Syntactic ergativity as absolutive movement in Tongic Polynesian

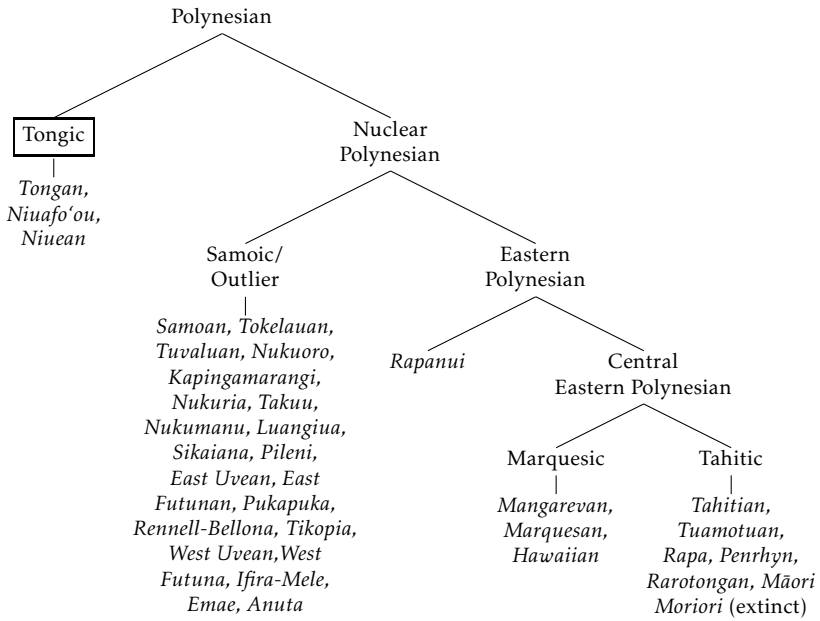
Lauren Clemens — *University at Albany*
Rebecca Tollan — *University of Toronto*

The 93rd Annual Meeting of the Linguistic Society of America
New York, NY, January 6th, 2019

1 Introduction

- The Tongic branch of the Polynesian family (Austronesian > Malayo-Polynesian) consists of three languages: Tongan, Niuafo'ou, and Niuean.
- Tongic languages are primarily spoken on the South Pacific islands of Tonga, Niuafo'ou, Niue, and New Zealand.

(1) Polynesian language family
(from Clemens 2014 , based on Lynch et al. 2003)



- In this talk, we identify and analyze a correspondence between two ways in which these languages vary (2):
  1. (In)ability of the ergative argument to undergo A-bar movement, i.e. 'syntactic ergativity'.
  2. (Un)availability of postverbal word order variation (i.e. whether or not both VSO and VOS are available).

(2) Tongic extraction and word order patterns

	Syntactic ergativity	Word order variation
Tongan	✓	✓
Niuafo'ou	✓	✓
Niuean	✗	✗

- We provide a unified account of syntactic ergativity and variable word order in Tongic Polynesian based on the locus of absolutive case assignment:
  - We adopt an Absolutive Inversion approach to case assignment (Campana 1992; Bittner & Hale 1996; Aldridge 2004; Coon et al. 2014; a.o.)
  - We propose that abs is assigned low in Niuean, but high in Tongan and Niuafo'ou.
- Finally, we show how the lack of parallel movement asymmetries in accusative languages can be accounted for by this approach to syntactic ergativity (Tollan 2018).

Road Map: □Ergativity • □Word Order • □Coordination • □Blocking

2 Morphological and syntactic ergativity

2.1 Morphologically ergativity

- Tongan, Niuean, and Niuafo'ou are verb-initial (predominantly VSO) with ergative case marking.

- Beginning with **Tongan**, the subject of intransitive clauses and the object of transitive clauses is marked *'a*, while the subject of transitive clauses is marked *'e*, as in (3).

