

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 (\bar{A} -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 \bar{A} -probe on C^0 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 ban ergative extraction in languages which otherwise allow it. We argue that the problem with \bar{A} -extracting the ergative subject across the intervening object connects to the requirements of the \bar{A} -probe on C^0 : the probe on C^0 is bundled to search simultaneously for $[\bar{A}]$ and $[D]$ features. This relates the Mayan patterns to recent proposals for extraction patterns in Austronesian languages (e.g. Aldridge to appear) 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 C^0 and an \bar{A} -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 \bar{A} -extraction asymmetries and syntactic ergativity cross-linguistically.

Keywords: \bar{A} -extraction, extraction restrictions, syntactic ergativity, Agent Focus, Mayan

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). The continued interest in the EEC and AF is perhaps unsurprising given the connection to topics across a range of morphological and syntactic domains, including morphological

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and syntactic ergativity, \bar{A} -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 \bar{A} -extracting the ergative subject from a regular transitive clause are previewed for Q'anjob'al and K'iche' in (1).¹

(1) *Ergative Extraction Constraint*

- a. *Maktxel max y-il ix ix?
 who PFV A3S-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 \bar{A} -extraction from transitive verb forms is well-formed.

(2) *Object extraction*

- a. Maktxel max y-il naq winaq?
 who PFV A3S-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 \bar{A} -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 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.

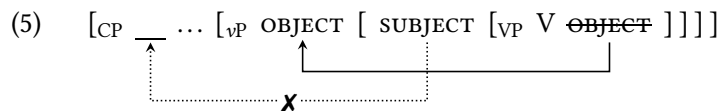
¹We follow Leipzig glossing conventions with the addition of the following abbreviations: A – “Set A” (ergative/possessive); AF – Agent Focus; B – “Set B” (absolute); DIM – diminutive; DIR – directional; DTV – derived transitive status suffix; ENC – enclitic; EXT – existential; FOC – focus; ITV – intransitive status suffix; OBV – obviate; 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.

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 \bar{A} -probe on C^0 , the subject is restricted from undergoing \bar{A} -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).



We show that special factors which exceptionally prevent such intervention from occurring have a direct effect on the extractability of the transitive subject.²

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 \bar{A} -extracting the ergative subject across the moved object connects to the requirements of the \bar{A} -probe on C^0 . In section 3, we specifically propose that the probe on C^0 is a complex probe which probes simultaneously for [\bar{A}] 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 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 \bar{A} -probe on C^0 , and to a blurred division between traditional A- and \bar{A} -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 Infl^0 and C^0 . We propose in section 5 that these two different AF strategies account for independent differences in these constructions in Q’anjob’alan and K’ichean.

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 \bar{A} -probe on C^0 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

²On the flipside, we suggest in appendix A that factors which exceptionally cause objects to raise may cause intervention effects in a language which otherwise does *not* exhibit the EEC.

treats this as a distinct phenomenon, and do not discuss Yucatec further here.⁵

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.

2.1 Mayan background

The Mayan language family is made up of about thirty languages spoken in southern Mexico, Guatemala, Belize, and Honduras by more than six million people (Bennett et al. 2016; Aissen et al. 2017b; England 2017). The family is typically divided into six major subgroups: Yucatecan, Greater Tzeltalan, K'ichean, Greater Q'anjob'alan, Mamean, and Huastecan (Campbell and Kaufman 1985; England and Zavala 2013; Campbell 2017).⁶ 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 semi-colons). We have underlined four languages that will play a main role in the discussion and analysis below.

- (8)
- a. **Yucatecan:** Yucatec Maya, Lacandon; Itzaj, Mopan
 - b. **Greater Tzeltalan:** Ch'ol, Yokot'an, Ch'orti; Tsotsil, Tzeltal
 - 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-a). 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

⁵There are two ways that “Agent Focus” has been used in previous literature: (i) a particular construction used exclusively to \bar{A} -extract transitive subjects, with a defined set of characteristics, as in (7); or (ii) any construction used for focusing agents. The antipassive and Yucatec forms fall into the latter group, and we set them aside here, delimiting our investigation to the forms that share the characteristics in (7). 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.

⁶See 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). 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).

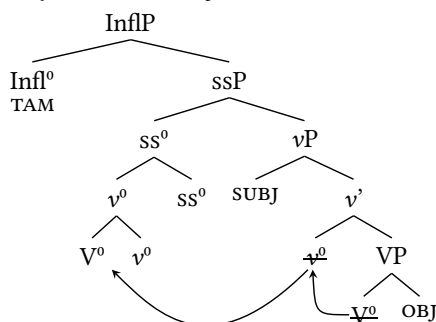
- (11) Choñkol i-wäy-el.
 PROG A3-sleep-NML
 'She is sleeping.'

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 /Voice⁰ 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 shown in (12).

- (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 feature-sharing resulting from the relationship between v^0 and its specifier directly upon merge. See also [Wiltschko 2006](#) for a similar case of “inherent agreement” in Halkomelem Salish. Set B morphemes are discussed just below.

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 consistently 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 (13) 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.⁷

- (13) K-om [j-kãñ-ety].
 A1-want A1-know-B2
 ‘I want to speak to you.’ (Ch’ol; [Vázquez Álvarez 2011](#), 99)

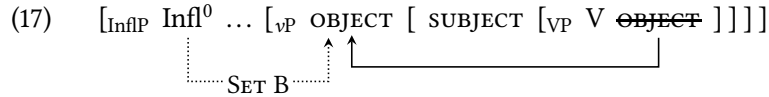
K’iche’, on the other hand, is an example of a language in which the Set B absolutive morphemes uniformly precede the predicate stem, as in (10b) above. These HIGH-ABS languages are proposed by [Coon et al. \(2014\)](#) to be languages in which finite Infl^0 is the source of absolutive morphology in 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 (14).⁸

- (14) 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)

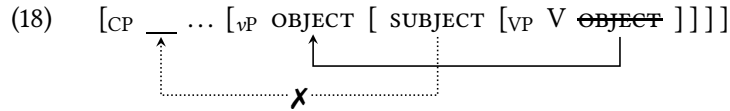
Some languages, like Chuj and Q’anjob’al, allow both pre- and post-stem Set B morphology. In general,

⁷We set aside for now the question of whether Set B morphemes are pronominal clitics or agreement markers, returning to 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.

⁸Based 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 to appear](#), and works in [Palancar and Zavala 2013](#) on nonfinite embedding in Mayan languages.



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 (18) and formalized in section 3 below. We will propose that this configuration is the source of the EEC.

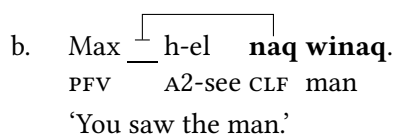
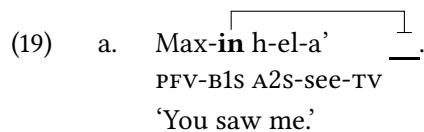


Note that while we have discussed Infl^0 and v^0 as the heads responsible for the Agree operations underlying the appearance of the Set B (absolutive) morphemes, we make no commitment as to whether the realization of Set B morphology is also tied to nominal licensing. While some previous accounts of 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.

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). 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,vP, 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 (19). 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 (19a), *or* a full DP, as in (19b), but not both.



(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 (20) (repeated from (7)).

- (20) *Characteristics of Mayan Agent Focus*
- a. AF is used when the transitive subject is \bar{A} -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.

An example from K'iche' illustrating these properties is shown in (21).

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

Despite the consistent characteristics in (20), 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 (22).

- (22) *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 (22a) is morphological; the pattern in (22b) 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 (22c) is related to obviation.

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 (23). Here we argue against the existence of (23c) for true AF; our analysis in section 5 accounts for the variation between (23a) and (23b).

- (23) *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 (24). 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 (24c).

- (24) 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 (25).

- (25) 1st person / 2nd person \gg 3rd person plural \gg 3rd person singular

Examples are shown in the K'iche' focus pairs in (26) and (27). The roles of the argument DPs are reversed in the pairs below, but note that the verb form remains identical. In (26) the Set B morpheme indexes the 1st person DP regardless of whether it is the subject or the object. Similarly, in (27) the Set B morpheme indexes the 3rd person plural DP regardless of its grammatical function.

- (26) 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)
- (27) 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 (28). 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.

- (28) 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 (28) 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 (29). In (29a) we see a sentence with no extraction typically described as an antipassive, while in (29b) we find a sentence with extraction, described as Agent Focus.

- (29) 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 [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 (29), 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 (29b). We contend that (29b) 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.

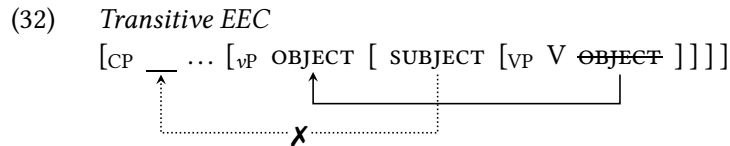
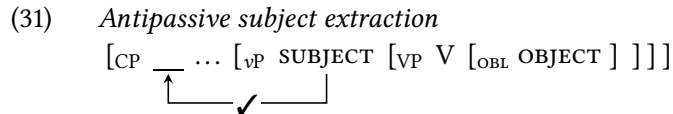
Similar facts are described for Mam ([England 1983](#)), which does not appear to possess a distinct AF form, but instead uses antipassive forms to extract agents: “The antipassive is used for various functions, including unknown or unmentioned patient, *agent promotion*, object (patient) incorporation 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 (30a). 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 (30b), 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 \bar{A} -extracted ([Berinstein](#) labels this construction “2–3 Retreat”, in the framework of Relational Grammar).

- (30) 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 [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 (30b) is restricted to contexts of agent extraction ([Aissen](#) labels these AF_{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 (discussed further in §4 below), and the clause is intransitive, it is unsurprising that the subject triggers Set B morphology and can extract. Contrast the schema in (31) with the ungrammatical (32), repeated from (5) above.



