

### Two kinds of syntactic ergativity in Mayan

Some ergative languages prohibit straightforward extraction of transitive ergative subjects, a phenomenon now known as syntactic ergativity (Campana 1992, Bittner and Hale 1996, Aldridge 2004, 2008, Stiebels 2006, Coon et al. 2015, Deal 2015, 2016, Polinsky 2015).

- (1) \*Achike x-Ø-u-löq' ri äk'? (Kaqchikel)  
 who CPL-ABS.3S-ERG.3S-buy the chicken (Intended: 'Who bought the chicken?')

We focus on Mayan languages and on deriving partial and across-the-board (ATB) syntactic ergativity (SE), which we argue has two different sources, both stemming from the avoidance of defective intervention. We assume non-configurational Case-licensing by functional heads. In all Mayan languages we take ergative (ERG) to be an inherent Case assigned by *v*, and absolutive (ABS) to be assigned either by T (high ABS languages) or *v* (low ABS languages) (Coon et al. 2015, see also Legate 2008, Aldridge 2004). In Mayan high ABS languages (all of which display SE - Coon et al. 2015), the internal argument needs to get ABS from T, but the external (inherently ERG) subject intervenes (2). There are two potential ways to circumvent this problem, as schematized in (3):

- (2)  $T_{[uPHI]} \dots DP_{[ERG]} \dots DP_{[UCase]}$   
 (3) a. Option 1: Move the transitive subject ('altruistic' movement)  
 $DP_{i[ERG]} T_{[ABS]} \dots t_i \dots DP_{[ABS]}$   
 b. Option 2: Move the transitive object (leapfrogging – Bobaljik 1995)  
 $T_{[ABS]} \dots DP_{i[ABS]} DP_{[ERG]} \dots t_i$

In (3a), the transitive subject moves 'altruistically' to SpecTP and ceases to intervene (see Holmberg & Hrǫarsdóttir 2003; Anand & Nevins 2006; Preminger 2010, Imanishi 2014; *i.a.*) resulting in SO order. In (3b), the object leapfrogs the subject to an outer spec *v*P making it closer (or at least equidistant) to T (see Bobaljik 1995; Aldridge 2004, 2008; Coon et al. 2015) resulting in OS order. We assume verb-initial order is derived by head movement to Fin in (3a) and T in (3b).

For type (3b) languages, we adopt a version of the analysis in Coon et al. (2015) and especially Aldridge (2004, 2008) whereby (i) the ERG subject originates in Spec*v*P, and (ii) there is a single escape hatch, so that 'leapfrogging' movement of the object to an outer Spec*v*P traps the subject inside the *v*P phase. In languages using option (3a), however, we argue that SE results from anti-locality (Erlewine 2016), but note that T is responsible for ABS rather than ERG agreement on our account (cf. *ibid.*), in line with the observation that ABS is not available in non-finite embedded contexts in Mayan high ABS languages (Coon et al. 2015). We adopt (4):

- (4) **Spec-to-Spec Anti-locality:** A-bar movement of a phrase from the Specifier of XP must cross a maximal projection other than XP (Erlewine 2016: 431).

Note that this only applies to transitive contexts in Mayan since altruistic movement of  $DP_{ERG}$  to SpecTP only takes place to avoid defective intervention. In accusative languages where both transitive and intransitive subjects are in SpecTP, anti-locality results in subject *that*-trace effects (Erlewine 2014; Douglas 2015). Both (3a) and (3b) are attested in Mayan languages, we claim.

To illustrate these two different systems we first present data from Tz'utujil (strict VOS; García Ixmatá 1997; Dayley 1986), which displays a form of SE whereby only the ABS can extract from *v*P and special morphology is required to extract any other *v*P-internal argument/adjunct. This is illustrated for instruments in (5):

- (5) **Naq** x-Ø-u -jis-i-\*(b'ee)-j r-ixiin ruu-weex jar aj-samaaj?  
**what** COM-ABS.3s-ERG.3s-tear-V-INST-SUFF ERG.3s-with ERG.3s-trousers ART AGT-work  
 'What did the worker tear his trousers with?' (García Ixmatá 1997: p.432)

We contrast this with Tektitek (strict VSO; Pérez Vail 2007), which displays a form of SE only prohibiting extraction of the transitive ERG subject, with other *v*P-internal arguments/adjuncts extracting freely. Thus instrument extraction does not require any special marking on the verb in (6):

- (6) **Tzan** j-q'ab' n-Ø-el j-q'uuchi-'.  
**with** ERG.1p-hand INC-ABS.3s-DIR ERG.1p-break-SUFF  
 'With our hand we broke it.' (Pérez Vail 2007: p.362)

The predicted pattern is that all VOS SE languages will pattern with Tz'utujil. England (1991: 454) notes that basic word order is complex in Mayan, and subject to the effects of animacy/definiteness

