistant goals is subject to Best Match, allowed us to account for the privileged status of 1st and 2nd person DPs with respect to 3rd persons. All other combinations result in feature gluttony. The principles of Vocabulary Insertion, together with the assumption that the null 3rd person cell in the paradigm corresponds to the *absence* of a Vocabulary Item, resulted in the full range of patterns.