In our analysis of AF in section 5, we analyze the AF morpheme as the realization of a v^0 /Voice⁰ head which, among other special characteristics described below, imposes a selectional restriction on the agent in its specifier, requiring it to bear an $[\bar{A}]$ feature. This correctly restricts the use of AF to agent extraction environments. We suggest that the special antipassives which are dedicated to \bar{A} -extraction, like the Q'eqchi' form in (30b), impose a similar restriction 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 (23a) and (23b) above, summarized in (33). We return to the analysis of these in section 5

- (33) *AF agreement patterns*
 Set B = object | e.g. Q'anjob'al, Chuj, Popti'
 Set B = variable | e.g. K'iche', Kaqchikel, Tz'utujil

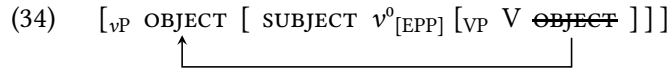
As noted by [Stiebels \(2006\)](#), consistent subject agreement (from (23c) above) is limited to contexts in which objects are demoted. Though these antipassive constructions are interesting, they do not present the same type of puzzle for how the EEC is circumvented and are not discussed further here.

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) high base generation of certain ergatives (§4 and see [Henderson and Coon 2018](#)); or (ii) variation in probe structure (§3.2, and fn. 11).

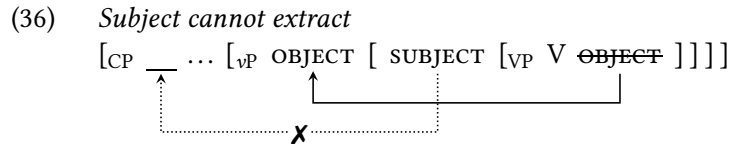
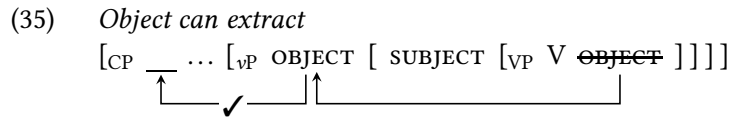
3 The extraction problem

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 (14) above). The relevant configuration is diagrammed in (34).



In the configuration in (34), 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 \bar{A} -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 \bar{A} -movement to Spec,CP, schematized in (35). Ergative subject \bar{A} -movement is ill-formed as shown in (36), repeated from (5).



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 the nature of the \bar{A} -probe in Mayan.

\bar{A} -movement is generally taken to obey Relativized Minimality (Rizzi 1990), and therefore are able to skip over or ignore elements that structurally intervene between a probe and its accessible goal but which crucially lack the requisite \bar{A} -feature sought by the probe—for example, the plain object DP in the configuration in (36). Building on the analysis of K'ichean in Levin 2018, however, we claim that (37) holds in Mayan:

- (37) RELATIVIZED PROBING IN MAYAN \bar{A} -MOVEMENT
 \bar{A} -probes are relativized to the feature [D].

Adopting (37), \bar{A} -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 (36), and (ii) relativization of the \bar{A} -probe to [D], as in (37), that conspire to yield the EEC.

Before we discuss the details, we note that relativization of an \bar{A} -probe to [D] connects to recent work on extraction asymmetries outside of the Mayan family. Aldridge (to appear), for example, proposes 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 \bar{A} -movement; van Urk 2015), with potential connections to the notion of Feature Inheritance more generally (Richards 2007; Chomsky 2008; Martinović 2015), discussed in more detail below. Importantly, however, these works also relate asymmetries in extraction to a problem of nominal

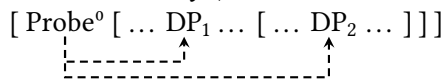
licensing (as in e.g. Coon et al.’s and Assmann et al.’s accounts of Mayan discussed above). For Aldridge and Erlewine, only the DP which extracts may receive abstract structural case (i.e. nominative/absolute). We will argue in section 4 that in Mayan, however, nominal licensing cannot be the problem: finite Infl⁰ 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 (37), 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 \bar{A} -features, we can straightforwardly derive the EEC. Specifically, an articulated probe on C⁰ 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. 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 as 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 (38).

(38) *Feature Gluttony* (Coon and Keine to appear)



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 (38) 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 \bar{A} -movement: when the \bar{A} -probe on C⁰ 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 (39).

$$(39) \begin{bmatrix} x \\ | \\ y \\ | \\ z \end{bmatrix}$$

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 (39), 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 (39) are given in (40).

(40) *Articulated probes*

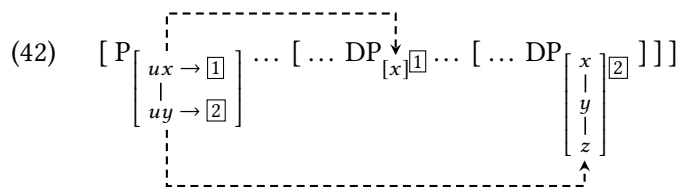
- a. $\left[\begin{array}{c} ux \end{array} \right]$ – fully satisfied by any goal bearing $[x]$
- b. $\left[\begin{array}{c} ux \\ | \\ uy \end{array} \right]$ – fully satisfied by any goal bearing $[x[y]]$
- c. $\left[\begin{array}{c} ux \\ | \\ uy \\ | \\ uz \end{array} \right]$ – fully satisfied by any goal bearing $[x[y[z]]]$

Finally, Coon and Keine’s formalization of Agree is given in (41).

(41) 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 (41) 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 (41) allows for different segments on a complex probe to enter into Agree with *distinct* goals. Consider the diagram in (42).



In (42), an articulated probe P with the unchecked 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 (41), 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 $[uy]$. In this paper, 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 $[y]$ results in the copying of the feature hierarchy $\boxed{2}$.

The Agree relations in the derivation in (43) 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 (43). P in (43) is *gluttonous* because it has agreed with, and hence acquired values from, two DPs.

$$(43) \quad P = \left\{ [x]_{\boxed{1}}, \left[\begin{array}{c} x \\ | \\ y \\ | \\ z \end{array} \right]_{\boxed{2}} \right\}$$

Crucially, feature gluttony only arises when the lower potential goal is featurally *more* highly specified than the higher potential goal with respect to the probe, as was the case in (42) above. If the lower DP has fewer features than the higher DP, or an identical set of features, gluttony does not arise.

First consider (44), 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.

$$(44) \quad [P \left[\begin{array}{c} ux \\ | \\ uy \end{array} \right]_{\boxed{1}} \dots [\dots DP \left[\begin{array}{c} x \\ | \\ y \\ | \\ z \end{array} \right]_{\boxed{1}} \dots [\dots DP \left[\begin{array}{c} x \\ | \\ y \end{array} \right]]]]$$

Similarly, only a single Agree relationship is established in (45), 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 (45) is not fatal.

$$(45) \quad [P \left[\begin{array}{c} ux \rightarrow \boxed{1} \\ | \\ uy \end{array} \right] \dots [\dots DP \left[\begin{array}{c} x \\ | \\ x \end{array} \right]_{\boxed{1}} \dots [\dots DP_{[x]}]]]$$

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 \bar{A} -probes to hold in Mayan:

$$(46) \quad \text{RELATIVIZED PROBING IN MAYAN } \bar{A}\text{-MOVEMENT}$$

\bar{A} -probes are relativized to the feature $[D]$.

More precisely, we take (46) to mean that the \bar{A} -probe on C^0 in Mayan searches for *both* the feature $[D]$ and one of the features involved in \bar{A} -movement, such as $[Wh]$, $[Foc]$, or $[Rel]$. Here, we notate this set of features together as $[\bar{A}]$. In a HIGH-ABS configuration, the higher DP object will have the feature $[D]$, while the lower \bar{A} -subject will have both $[D]$ and $[\bar{A}]$ features, giving rise to gluttony, as shown in (47).

(47) *Feature gluttony configuration in \bar{A} -probing*

$$\left[C^0_{[uD, u\bar{A}]} \left[\dots DP.Object_{[D]} \dots \left[\dots DP.Subject_{[D, \bar{A}]} \dots \right] \right] \right]$$

The key question is how it is possible for C^0 to probe for both $[D]$ and $[\bar{A}]$ at the same time. We suggest that the key to understanding this property is the ability for features to be arranged into geometries. Specifically, following Baier (2018) on anti-agreement effects cross-linguistically, we propose that the feature $[D]$ and the $[\bar{A}]$ in Mayan are part of *the same* feature geometry, which we label \mathcal{F} , shown in (48).

(48) *Feature geometry \mathcal{F}*

$$\left[\begin{array}{c} \mathcal{F} \\ \wedge \\ D \quad \bar{A} \end{array} \right]$$

According to the geometry in (48), the feature $[D]$ entails $[\mathcal{F}]$, as does the feature $[\bar{A}]$. 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 $[\bar{A}]$ is specified $[\mathcal{F}[\bar{A}]]$.¹¹ XPs bearing these features will therefore match any probe searching for $[\mathcal{F}]$. We propose that the C^0 head involved in \bar{A} -extraction in Mayan bears a fully articulated \mathcal{F} -probe, as shown in (49).

(49) *Probe on C^0 in Mayan \bar{A} -extraction*

$$\left[\begin{array}{c} u\mathcal{F} \\ \wedge \\ uD \quad u\bar{A} \end{array} \right]$$

As noted above, the idea that \bar{A} -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 $[\varphi]$ and $[\bar{A}]$ simultaneously, 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. Aldridge (to appear) proposes that Austronesian movement to Spec,CP is driven by $[\varphi]$ -features.

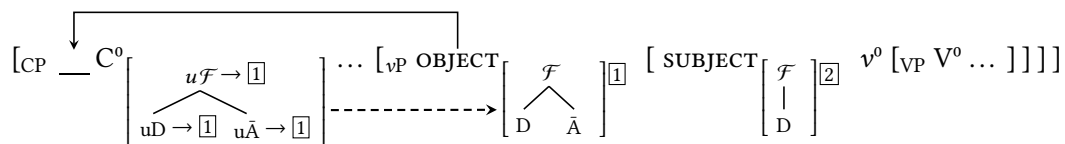
The probe in (49), combined with the assumption that the object moves to a position above the subject, is able to derive the Mayan EEC. Consider first what happens in object extraction contexts, shown in (50).