(though these may be due to processing factors - see Clemens & Coon 2016). She notes a contrast between strict VSO languages and mixed VSO/VOS languages but also notes that the latter can be further divided into “two major groups: those that do not permit VSO or only do so in highly restricted and marked circumstances, and those that do permit VSO more readily”. Note that some SE VSO and VSO/VOS languages do have instrumental voice. Popti’ is VSO and displays (partial) SE and yet requires AF for the extraction of instruments (Craig 1977); K’iche’ is VSO/VOS and display ATB SE, but requires instrumental voice to extract instruments. In VOS Tz’utujil, however, all low adjuncts require special morphology in order to be extracted and this, we argue, is the signature property of a single escape hatch  $\nu$ P. This emerges, in our system, from the fact that anti-locality (observed in S>O languages) can only give rise to an anything-but-the-ERG restriction whereas leapfrogging (observed in O>S languages), if coupled with a single escape hatch, can give rise to a nothing-but-the-ABS effect, because the ABS object obligatorily occupies the phase edge position.

We then illustrate another difference between SE in VOS languages vs. VSO languages. Compiling data from a range of sources, we show that high ABS VOS languages always display ATB SE i.e. Agent Focus (or antipassive) is required whenever a transitive ERG subject undergoes any A-bar extraction, whereas VSO languages can display *partial* SE, i.e. some A-bar extractions of the transitive ERG subject require Agent Focus (or antipassive), whilst others do not. Based on Stiebels (2006), Coon et al. (2015) and others, partial SE appears to follow the implicational hierarchy in (7):

(7) **Implicational hierarchy for Agent Focus (AF):** relative clause > question > focus

We argue that (7) derives from anti-locality combined with a universal functional sequence (see Rizzi 1997: 289, 290-1, 300). Formally, we propose that the features triggering these different A-bar movements are distinct and can be distributed according to the functional sequence across Force/Fin or collapsed onto one head, as schematised in (6) (see also Deal 2016):

- (8) a. Awakatek (VSO):  $[\text{ForceP Force}_{[\text{REL}/\text{WH}]} [\text{FinP Fin}_{[\text{FOC}]} [\text{TP DP}_{\text{ERG}} \text{T} \dots]]]$   
 b. Popti’, Mam (VSO):  $[\text{ForceP Force}_{[\text{REL}]} [\text{FinP Fin}_{[\text{WH}/\text{FOC}]} [\text{TP DP}_{\text{ERG}} \text{T} \dots]]]$   
 c. Q’anjob’al (VSO):  $[\text{ForceP Force} [\text{FinP Fin}_{[\text{REL}/\text{WH}/\text{FOC}]} [\text{TP DP}_{\text{ERG}} \text{T} \dots]]]$

According to (4), movement from SpecTP to SpecFinP is anti-local. Consequently, in (8a) languages, only Focus movement exhibits SE since relative/question movement targets the higher head ForceP; in (8b) both *wh*- and focus movement (but not relativization) exhibit SE; and in (8c) all kinds of A-bar movement exhibit SE, i.e. they require AF. Following Campana (1992) and Coon et al. (2015), we assume that AF serves to license the object *in-situ* so that it does not depend on T for Case. As such, neither altruistic nor leapfrogging movement is required where AF is present. The clear prediction is that partial SE will not be possible in VOS languages, where SE is not due to anti-locality. This appears to be the case: all strict VOS SE languages exhibit ATB rather than partial SE (based on data from Dayley, 1985; England, 1991; Durbin & Ojeda; 1978, Hofling, 1984; Norcliffe 2009; Pinkerton, 1976; Stiebels 2006; García Ixmata 1997):

(9) Q’eqchi’, Tz’utujil (San Juan, Santiago), Ixil (Cotzal) (i): VOS, ATB SE

Many Mayan languages do not exhibit SE. Following Coon et al. (2015), we assume that in these languages the object is Case-licensed by  $\nu$  rather than T (see also Aldridge 2004, 2008, Legate 2008). As such, there is no defective intervention and no motivation for altruistic or leapfrogging movement. As Coon et al. show, this is also reflected in the position of absolutive markers in these low ABS languages. In such cases, VSO order results from V-movement past a  $\nu$ P-internal subject and VOS order is derived by predicate fronting (see Coon 2010). There are thus multiple ways to derive verb-initial orders on our approach, a point that we address in our talk.

We also address some challenges facing the current account. Aissen (2016) shows that SE is sensitive to person (citing much previous work). In Popti’ & Q’anjob’al, AF is impossible if A is 1<sup>st</sup> or 2<sup>nd</sup> person (Craig 1979; Pascual 2007). We attribute this to the fact that 1<sup>st</sup>/2<sup>nd</sup> person subjects require the presence of an additional person projection between T and Fin. Finally, we address the status of Yucatec and Ixil, which display SE without being high ABS. This, we argue, is part of a more general possibility for O to raise to Spec $\nu$ P even in low ABS languages (see Aldridge 2004, 2008). Again, this is predicted to be possible only in VOS languages and both Yucatec and many varieties of Ixil are VOS languages.