**Two ways to be syntactically ergative: on avoiding defective intervention**

Jamie Douglas (University of Cambridge) and Michelle Sheehan (Anglia Ruskin University)

Many unrelated ergative languages exhibit a restriction on extraction of transitive ergative subjects, a phenomenon known as syntactic ergativity (SE) (Aldridge 2004, 2008, Coon et al. 2015, Deal 2015, Polinsky 2015).

(1) \*Achike x-Ø-u-löq’ ri äk’? (Kaqchikel)

who CPL-ABS.3S-ERG.3S-buy the chicken (int: ‘Who bought the chicken?’)

We focus on SE in Mayan languages, which we argue has two different sources, both stemming from the avoidance of defective intervention. In high absolutive (ABS) Mayan languages (all of which display SE, Coon et al. 2015), the internal argument gets ABS Case from T, but the external (inherently ergative) subject intervenes (2). There are two ways to circumvent this problem (see also Preminger 2010 on dative intervention) (3).

(2) T[uPHI] … **DP[ERG]** … DP[UCase]

(3) a. Option 1: Move the transitive subject (altruistic movement)

**DPi[ERG]**T[ABS] … ti … DP[ABS]

b. Option 2: Move the transitive object (leapfrogging – Bobaljik 1995)

T[ABS] … **DPi[ABS]** DP[ERG] … ti

In (3a), the transitive subject moves ‘altruistically’ to SpecTP and ceases to intervene (see Holmberg & Hróarsdóttir 2003; Anand & Nevins 2006; Imanishi 2014; *i.a.*) resulting in SO order. In (3b), the object leapfrogs the subject to an outer specifier of the same head (v) making it closer (or at least equidistant) to T (see Bobaljik 1995; Aldridge 2004, 2008; Coon et al. 2015) resulting in OS order.

For type (3b) languages, we adopt a version of the analysis in Coon et al. (2015) and especially Aldridge (2004, 2008) whereby (i) the ergative subject originates in SpecvP, and (ii) there is a single escape hatch, so that ‘leapfrogging’ movement of the object to an outer SpecvP traps the subject inside the vP phase. In languages using option (3a), we argue that SE results from anti-locality (Erlewine 2015), but note that ERG is an inherent case on our proposal, not a structural case assigned by T (cf. ibid.), so many of Henderson & Coon’s (2015) objections to an anti-locality analysis are avoided. We nonetheless adopt:

(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 2015).

This only applies to transitive contexts in Mayan since altruistic movement of DPERG to SpecTP only takes place to avoid defective intervention. In accusative languages where 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.

The main evidence we consider concerns basic word order. Mayan languages split into three distinct word order classes (though classification is often difficult and/or controversial): (i) VOS, (ii) VSO and (iii) alternating VOS/VSO (Norman & Campbell 1978; England 1991). Types (i)-(ii) also typically permit SVO. We show that, if SE is present, type (i) languages tend to display across-the-board (ATB) SE, i.e. Agent Focus (or antipassive) is required whenever a transitive ERG subject undergoes any A’-extraction, whereas types (ii) and (iii) can display *partial* SE, i.e. some A’-extractions of the transitive ERG subject require Agent Focus, whilst others do not. Based on Stiebels (2006), Coon et al. (2015) and other descriptions, partial SE appears to follow an implicational hierarchy (if SE is exhibited for a particular A-bar construction, it is exhibited for all constructions to the right/lower on (5):

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

We argue that (5) derives from anti-locality combined with a universal functional sequence (see also 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 (as Rizzi shows) or collapsed onto one head, as schematised in (6):

(6) a. Awakatek (ii), Akatek (iii): [ForceP Force[REL/WH] [FinP Fin[FOC] [TP DPERG T …]]]

b. Popti’, Mam (ii), Kaqchikel (iii): [ForceP Force[REL] [FinP Fin[WH/FOC] [TP DPERG T …]]]

c. Q'anjob'al (ii), K'iche' (iii): [ForceP Force [FinP Fin[REL/WH/FOC] [TP DPERG T …]]

According to (4), movement from SpecTP to SpecFinP is anti-local. Consequently, in (6a) languages, only Focus movement exhibits SE since relative/question movement targets the higher head ForceP; in (6b) both wh- and focus (but not relative) movement exhibit SE; and in (6c) all kinds of A-bar movement exhibit SE, i.e. they require AF. Following Coon et al. (2014), 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, hence SE fails to occur. The clear prediction is that partial SE will only be possible in type (3a) languages, so that partial SE Mayan languages will be strict VSO or VSO/VOS, i.e. they must have SO orders. This prediction is borne out: all of the languages in (6) allow VSO.

In Leapfrogging (3b) analyses, on the other hand, SE is predicted to hold ATB because all intermediate A-bar extraction must proceed via spec vP. This prediction seems to hold: all strict VOS SE languages we are familiar with 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):

(7) Q'eqchi', Tz'utujil (San Juan, Santiago), Yucatec, Ixil (Cotzal) (i): (3b) = ATB SE, VOS

In both VOS and VSO languages, we propose that verb movement to a higher position (T or Fin) derives V-initial order.

There are, of course, many Mayan languages that do not exhibit SE. Following Coon et al (2014) we assume that in these languages the object is Case-licensed by v 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 vP-internal subject and VOS order is derived by predicate fronting (see Coon 2010). There are thus multiple ways to derive verb-initial orders.

In addition to accounting for differences in basic word order, our account also makes further predictions regarding the attestation of AF in type (3a) vs. (3b) languages. (i) Altruistic (3a) languages may display different SE patterns in local vs. non-local movement, as is the case with that-trace effects (see Douglas 2015). (ii) Only in type (3a) languages will SE be sensitive to the insertion of adverbials between TP and FinP (see Erlewine 2015). (iii) In type (3a) languages, SE will only restrict the extraction of *transitive subjects* - all other arguments/adjuncts should be extractable, whereas in type (3b) languages it is possible that *only* absolutive objects can be extracted. Initial findings partially support these predictions, though research is ongoing and challenges remain. In Popti’ (a (3a) language), AF is obligatory in instances of local extraction, but only optional in non-local extraction. This is consistent with the idea that successive cyclic movement can proceed through a different position compared with local extraction. Evidence presented by Erlewine on Kaqchikel (a (3a) language) suggests that adverbs mitigate anti-locality, avoiding the need for AF (but see also Henderson & Coon 2015 for a critique of the data). Finally, note that while Kaqchikel also allows A-bar extraction of oblique arguments with no special morphology adjustment (indirect object, locative and instrumental) (Assmann et al. 2012), in many Mayan languages instrumental voice is required to extract instruments. Interestingly, though, this does not correlate with the S>O, O>S distinction. Popti’, for example is VSO and displays partial SE and yet requires AF for the extraction of instruments (Craig 1977). K'iche' and Tz’utujil are VSO/VOS and display ATB SE but require instrumental voice to extract instruments.