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

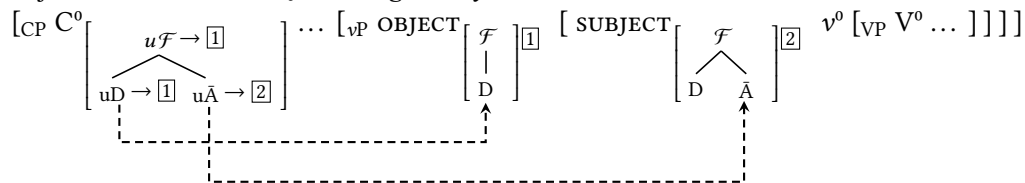
$${}_{[CP]} C^0 \left[\begin{array}{c} u\mathcal{F} \rightarrow \boxed{1} \\ \wedge \\ uD \rightarrow \boxed{1} \quad u\bar{A} \rightarrow \boxed{1} \end{array} \right] \dots [{}_{[VP]} OBJECT \left[\begin{array}{c} \mathcal{F} \\ \wedge \\ D \quad \bar{A} \end{array} \right] \boxed{1} [SUBJECT \left[\begin{array}{c} \mathcal{F} \\ | \\ D \end{array} \right] \boxed{2} v^0 [{}_{[VP]} V^0 \dots]]]]$$

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 $\boxed{1}$, valuing the matching segments $[u\mathcal{F}]$, $[uD]$, and $[u\bar{A}]$ on the probe. Across Mayan, \bar{A} -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 (50), the object moves to Spec,CP, as shown in (51). Object \bar{A} -movement is unproblematic, as C^0 has entered into only one Agree relation in (51), and therefore there is only one DP that can potentially move to Spec,CP.

¹¹We assume that the feature sets $[D]$ and $[\bar{A}]$ are also internally structured. See Abels 2012 and Aravind 2018 for proposals regarding the structure of the $[\bar{A}]$ feature set. Though we do not develop this idea further here, note that articulation of \bar{A} -features could provide a means of accounting for variation in different types of \bar{A} -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, \bar{A} -contexts could be handled by appealing to more fine-grained specifications in the probe's feature structure.

(51) \bar{A} -movement of the object

Consider next what happens in structures where a transitive subject has an $[\bar{A}]$ feature and the object does not, as in the would-be agent extraction configuration shown in (52).

(52) \bar{A} -feature located on subject \rightarrow gluttony

In this scenario, the probe on C^0 agrees with *both* the object DP and the subject DP. The object DP is the closest goal matching segments $[u\mathcal{F}]$ and $[uD]$ on the probe, and the subject DP is the closest goal matching segment $[u\bar{A}]$ on the probe.¹²

The configuration in (52)—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 (52) results from conflicting requirements on movement that are brought about by the fact that (i) C^0 has entered into Agree relationships with two DPs, and (ii) the \bar{A} -probe on Mayan C^0 requires elements with which it has agreed to undergo movement. This latter requirement is stated in (53), mirroring Coon and Keine’s requirement for cliticization.

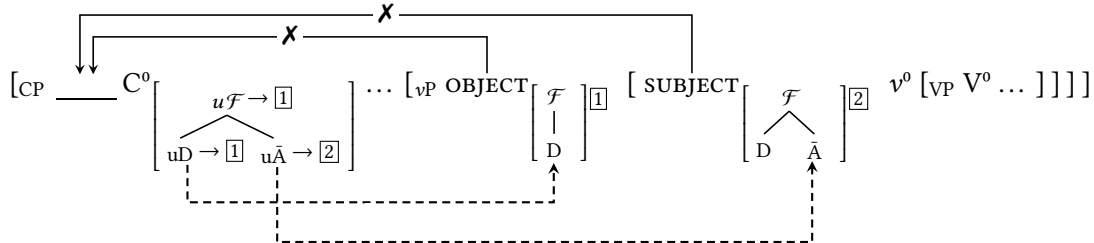
- (53) If a segment of a movement-inducing probe on a head H has agreed with an XP, this XP must undergo movement to the specifier of H.

There is broad evidence that the requirement for \bar{A} -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 (to appear) on Tsotsil and Tzeltal; AnderBois and Chan Dzul (to appear) on Yucatec Maya; Can Pixabaj (to appear) on K’iche’; Mateo Toledo (to appear) on Q’anjob’al; Royer (to appear-b); and Vázquez Álvarez and Coon (to appear) on Ch’ol.

The requirement in (53) poses no problem for \bar{A} -probes which are not gluttonous—as in the \bar{A} -object in (51)—but causes an irresolvable conflict in gluttony environments like the one illustrated in (52). Moving only one of the DPs, or moving neither DP, poses a clear violation of (53). 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 (53); assuming that every step in the derivation must be well-formed, a sequential movement option is also ruled out. Finally, we consider the possibility that both DPs move *simultaneously*. While this would not violate the requirement in (53), 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 (52) ineffable (see Coon and Keine to appear on the same conflict in cliticization). This derives the EEC.

¹²A reviewer asks what happens under our analysis when *neither* the object nor the subject bear $[\bar{A}]$. One possibility is that the C^0 in extraction contexts is different than the C^0 in non-extraction contexts, with the later lacking a probe altogether. An alternative would be to propose that C^0 always bears this probe but it is the $[u\bar{A}]$ segment of the probe which is movement inducing; if it does not find a goal, no movement takes place.

(54) \bar{A} -feature located on subject \rightarrow gluttony

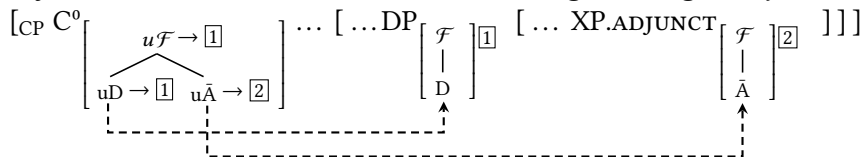


Stepping back, the analysis above formalizes our claim that the EEC is the result of an *intervention* problem. Specifically, in HIGH-ABS languages the DP object raises to a position above the \bar{A} -subject, resulting in a gluttony configuration: the object bears only [D], causing the complex \bar{A} -probe to enter into Agree with both the object and the lower subject. The Mayan \bar{A} -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.

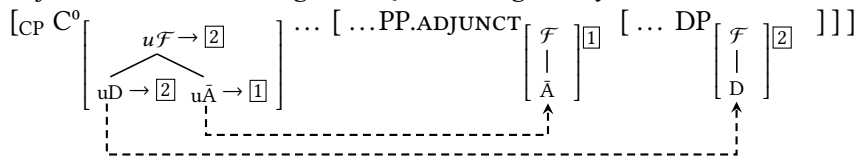
3.3 Adjunct extraction

In the system developed above, an XP which successfully undergoes \bar{A} -extraction must be the only XP with which the complex probe on C^0 enters into Agree. This state of affairs holds when there is no intervening DP between the probe and the \bar{A} -element, as in licit object extraction in (51). It does not hold in would-be transitive subject extraction, because the object DP intervenes, as in (54). 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 \bar{A} -adjunct will enter into Agree with C^0 , causing gluttony, as shown in (55). 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 (56).

(55) \bar{A} -feature located on low adjunct with intervening DP \rightarrow gluttony



(56) \bar{A} -feature located on a high PP adjunct \rightarrow 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 these predictions may be on the right track.

First, consider the case of low adjuncts, generated below one or more of the DP arguments. We assume that all [\bar{A}]-bearing elements generated below vP must undergo movement to the edge of vP in order to extract, placing them above argument DPs. As potential support for this proposal, note that in some EEC Mayan languages, special verbal morphology is found precisely in contexts of \bar{A} -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 vP -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 (55) 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 (56). If a high [\bar{A}]-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 \bar{A} -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 \bar{A} -extraction, avoiding a gluttony configuration.

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 2013, 666, Vázquez Álvarez and Coon to appear). 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). Nevertheless, we tentatively suggest that these apparent P⁰s 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 (56) (see Grimshaw 2005 for the claim that P⁰ 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 \bar{A} -probe to search for [D] and [\bar{A}] 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 (at least) two environments in which transitive subjects extract in HIGH-ABS languages *without* the use of the special AF form, each examined below. First, in some languages, transitive clauses with bare NP objects have been noted to permit ergative subject extraction. Here we propose that the transitive NP object moves above the subject but, due to the fact that it lacks a [D] feature, it will not intervene for the \bar{A} -probe, which is relativized to [D]. Second, constructions with reflexive and “extended reflexive” objects permit transitive subject extraction. Here, we propose that the object undergoes movement to a position above the subject, but then *reconstructs* for binding purposes. In the remainder of this section we examine these patterns in HIGH-ABS Mayan languages.

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

- a. object is a bare NP (§4.1)
- b. object is a reflexive or extended reflexive (§4.2)

As our account predicts, in exactly these environments the EEC is suspended and ergative subject extraction out of a canonical transitive clause is exceptionally well-formed.

Before we examine these two environments in detail, note that the EEC has also been reported to be obviated in a third environment: when both the subject and object DP occupy the left periphery, in apparent examples of multiple extraction, discussed in more detail in Erlewine 2016. These effects are described for Kaqchikel by García Matzar and Rodríguez Guaján (1997) and Broadwell (2000), shown in (58). When both arguments appear preverbally, as in (58a), the order S–O–V triggers the use of a full transitive verb form. The reverse order, O–S–V, requires the Agent Focus form of the verb, as in (58b).¹³ The initial element is contrastive, as indicated by the translations from the original.

- (58) a. [_{SUBJ} Ja ri utiw-a’], [_{OBJ} ja ri aq] x-e-ki-tij.
 FOC DET coyote-PL FOC DET pig PFV-B3P-A3P-eat
 ‘(In contrast to) the coyotes, it’s the pigs they eat.’
- b. [_{OBJ} Ja ri aq], [_{SUBJ} ja utiw-a’] x-e-ti-o.
 FOC DET pigs FOC coyote-PL PFV-B3P-eat-AF
 ‘(In contrast to) the pigs, it’s the coyotes that eat them.’ (Kaqchikel; García Matzar and Rodríguez Guaján 1997, 405)

Henderson and Coon (2018) argue that the initial DP in sentences like (58a) is a base-generated high topic, associated with a null pronoun in the base subject position. This is supported by the fact that an intonational break is required between the two DPs, which Aissen (1992) takes to be a diagnostic of high topics.

¹³An anonymous reviewer points out that Assmann et al. (2015, 375) provide an example of O-S-V 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 (Broadwell 2000; Erlewine 2016). Thanks to Robert Henderson and Rodrigo Ranero for discussion.

Aissen (1992, 76) further notes a connection between external topics and contrastive topics in Kaqchikel’s close relative, Tz’utujil. Under a high-topic analysis, the S–O–V sentence in (58a) involves only object extraction and the transitive form of the verb is expected. In contrast, O–S–V sentences like (58b) show true subject extraction (with a high base-generated object), and AF is correctly predicted to be required. We do not discuss these examples further here, but see Levin 2018 for an alternative.¹⁴

In the remainder of this section, we discuss the two contexts listed in (57) which obviate the need for AF, and sketch how our analysis accounts for these environments.

4.1 NP complements

The intervention-based approach pursued here receives 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 \bar{A} -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 \bar{A} -movement of the ergative subject. This is shown for a *wh*-subject in (59a) and a negative existential in (59b).

- (59) 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.

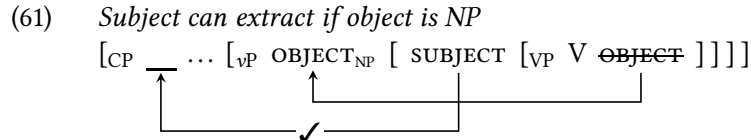
We maintain that the obligatory absence of determiners in (59) indicates that objects in this construction are structurally reduced; they lack D⁰ and its concomitant [D]-feature.¹⁵ These objects are nevertheless phrasal. They can be modified by adjectives, as in (59b). In fact, these reduced noun phrases 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 (60).

- (60) 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)

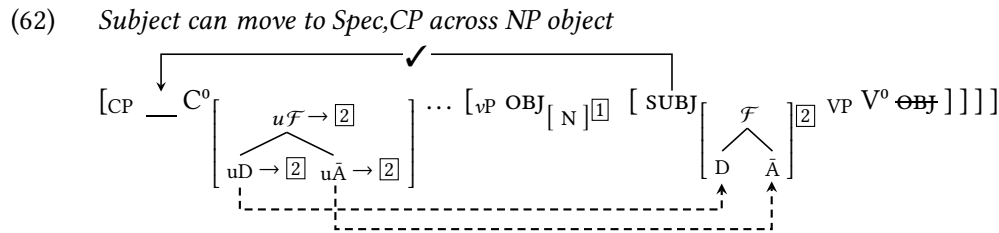
¹⁴A second possibility is proposed by Levin (2018). If sentences like those above *do* involve multiple extraction, as proposed in Erlewine 2016, then in the grammatical S–O–V transitives, the subject can be analyzed as having extracted across the *trace* of the object. Given that traces are shown cross-linguistically to not behave as interveners—see Rizzi 1986; Chomsky 1995, 2001, McGinnis 1998, Bošković 2011—we would correctly predict that the ergative subject should be targetable by the \bar{A} -probe on C⁰.

¹⁵Aissen (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 bare NP objects. Aissen shows that this variation 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 D⁰s would, explaining the requirement for AF in these configurations. The presence of null D⁰ 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 D⁰ (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.

Sentences like those in (60) 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 (60) 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 (61).



In the proposed structure in (61), 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 \bar{A} -probe on C^0 , which—as we proposed in section 3—is relativized to [D] and $[\bar{A}]$. In a configuration with a raised bare NP object, the \bar{A} -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 only the ergative subject. No gluttony arises, as in (62), and ergative extraction is correctly predicted to be possible.



In sum, the licit \bar{A} -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 (52) above). However when the raised object is *not* 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.

4.2 Reflexives and extended reflexives

The second environment in which ergative subject \bar{A} -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 \bar{A} -extraction from reflexive and extended reflexive configurations in Q’anjob’al and K’iche’ are provided in (63) and (64).

- (63) *Reflexive objects*
- a. Maktxel max y-il s-b’a?
 who PFV A3S-see A3S-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)

(64) *Extended reflexive objects*

- a. Maktxel max s-bon **s-na?**
 who PFV A3S-paint A3S-house
 'Who_i painted his_{i/*j} (own) 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_i burned his_{i/*j} (own) foot.' (K'iche'; Mondloch 1981, 237)

Reflexive constructions like those in (63) involve a transitive verb stem and a nominal anaphor, often described as a relational noun or a body-part noun, in object position. 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 (63) show, transitive subjects may \bar{A} -extract from a transitive verb when the object is a reflexive. The so-called "extended reflexives" in (64) appear structurally similar, but the possessed object is a regular (non-anaphoric) nominal (Aissen 1999). In the examples in (64), the subject binds the possessor of the object and a transitive subject again appears \bar{A} -extracted in the absence of AF marking. We contend that 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 (65), a minimal pair with the extended reflexive in (64a) above. In both sentences, the object is the possessed nominal *sna* 'his house'. In (64a), when the verb form is transitive, the object's possessor is interpreted as bound by the subject—an extended reflexive. In (65), the verb is in the AF form and the object's possessor may not be interpreted as bound by the subject.

- (65) Maktxel max bon-on s-na?
 who ASP paint-AF A3S-house
 'Who_i painted his_{*i/j} house?' (Q'anjob'al; Coon et al. 2014, 226)

In Q'anjob'al then, the presence of AF morphology on the verb in (65) forces disjoint reference between the subject and the object's possessor.¹⁶

Extended reflexive objects display two important properties. 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 plural possessed object, *ri rak'wala* 'his children', is bound by *Juan* in (66a) and by the subject *wh*-word in (66b). In both, the plural object triggers the realization of the overt 3rd plural Set B morpheme *-e*.

- (66) 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
 'It's Juan_i that went to look for his_{i/*j} (own) 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_i went to look for his_{i/*j} (own) children?' (Kaqchikel)

We propose that the ability for the bound objects to trigger Set B morphology in (66) indicates that the bound object has, like other objects, undergone movement above the subject, where it establishes an Agree

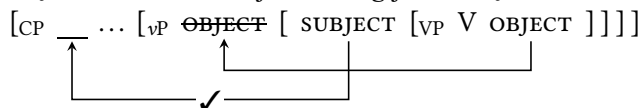
¹⁶Similar alternations can be found in some of the languages above, while in some other languages, AF is described as optional in bound contexts (see Aissen 2017b, 747 for an overview). We return to this in our analysis of AF in section 5.

relationship with finite Infl^0 (on par with the bare NPs from §4.1 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*.¹⁷ 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 \bar{A} -probe on C^0 —precisely in contexts in which the subject binds into the object?

4.2.1 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 (66) above, it is problematic from the point of view of binding (see Campana 1992). 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* C^0 probes, meaning that the higher copy does not act as an intervener to that probe, as shown in (67).

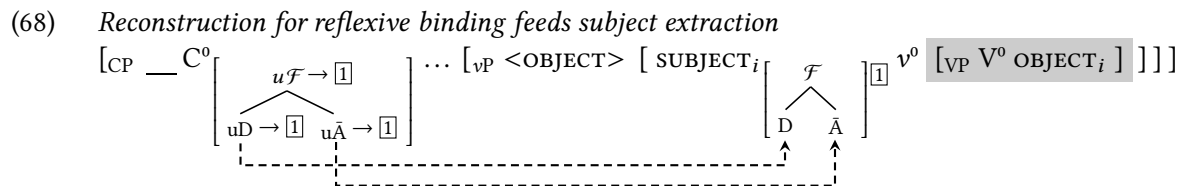
(67) *Object reconstruction for binding feeds subject extraction*



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 vP phase is not spelled out until C^0 is merged, and therefore anything inside vP is potentially accessible to the probe on Infl^0 . Finally, to derive the invisibility of reconstructed copies to the probe on C^0 , we propose that reconstruction occurs at 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 vP . Second, Infl^0 is merged and probes, finding the object in the higher specifier of vP and triggering Set B morphology (as in (66)). Next, C^0 is merged, triggering the spell out of the vP 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 C^0 , as shown in (68).

¹⁷We 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). Furthermore, while Q'anjob'alan languages lack general determiners, they do have a series of nominal classifiers, which are impossible on extended reflexive objects (Coon et al. 2014; Royer 2017, 2019). Coon et al. (2014) take the obligatory absence of nominal classifiers to indicate that extended reflexive objects have pseudo-incorporated into the verb and thus remain low. However, their account does not capture the fact that extended reflexive objects need *not* appear adjacent to the verb (Coon et al. 2014, fn. 28). Our account is compatible with an analysis in which the Q'anjob'alan extended reflexive object undergoes raising, but lacks an overt classifier for independent semantic reasons (see Royer 2019 and §4.2.2 below).



In (68), the articulated probe on C^0 agrees only with the subject DP, which matches and removes $[uD]$ and $[u\bar{A}]$ from the probe. Neither copy of the object DP is a licit target for C^0 : 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 (symbolized above by shading).¹⁸

4.2.2 Predictions and new evidence

Because semantic binding is the relevant factor in causing reconstruction, our account makes two important predictions. First, whenever the subject binds into the object—even in more complex constructions, such as when the subject binds into a relative clause modifying the object—we predict that the subject should be able to extract without AF. While to our knowledge this has not been discussed elsewhere in the Mayanist literature, initial data from Chuj in (69) provides evidence that this is the case.

- (69) a. **Context:** The teacher has bought a new book for the class and everyone takes turns reading it. You want to know who already read it and you ask:

Mach ix-awt-an [ch'anh s-libro ix-s-man *(ix)]?
 who PFV-read-AF CLF A3-book PFV-A3-buy CLF

'Who_i read the book that she_j bought?'

- b. **Context:** The class has gone on a trip to the bookstore, and every girl gets to buy one book. They go back to school and everyone takes out their new book to read. You ask:

Mach ix-y-awt-ej [ch'anh s-libro ix-s-man-a' *(ix)]?
 who PFV-A3-read-DTV CLF A3-book PFV-A3-buy-TV CLF

'Who_i read the book that she_i bought?' (Chuj)

The baseline sentence in (69a) involves no pronominal binding and obligatorily employs AF for extraction of the subject. In (69b), however, when the extracted subject binds a (null) pronominal in the object's relative clause, extraction is permitted from a transitive verb form.¹⁹

¹⁸This account focuses on extended reflexives because the syntactic position of regular reflexives (like (63) above) is less clear. As noted above, reflexives in Mayan languages are formed by combining a possessive Set A marker with an anaphoric relational noun, glossable as 'self'. Unlike English, these reflexive nominals do not inflect for number. Therefore, it is not possible to tell if 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).

We thus have multiple viable options for accounting for regular reflexives like the ones in (63) above. 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 4.1 above. Alternatively, they could be full DPs, but as with extended reflexives, they are required to reconstruct to their base position below the subject for binding purposes. Finally, it is possible that they never raise in the first place. Multiple options may exist within Mayan, and we note that any of these possibilities are correctly predicted to obviate the EEC.

¹⁹While AF is required in (69a), either transitive or AF forms of the verb are acceptable in (69b). This is in line with the fact that AF is generally optional in Chuj extended reflexives (Hou 2013); see also fn. 16 above. We return to this optionality in §5.

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 have a series of nominal classifiers which function like pronouns (Craig 1986; Zavala 2000). In Chuj, nominal classifier pronouns like the feminine *ix* above are generally obligatory in definite and specific contexts like (69a), but are impossible in bound pronominal contexts like (69b) (Royer 2019). While further work is needed to determine if this generalization is attested more broadly in the languages for which reflexive and extended reflexive objects obviate the EEC, we take the contrast in (69) as strong evidence for the proposal that it is specifically *binding* at issue in these constructions, rather than, for example, categorical differences between extended reflexive and regular DP objects (as in Coon et al. 2014; see fn. 18).

Second, the analysis proposed above makes a prediction about binding and the \bar{A} -extraction of *objects*. Specifically, because an object into which the subject binds must be spelled out in the νP phase (see (68)), bound objects should be banned from undergoing regular \bar{A} -extraction. Initial data from several languages with the EEC provide striking confirmation for this prediction.²⁰ First consider extraction of a non-bound object in Chuj, shown in (70b), from the transitive clause in (70a).

- (70) a. Ix-s-chonh [te' pat] [ix Malin].
 PFV-A3-sell CLF house CLF Malin
 'Malin sold the house.'
- b. [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)

If we add a bound possessor to the object, as in (71a), object extraction becomes ungrammatical, as shown in (71b). Recall from (69) that bound possessors must be null in Chuj, here 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 (71c).

- (71) a. Ix-s-chonh [te' s-pat Ø] [ix Malin].
 PFV-A3-sell CLF A3-house CLF CLF Malin
 'Malin_i sold her_i house.'
- b. *[Mach te' s-pat Ø]_i ix-s-chonh ____i [ix Malin]?
 WH CLF A3-house CLF PFV-A3-sell CLF Malin
 intended: 'Which of her_i houses did Malin_i sell?'
- c. [Mach te' s-pat ix]_i ix-s-chonh ____i [ix Malin]?
 WH CLF A3-house CLF PFV-A3-sell CLF Malin
 'Which of her_{j/*i} houses did Malin_i sell?' (Chuj)

These data 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 νP is deleted, and therefore the probe on C^0 will never be able to access that copy to extract them.

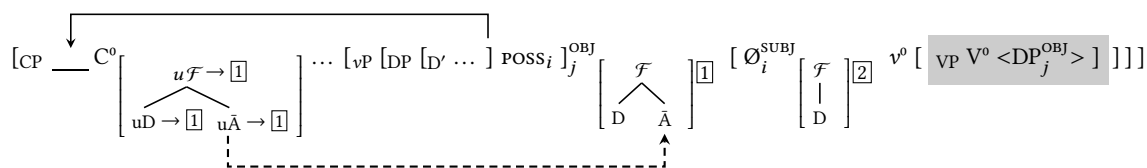
In order to express the intended meaning in (71b), with an interpretation in which the subject binds into an object which has extracted, we find sentences like the one in (72).

²⁰We are grateful to Magdalena Torres and Justin Royer for discussion of Chuj; 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; and Judith Aissen for discussion of these patterns more generally.

- (72) [Mach te' s-pat ix Malin_j]_i ix-s-chonh-o' ____i [Ø]_j?
 WH CLF A3-house CLF Malin PFV-A3-sell-TV CLF
 'Which of her_i houses did Malin_i sell?' (lit.: 'Which of Malin's_i houses did she_i sell?') (Chuj)

Notably, the full DP appears in the possessor position in the fronted object and no overt subject is present; we represent a null pronoun in base postverbal subject position. We propose that this strategy for achieving coreference between the subject and the object's possessor can be understood under the account we outlined above. Specifically, due to the impossibility of extracting an object which must reconstruct, as in (71b), a bound pronominal cannot be generated inside the object; instead, a full DP is generated as the object's possessor and the null pronoun is generated as the subject. The object undergoes the usual EPP-driven movement to Spec,vP. Crucially, because the object does not contain the anaphoric pronoun Ø, no reconstruction occurs. When C⁰ merges, the object is visible at the edge of vP and extracts freely. If we take movement of the object to Spec,vP to be A-movement, we also explain the absence of a Principle C violation between the pronominal subject and R-expression object. Since the object has A-moved above the subject, and A-movement does not reconstruct for Principle C, no violation should arise (van Riemsdijk and Williams 1981; Freidin 1986; Lebeaux 1988). The structure of (72) is schematized in (73).

- (73) DP base-generated in object facilitates extraction



Constructions similar to those in (71) are discussed for Popti' (Q'anjob'alan) by Aissen (2000), who—drawing on data and observations from Craig 1977—proposes a *prosodic constraint* which requires the linearly second of two co-indexed classifiers to be deleted (Ø). Note, however, that while a prosodic-deletion analysis captures the Q'anjob'alan pattern (and may be independently needed), it would not predict similar facts to hold in languages like those of the K'ichean branch, which do not employ nominal classifiers as pronouns. Our account, in contrast, predicts that all languages with the EEC should show this pattern. Namely, the same constellation of factors which *permits* subject extraction when the subject binds into the object, should *prohibit* object extraction in the same environments.

Preliminary evidence from HIGH-ABS K'iche' supports our reconstruction account. The sentence in (74)—with an overt DP in subject position and a possessed DP in object position—is interpreted as having disjoint reference between the subject and possessor. Initial evidence suggests that Mam shows the same pattern, as illustrated in (75).

- (74) [Are le r-aqan Ø]_i x-u-k'at ____i [le a Xwaan].
 FOC DET A3S-foot PRON PFV-A3S-burn DET CLF Juan
 Juan_i burned his_j foot. (K'iche)
- (75) [A t-chej Ø]_i o tz'-ok t-b'yo-'n [Xwan] ____i.
 DET A3S-horse PRON PFV B3S-DIR A3S-hit-DIR Juan
 'Juan_i hit his_j horse.' (San Juan Atitán Mam)

Note that under our analysis, the fact that bound elements apparently cannot appear inside a fronted object in Chuj, K'iche', or Mam connects directly to the generalization these are HIGH-ABS languages in which the object raises *above* the subject, and then is forced to reconstruct for binding.

In LOW-ABS languages like Ch'ol, objects do not invert with the subject, and indeed exactly the opposite pattern is found. The sentence in (76a) is interpreted with a bound possessor inside the fronted object; an

overt DP in fronted object position forces a disjoint reading, as in (76b). LOW-ABS Tseltal appears to pattern similarly.²¹

- (76) a. [I-wakax Ø]_i tyi i-choñ-o ____i [aj-Juan].
 A3-COW PRON PFV A3-sell-TV CLF-Juan
 ‘Juan_i sold his_i cow.’
- b. [I-wakax aj-Juan]_i tyi i-choñ-o ____i [Ø].
 A3-COW CLF-Juan PFV A3-sell-TV PRON
 ‘He_i sold Juan’s_j cow.’ (Ch’ol)

Contrast the Ch’ol form in (76a) with the K’iche’ and Mam forms in (74) and ???. In Ch’ol, if a null pronoun appears as the possessor of the focused object, it is interpreted as bound by the subject; in K’iche’ and Mam exactly the opposite pattern arises. While further empirical work remains to be done on these patterns, our proposal above connects two features of Mayan languages with the EEC, summarized in (77).

- (77) In languages which generally exhibit the EEC, if the subject binds into the object...
- The ergative subject *may* extract from a transitive verb form.
 - The object *may not* extract.

In sum, the established observation in (77a) that subjects which bind into objects can exceptionally extract without the use of the AF construction is explained under our proposal as follows: the object—which has moved to its position above the subject—must reconstruct when the vP phase is spelled-out. As a result, the object no longer intervenes for subject extraction. At the same time, reconstruction of the object for binding should prevent the *object* from undergoing \bar{A} -extraction—a prediction which finds support in initial evidence from several languages in different subfamilies.

The apparent reversal in binding patterns with extracted objects between the HIGH-ABS and LOW-ABS languages discussed here presents strong evidence for a deep difference in the syntax of these Mayan languages, a difference which we argue connects directly to the EEC. Our specific account involving reconstruction in HIGH-ABS languages makes correct predictions for (i) the exceptional extractability of ergative subjects which bind into objects, and (ii) the *non*-extractability of objects into which subjects bind.

4.3 Interim summary and comparison with other accounts

In section 3, we proposed that the ergative subject is restricted from undergoing \bar{A} -extraction in HIGH-ABS languages because the object has moved above it (see (36)). This configuration permits finite Infl⁰ to enter into Agree with the object (§2.2), but it also makes the object a more local goal for the [D]-relativized \bar{A} -probe (see (37)). If, as we propose, this intervention by the object explains the ungrammaticality of ergative subject \bar{A} -extraction, we expect to find instances of exceptionally well-formed ergative subject \bar{A} -extraction just in case the transitive object does not act as an intervener. In this section, we investigated two environments in which ergative subject \bar{A} -extraction is exceptionally well-formed: transitives with bare NP objects (§4.1); and transitives in which the subject binds into the object (§4.2). We proposed that both cases provide evidence that *intervention of a DP object* is behind the EEC.²²

²¹One might reasonably wonder how bound objects *ever* extract, if reconstruction takes place when the vP phase is spelled out. We assume that in languages like Ch’ol (and English) objects generally remain low, but objects with [\bar{A}] features must move to the phase edge in order to undergo further extraction. We assume this movement causes the object to tuck in *below* the subject. Binding conditions are satisfied at the edge, and the object is then free to extract further. The problem in Chuj, K’iche’, and Mam, then, is that the object has raised *too high*; it has no way to extract while also satisfying the conditions required for a bound element to be bound by the subject.

²²One 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 \bar{A} -movement,

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*.²³ In the interest of space we do not summarize these alternatives in full, but briefly highlight the issues raised by the facts above.

First, it has been claimed that 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 \bar{A} -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 \bar{A} -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 \bar{A} -extraction in environments in which the object is a non-intervener—as with NP objects and bound objects in sections 4.1 and 4.2 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 vP phase. For Assmann et al. (2015), all DPs must pass through Spec,InflP en route to

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 Anna
 'Who said that Anna 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 A3S-say COMP PFV go CLF Anna
 'Who said that Anna 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 are 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). Alternatively, CPs might be base-generated in \bar{A} -positions and be co-referential with a DP in argument position (e.g. Alrenga 2005). On either of these views, transitive clauses with putative CP complements should behave identically to those with DP complements, blocking ergative subject extraction. Alternatively, CPs might intervene for independent reasons. In order for long-distance \bar{A} -movement to obtain, CPs must themselves establish syntactic relationships within the clause (e.g. Rackowski and Richards 2005, van Urk and Richards 2015). If CP complements also move above the subject (followed by extraposition to the right edge), this may block \bar{A} -probes from skipping over the intervening CP to target the ergative subject. We leave investigation of these and other alternatives for CP complements to future work.

²³One 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. 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. \bar{A} -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.

Spec,CP; if the transitive subject moves through Spec,InflP, however, it *maraudes* the licensing abilities of Infl⁰, 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 Infl⁰. The crucial data points from above are repeated in (78); 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 Infl⁰ has taken place, and given that these accounts take Infl⁰ to be the source of object licensing, these sentences demonstrate that ergative extraction should not be incompatible with object licensing.

- (78) 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'; =(60))
- 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; =(66b))

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 spell-out of a special v^0 /Voice⁰ head (v_{AF}^0). While regular transitive v^0 (v_{TV}^0) triggers raising of the object above the subject in HIGH-ABS languages, v_{AF}^0 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_{AF}^0 . 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_{AF}^0 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 (79).

- (79) *Characteristics of Mayan Agent Focus*
- AF is used when the transitive subject is \bar{A} -extracted;
 - AF constructions involve dyadic predicates in which neither subject nor object DP is oblique;
 - Set A (ergative) φ -marking is absent;
 - a special Agent Focus suffix appears on the stem;
 - 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 (80).

(80) *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)

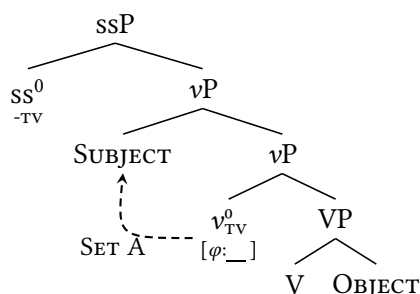
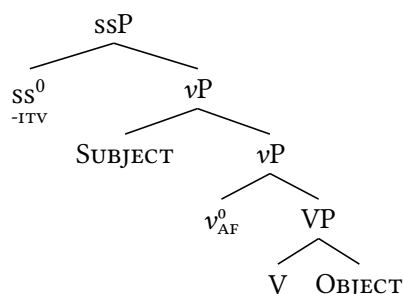
Both constructions in (80) share all of the properties in (79) above: AF is used only when the transitive subject is \bar{A} -extracted (here for focus), and neither subject nor object appears demoted. Focusing on the stems themselves, we find that Set A marking is absent entirely, an AF suffix appears 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 (81). 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 (80b) 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.

(81) *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 (80a) and *-ow* in (80b)—is the overt morphological realization of a v^0 head (v_{AF}^0). Like v_{TV}^0 , it introduces the transitive subject in its specifier position. However *unlike* the transitive subject, it does not enter into a φ -feature sharing 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 (82) and (83).

(82) *Transitive*(83) *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 vP. Specifically, the transitive form of the status suffix is conditioned by merge with ergative/Set A-assigning (transitive) vPs, as in (82), while the intransitive suffix is conditioned by non-ergative/Set A-assigning vPs, as in (83). The latter category includes intransitive verbs in the languages in question, but also the Agent Focus vP. The picture so far accounts for several of the AF properties in (79) above; it connects the appearance of a special suffix (79d) to the absence of Set A morphology (79c) and the choice of an intransitive status suffix (79e).

We now turn to the property in (79a): 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 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_{AF}^0 has a selectional requirement which mandates that the DP merged in its specifier bear an $[\bar{A}]$ 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 \bar{A} -subjects.

Attributing the use of AF to selection of $[\bar{A}]$ -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 $[\bar{A}]$ -bearing agents. [Aissen \(2017b\)](#) labels these “AF_{OBL}”; see Q’eqchi’ in (30b) 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 /Voice⁰ head—i.e. heads which select an agent but do not license the appearance of internal arguments—the same selectional requirement can be proposed for these cases.

Second, recall from section 4.2 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_{AF}^0 is restricted to use with $[\bar{A}]$ -bearing external arguments; v_{TV}^0 , in contrast, is in principle free to merge external arguments *with or without* $[\bar{A}]$ -features. Such derivations will only converge if the object then does not intervene for agent extraction, allowing for the possibility of v_{TV}^0 in transitives with the binding configuration outlined in section 3 above.

The general properties of v_{TV}^0 and v_{AF}^0 discussed thus far are summarized below in (85). We adopt [Longenbaugh’s \(2019\)](#) notation in (84), drawn from [Müller \(2010\)](#).

(84) *Agree and merge feature notation*

- a. Agree features $[X: _]$, trigger Agree with a YP with feature X
- b. Merge features $[\bullet X \bullet]$, trigger external merge or A-movement of a YP with feature X

(85) *Transitive and AF v^0*

	v_{TV}^0	v_{AF}^0
external argument	$[\bullet DP \bullet]$ $[\varphi: _]$	$[\bullet DP_{\bar{A}} \bullet]$
internal argument	$[\bullet DP \bullet]$	

Both v_{TV}^0 and v_{AF}^0 have a merge feature, triggering external merge of the external argument in their specifier; only v_{AF}^0 restricts the external argument to $[\bar{A}]$ -bearing DPs (annotated $[\bullet DP_{\bar{A}} \bullet]$ below). A further difference between the two heads is in the presence of absence of Set A agreement: v_{TV}^0 triggers Set A agreement, while v_{AF}^0 does not. Following [Aissen 2010](#) and [Coon 2017](#), we assume that Set A agreement is the result of feature sharing between the external argument and the v^0 head (see §2.2); we annotate this inherent agreement relationship as $[\bullet DP \bullet]$. 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_{TV}^0 (i.e. what we called an “[EPP]” feature above), as shown in (85).²⁴

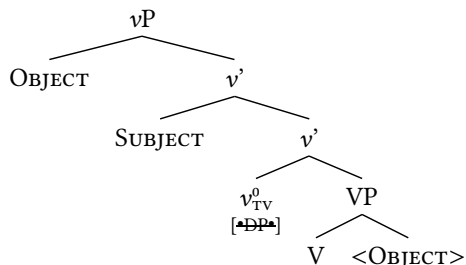
²⁴For now we set aside questions of whether the features on a head may be ordered, as for example in [Müller 2010](#), or whether economy conditions determine in the order in which features are discharged, as for example in [Longenbaugh 2019](#) and work

The crucial question now becomes accounting for the property in (79b): what about the AF construction permits the transitive subject to \bar{A} -extract from a regular dyadic predicate? We propose that this connects to the interaction between v_{AF}^0 and the *internal* argument—i.e. the shaded cell in (85). 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.

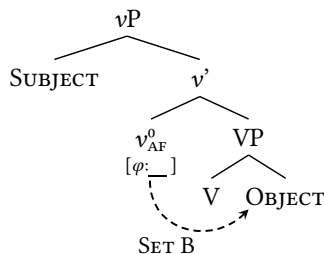
5.2 Q’anjob’alan

Our analysis of AF in Q’anjob’alan follows in broad strokes the account in Coon et al. 2014: Q’anjob’alan v_{AF}^0 differs from v_{TV}^0 both in not triggering Set A subject marking, as shown in (83) and summarized in (85), but also in having a φ -probe which enters into Agree with the transitive *object*, creating the Set B/absolutive morpheme. While v_{TV}^0 triggers raising of the transitive object to a position above the subject (§2.2), v_{AF}^0 does not and the object remains low. The features of v_{TV}^0 and v_{AF}^0 relevant to the internal arguments are shown in (86) and (87) below.

(86) *Transitive object raises*



(87) *AF object remains low*



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_{AF}^0 has the φ -probe responsible for triggering the Set B morpheme.

The relevant features on v_{TV}^0 and v_{AF}^0 in Q’anjob’alan are summarized in (88). Transitive and AF v^0 crucially differ in their treatment of the object: v_{TV}^0 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_{AF}^0 does have a φ -probe triggering a Set B morpheme, and the object remains in situ.²⁵

(88) *Transitive and AF v^0 in Q’anjob’alan*

	v_{TV}^0	v_{AF}^0
external argument	$[\bullet DP \bullet]$ $[\varphi: _]$	$[\bullet DP_{\bar{A}} \bullet]$
internal argument	$[\bullet DP \bullet]$	$[\varphi: _]$

discussed there. We are grateful to Elise Newman for discussion on these and related matters.

²⁵Importantly, 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. 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.

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 (89).

- (89) 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 (89). But in clauses lacking overt aspect marking, as with the non-verbal predicates in (90), the Set B morpheme appears after the predicate, written as a free-standing morpheme (orthographic <h> represents the absence of an initial glottal stop).

- (90) 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 Infl⁰ (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 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 (89b), 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_{AF}^0 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 entirely expected under this account, in which v_{AF}^0 provides a low source for Set B morphology.²⁶

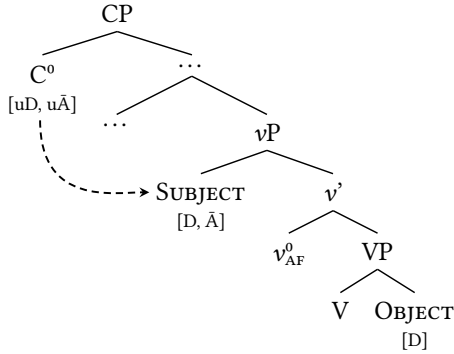
- (91) Chi uj [hach y-il-**on**-i].
 IPFV be.able.to B2S A3S-see-AF-ITV
 'She can see you.' (Q'anjob'al; Coon et al. 2014, 180)

Finally, and most relevant to the discussion at hand, the proposal that the object remains low offers

²⁶We 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 further that the embedded v_{AF}^0 must differ from main clause v_{AF}^0 in not requiring its specifier to have an [Ā] feature.

an immediate account of the ability for an $[\bar{A}]$ -bearing transitive subject to extract from an AF clause. As illustrated in (92), the articulated probe on C^0 will find the high subject DP. The subject will fully satisfy the probe, and probing will halt, permitting the subject to \bar{A} -extract.

(92) *Probe on C^0 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 $[\bullet D \bullet]$ 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.

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 (83) 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 (93), repeated from (25) above.

(93) 1st person / 2nd person \gg 3rd person plural \gg 3rd person singular

A pair illustrating combinations of 1st and 3rd person singular DPs is provided in (94). Note that Set B indexes the 1st person DP regardless of whether it is the subject (94a) or the object (94b).

- (94) 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 (14) 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_{AF}^0 head, shown in the column added to the comparison table in (95). Specifically, K'ichean AF is like Q'anjob'alan AF—and different from full transitive v^0 in both subfamilies—insofar as v_{AF}^0 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_{AF}^0 is closer to v_{TV}^0 insofar as it *does* trigger raising of the object, but does not enter into φ -Agree with it. The differences in AF features in the two subfamilies are highlighted in (95) below.

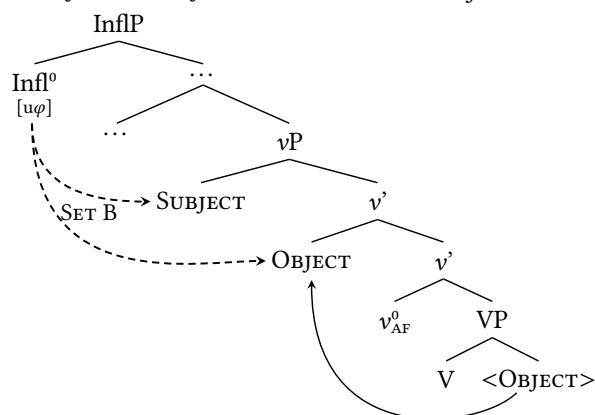
(95) *Transitive and AF v^0 in Q'anjob'alan and K'ichean compared*

	v_{TV}^0	v_{AF}^0 (Q'.)	v_{AF}^0 (K'.)
external argument	[•DP•] [φ :__]	[•DP _A •]	[•DP _A •]
internal argument	[•DP•]	[φ :__]	[•DP•]

The proposed featural content of the K'ichean v_{AF}^0 head immediately provides a path to account for the two facts above. First, because K'ichean v_{AF}^0 lacks [φ :__] and is therefore not able to create a Set B/absolute morpheme, it is unsurprising that it is unavailable as a strategy for embedding a full transitive in a nonfinite environment. As noted above, we abstract away from whether this is due to nominal licensing triggered by φ -Agree, or some other more general requirement that Set B morphology be available—either way, it is clear that the v_{AF}^0 morpheme in K'ichean is not a viable alternative for creating Set B morphology the way it is in Q'anjob'alan.

Second, we propose that raising of the object places the object in a specifier of v_{AF}^0 . 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 (96). The proposal that Infl^0 access the subject and object simultaneously provides exactly the environment needed to account for the hierarchy effect, discussed in greater detail in appendix B.

(96) *AF: subject and object both accessible to Infl^0*

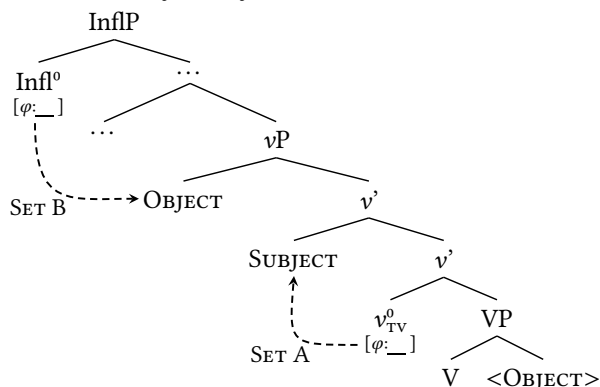


Concretely, we propose that the subject and object DPs in K'ichean AF are *equidistant* to higher functional projections. There are arguments in the literature both for (Reinhart 1981; Ura 1996; Chomsky 2000; Hornstein 2009; Oxford 2019) and against (Chomsky 2001; Hiraiwa 2001; Doggett 2004) equidistance 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 (96) for the transitive paradigm across the Algonquian family. The consistent equidistance of subject and

object DPs, combined with an articulated probe on Infl^0 , 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_{TV}^0 head enters into Agree with the subject in its specifier position; we suggest that this feature-sharing relation creates a relationship between v_{TV}^0 and the subject, which is distinct from that between v_{TV}^0 and the not-agreed-with object. As a result, the A-moved object unambiguously c-commands the subject, as in (97). Note that under the proposal that Set A agreement takes place immediately upon Merge ($[\text{DP}^{\bullet}]_{\varphi: _}$), there will always be a recoverable record of which DP has merged first in a transitive clause like (97): since the subject has valued the φ -probe on v_{TV}^0 , it merged with v_{TV}^0 first, before remerge of the internal argument with v_{TV}^0 . The higher probe would have access to this difference, resulting asymmetric c-command between the moved object and the subject.²⁷

(97) *Transitive: OBJ* \gg *SUBJ*



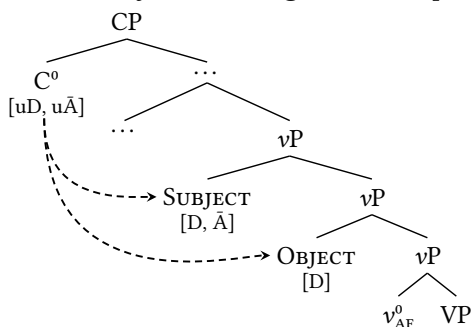
On the other hand, v_{AF}^0 does not enter into Agree with the external argument, and we propose that when it attracts the object, both DPs are viewed as equidistant to higher probes. Note that Algonquian consistently lacks inherent ergative agreement, compatible with the proposal that the absence of 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.²⁸ 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 $v\text{P}$. 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 \bar{A} -probe on C^0 is shown in (98).

²⁷Alternatively, 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 $v\text{P}$ 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.

²⁸A 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.

(98) *Probe on C^0 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 (99):²⁹

(99) *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 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 \bar{A} -subjects from transitive verb forms. Because the agent has both [D] and [\bar{A}] features, it is a better match for the complex probe on C^0 . C^0 then enters into Agree only with the agent, 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 \bar{A} -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 \bar{A} -extraction is a composite probe, relativized to search for both [D] and [\bar{A}] 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

²⁹In K'ichean AF, *Best Match* ensures that only one goal, namely the subject, will enter in Agree with C^0 . We argue that a probe is able to evaluate multiple goals without entering into Agree with them, and this is what happens in cases of equidistant goals in K'ichean AF. First, a probe segment [uF] searches for matching [F] on the accessible DPs in its c-command domain. After these instances of [F] are found, the probe establishes Agree between [uF] and [F]. We assume that a probe *segment* may only Agree with one DP; Therefore, when there are multiple accessible equidistant instances of [F], there must be some way of determining which [F] is Agreed with. *Best Match* is the constraint which regulates this choice: a probe segment will Agree with the [F] on a DP bearing another feature that matches with another probe segment on the same probe. Crucially, *Best Match* will only be operative in contexts where there are equidistant potential goals. This is because each segment on a probe is required to evaluate the closest accessible goal. In cases where one potential goal asymmetrically c-commands another, there will always be one matching feature closer to the probe than other potentially matching features, and *Best Match* will not come into play.

of features ($[\mathcal{F}]$, following Baier 2018), we proposed that the offending configurations in Mayan involve constructions in which the lower DP (the \bar{A} -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 $[\bar{A}]$ -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_{AF}^0 , which differs from transitive v_{TV}^0 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_{AF}^0 vary across the family, in a way that we connected directly to the independent variation observed in AF (§2). We adopted the general proposal for Q’anjob’alan AF in Coon et al. 2014: v_{AF}^0 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 of v_{AF}^0 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_{AF}^0 *does* cause raising of the object, but to a vP 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 \bar{A} -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 $[\bar{A}]$ 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 T⁰. Furthermore, the fact that not all morphologically ergative languages show EEC effects can be tied to independent variation in the source of “absolute” (Legate 2008), but with more nuance than reported in Coon et al. 2014. Specifically, in a language where finite T⁰/Infl⁰ is responsible for absolute clitics/agreement, we expect (all else being equal) the object to raise above the subject. In Mayan languages in which the source of absolute is low, we don’t find an EEC. Note however that nothing in principle rules out the possibility that objects which receive absolute case or agreement low could nonetheless raise above the subject (as appears to be the case for Tsotsil in appendix A). This is compatible, for example, with the account of Dyrbal in Legate 2012; Legate proposes that absolute has a *low* source but that the language nonetheless shows effects of an EEC. See also Aldridge 2004 on variation in Austronesian.³⁰

With respect to the mixed probe on C⁰, we noted above that the proposal that C⁰ probes for [\bar{A}] and [D] builds on a line of work on the nature of \bar{A} -movement in languages not genetically related to Mayan—see for example van Urk 2015 for Dinka, as well as Aldridge (to appear), Erlewine et al. 2017, and Erlewine (2018) for Austronesian languages. 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 \bar{A} -movement, as well as the roles associated with T⁰ and C⁰ in driving this movement. We note in closing that Mayan languages conspicuously lack processes associated movement to T⁰/Infl⁰: there are no raising verbs, no evidence that unaccusative or passive subjects undergo A-movement, and in general no evidence for [EPP]-driven movement to Spec,TP. If A-movement is triggered by nominal features like [D] or [φ] (van Urk 2015), then the fact that C⁰ is the locus of [D] probing in Mayan could perhaps be connected to this absence. For example, if features on Infl⁰ originate on C⁰ (Chomsky 2001), perhaps in Mayan we find evidence that the [uD] feature is not passed down, instead becoming wrapped up in the \bar{A} -probe. We leave this and many other future possible directions as topics for cross-linguistic investigation.

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³⁰ An anonymous reviewer observes that we do not completely rule out a nominative-accusative language with a Mayan-like \bar{A} -probe on C⁰ 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 C⁰ 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.

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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 (100).

- (100) *Argument features and AF*
- a. at least one DP must be 3rd person in order for AF to occur (e.g. K’ichee’);
 - 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 (101) below.

- (101) MAYAN EEC GENERALIZATION
 When an interpreted DP object structurally intervenes between the subject and the \bar{A} -probe on C^0 , the subject is restricted from undergoing \bar{A} -extraction.

We discuss each pattern from (100) in turn below, arguing that none presents a counterexample to the generalization in (101).

Our account contrasts explicitly with the proposal in [Stiebels 2006](#), in which the variation seen in (100) is taken to represent a trajectory of development, as in (102), formally regulated by variation in morphological constraint rankings (here and below, ‘PART’ = 1st or 2nd person discourse participant).

(102) *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 S–V–O and O–V–S (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.³¹ [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 discussed (see [Aissen 2017b](#) for discussion).

While we do not fully engage with [Stiebels’](#) analysis here, we maintain that abandoning our stronger restriction in (101) 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_{AF}^0 head generates the Set B morpheme. Our account correctly captures 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 Infl⁰ 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. More generally, in the sections below we propose that each of the apparent patterns in (100) can be tied to independent properties of the languages in question—connections not captured 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

³¹While it is generally accepted that Proto-Mayan had Agent Focus, and that the absence of AF in Lowland languages like Ch’ol and Tselal is an innovation ([Smith-Stark 1978](#); [Law 2013](#)), we are not aware of strong historical evidence for the scale in (102).

of the EEC in reflexive configurations, noting that such cases are unambiguous with respect to subject versus object extraction; however, it is not clear that this could extend to the full range of data around bound pronouns introduced in section 4.2.2 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 (102) 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 (100a). 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 (25) 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 (103), for example, the AF form is reported to be ungrammatical regardless of the choice of Set B morpheme.

- (103) *Ja rat x-{in/at/∅}-ax-an yin.
 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 (104).

- (104) 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 (104) 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 (105), 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).

- (105) 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 (106). 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.

- (106) 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 (107).

- (107) 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 (105), an AF form with special agreement (106), or—most surprisingly from the point of view of the EEC—apparent extraction from the transitive form as in (107).

It is not obviously the case, however, that the agent in (107) has extracted; one possibility is that at least in some cases, the left-edge DP is in a high base-generated position (see Aissen 1992; Clemens and Coon 2018 on high topics and discussion at the beginning of §4). In Q'anjob'alan languages, high base-generated topics require a resumptive classifier pronoun in postverbal base position (see §4.2.2); this is not the case for K'ichean languages, where it is more difficult to distinguish high base generation from true \bar{A} -extraction on morphological grounds. If a base-generation approach is correct for (107), it raises the question of why this option would not be more generally available (e.g. in [PART]>3 contexts). Here 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). Given that only some speakers permit full transitives like (107), we might predict that these are speakers who are more generally permissive with SVO in the absence of Agent Focus. Future work is needed to test whether forms like (107) correlate with a more general optionality of the AF construction.

An alternative possibility is that speakers which permit clauses like (107) 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

(108). In (108a), the extracted 3rd person agent appears with the expected AF form of the verb. In (108b), however, we find an apparently-focussed 1st person pronoun and a transitive verb form.

- (108) 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 (100) 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 (33) 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 (108b) 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 (109) and (110).³²

- (109) 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.'
- (110) 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.)

³²Similar 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.

While we set aside the details of the structure of forms like (108b), (109), and (110a), the fact that these “pronouns” do not appear in postverbal argument position, and can be clearly decomposed into the focus marker plus Set B clitic, points to the conclusion that \bar{A} -extraction simply has not taken place; the 1st and 2nd person forms are base-generated in the left edge. In other words, we follow Coon et al. 2014 in maintaining that all \bar{A} -extracted DPs in Q’anjob’alan require AF, and that 1st and 2nd person elements like *ayin* in (108b) have not \bar{A} -extracted from underlying subject position, in line with the generalization in (101) 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 (26b) 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 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 \bar{A} -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 Tzeltalan 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 (111a)—hallmarks of LOW-ABS languages.³³

- (111) 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 (20) 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.³⁴ However, Tsotsil AF occurs only when

³³Tsotsil also has a reduced set of “high” Set B morphemes; see Aissen 1987 and Woolford 2011 for discussion.

³⁴Aissen (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.

both arguments are 3rd person (Haviland 1981; Aissen 1999, 2017a). Compare the 3>3 forms in (112a) and (112b), with the ungrammatical form in (112c).

- (112) 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 (112c), a transitive form is used, as in (113). AF forms are similarly impossible when the object DP is 1st or 2nd person.

- (113) 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 (114).

- (114) 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 prominence* 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 (115).

- (115) 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 (115) is unambiguously interpreted as a case of patient extraction (cf. the optionality in (114)). 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 (115).

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 (116), in which the subject is proximate and the object is obviative, with the inverse form in (117).

(116) [SUBJ_{PROX} [VP V OBJ_{OBV}]] *direct*

(117) [OBJ_{PROX} [SUBJ_{OBV} [VP V ~~OBJ_{PROX}~~]]] *inverse*



Again, the generalization from (23c) 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 (101).³⁵

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 (118); Set B morphemes from one K’ichean language, Kaqchikel, are provided for reference in (119).

(118) *K’ichean person hierarchy*³⁶

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

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

	SINGULAR	PLURAL
1ST	<i>i-/in-</i>	<i>öj-</i>
2ND	<i>a-/at-</i>	<i>ix-</i>
3RD	∅	<i>e-/e’-</i>

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 (107) 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 (107) above to be grammatical.

With respect to the Set B morphemes in (119), the facts to be accounted for in (118) 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

³⁵Aissen (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* A-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_{TV}^o is not able to raise the object above the subject, as shown in (117). 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 general claims that apparent restrictions on person features of arguments can be traced to independent properties of the languages in question.

³⁶See Preminger 2014, pg. 64 for a full table of combinations and outputs, not included here for space.

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).

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 (120); on splitting φ -probes into distinct person (π) and number ($\#$) probes, see Taraldsen 1995; Sigurðsson 1996; Anagnostopoulou 2003; Béjar and Rezac 2003, among others.³⁷

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

$$\left[\begin{array}{c} u\pi \\ | \\ u\text{PART} \end{array} \right]$$

We assume that the K'ichean Set B morphemes—for example, those from Kaqchikel in (119)—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*.³⁸ 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 (120), 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 vP are equidistant from Infl^0 , as shown above in (96), 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 Vocabulary Items (VIs) compete for insertion into a single node. We demonstrate below how these assumptions derive the pattern in (118), tackling each combination in turn.

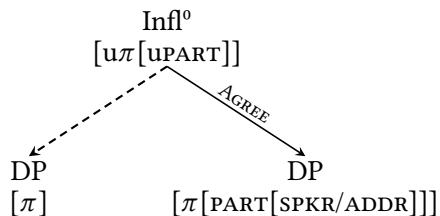
[PART] ↔ [3SG/PL]. When one argument is 1st or (non-formal) 2nd person, and the other is 3rd person (row a in the table in (118)), the articulated person probe in (120) will enter into Agree with only the 1st or 2nd person DP, as shown in (121) (borrowing Oxford's representation for probing equidistant DPs). This is because a [PART] DP will always have *more* of the features sought by the probe in (120) 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

³⁷It is possible that there are distinct person ([u π]) and number ([u $\#$]) probes, with [u π] 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.

³⁸Preminger (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.

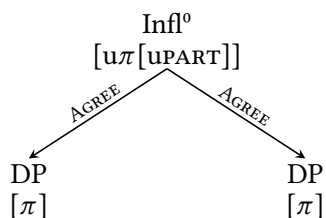
the subject or the object. The number specification of either DP is similarly irrelevant because Best Match is only calculated with respect to the features of the probe. The probe will copy back all features of the [PART]-bearing DP, spelling them out as the Set B morpheme.³⁹

(121) *One argument is 3rd person*

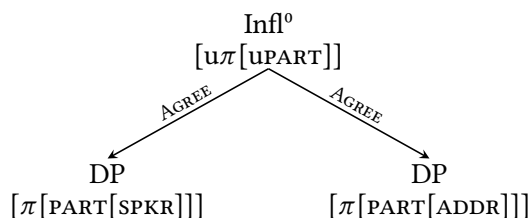


[PART] ↔ [PART] and [3] ↔ [3]. In other combinations DPs—i.e. rows (b)–(d) in (118) above—Best Match will fail to pick one DP over the other. This follows from the assumption that the π -probe only considers *person* features when calculating Best Match. In combinations of two 3rd person DPs, both will only have the feature [π], and therefore will be equal with respect to Best Match, as in (122). In combinations of 1st and 2nd person arguments, both DPs are again equally good matches for the [u π [uPART]] probe on Infl⁰, as in (123).⁴⁰ 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 (122)–(123).

(122) *Both arguments are 3rd person*



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



Strikingly, though the syntax of the constructions in rows (b)–(d) of the table in (118) is proposed to be identical, the outcomes of the configurations in (122) and (123) 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 Vocabulary 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.

³⁹The 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 (118)), but the grammaticality of multiple 3PL DPs (row (d) of (118)), relies directly on their morphological forms, and does not require this type of additional stipulation.

⁴⁰Note that since Best Match is evaluated against the features of the probe, 1st and 2nd person DPs will be equally good matches for this [u π [uPART]] probe regardless of whether both 1st and 2nd person are fully specified, as represented in (123), or whether one is underspecified (i.e. if 2nd person is missing the [ADDR] node; e.g. as in Harley and Ritter 2002).

Beginning in row (b), when two [PART] DPs have entered into Agree with Infl^0 , each will copy back a set of φ -features. Note that these will always be two *distinct* sets of features, since reflexive constructions are formally different; see §4.2. Each set of features will thus demand a different VI from the top two rows of the table in (119). Since only a single VI may be inserted, the derivation will crash, resulting in ineffability of these forms. 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 (118)). 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 (124). 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.

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

	combination of DPs	Set B	Account
a.	[PART] \leftrightarrow [3SG/PL]	[PART]	Best Match = [PART]; only [PART] enters into Agree
b.	[PART] \leftrightarrow [PART]	*	both Agree; conflicting VIs result in ineffability
c.	[3PL] \leftrightarrow [3SG]	[3PL]	both Agree; only [3PL] demands a VI
d.	[3PL] \leftrightarrow [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 $[\bar{A}]$ -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.