(3) a. Na'e 'alu 'a Sione.
PST go ABS Sione
'Sione went.'

b. Na'e kai 'e Sione 'a e mango.
PST eat ERG Sione ABS DEF mango
'Sione ate the mango.' (Otsuka 2000:50)

- In **Niuafo'ou**, intransitive subjects and transitive objects are optionally marked *'ia* when they occur with a determiner and obligatorily marked *'ia* when they are determinerless, while transitive subjects are obligatorily marked *'e*, as in (4).

(4) a. Ne ha'u 'ia Mele.
PST come ABS Mele
'Mele came.'

b. Ne'e kaî 'e te tangatá ('iá) te iká.
PST eat ERG SPF Sione ABS SPF fish
'The man ate the fish.' (Tsukamoto 1988:276-9)

- Turning to **Niuean**, intransitive subjects and transitive objects are marked *e* (common nouns) or *a* (proper nouns, pronouns), while transitive subjects are marked *he* (common nouns) or *e* (proper nouns, pronouns), as in (5).

(5) a. Ne fano e tehina haaku.
PST go ABS brother POSS
'My little brother went.'

b. Ne kai he puti ia e moa.
PST eat ERG cat DEM ABS chicken
'The cat ate the chicken.' (Seiter 1980:29)

2.2 Syntactic ergativity

- In a subset of morphologically ergative languages, ERG subjects are unable to undergo A-bar movement (e.g. relativization, *wh*-questions, focus).

- Beginning with **Tongan**, only ABS arguments relativize with a gap (6a); ERG arguments require a resumptive pronoun (Otsuka 2000). This is shown in (6b).

(6) a. e fefine$_i$ ['oku 'ofa'i 'e Sione ___$_i$].
DEF woman PRS love ERG Sione
'the woman whom Sione loves'

b. e fefine$_i$ ['oku *(ne)$_i$ 'ofa'i 'a Sione].
DEF woman PRS RP love ABS Sione
'the woman who loves Sione' (Otsuka 2000:116)

- A similar pattern is found in **Niuafo'ou**, where ABS arguments relativize with a gap (7a) and ERG arguments relativize with a resumptive element (7b).

(7) a. te ika$_i$ [ke au kaî ___$_i$]
DET fish SUBJ 1SG eat
'the fish that I should eat'

b. Ko te kakai$_i$ ['oku notou$_i$ langa te fala 'i heé]
PART DET people PRS 3PL build DET house LOC DEM
'the people who are building the house there'
(Tsukamoto 1988:327)

- Returning to **Tongan**, another indication of syntactic ergativity comes from raising constructions. While ABS arguments freely undergo raising (8a), ERG arguments do not (8b).

(8) a. ʻoku totonu ʻa e tamaiki pau'u$_i$ [ke taaʻi ʻe he
PRS advisable ABS children naughty COMP hit ERG
faiako ___$_i$].
teacher
'It is advisable that the teacher hit the naughty children.'

b. *ʻoku totonu ʻa e faiako$_i$ [ke taaʻi ___$_i$ ʻa e tamaiki
PRS advisable ABS teacher COMP hit ABS children
pauʻu].
naughty
Intended: It is advisable that the teacher hit the naughty children. (approx. Otsuka 2000:183)

- No raising data is available for **Niuafoʻou**.

- In **Niuean**, both ABS (9a) and ERG (9b) arguments relativize with a gap (Seiter 1980, Longenbaugh & Polinsky 2018).

(9) a. e tagata$_i$ [ne moto e koe ___$_i$].
ABS person NFT punch ERG 2SG
'the person who you punched'

b. e tagata$_i$ [ka kai ___$_i$ e talo].
ABS person FUT eat ABS taro
'the person who will eat the taro'
(approx. Seiter 1980:94)

- Furthermore, unlike in Tongan, ABS (10a) *and* ERG (10b) arguments are able to undergo raising.

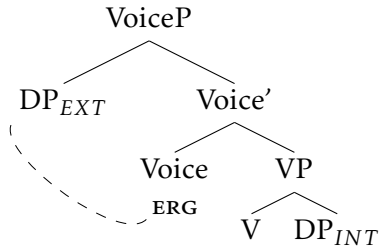
(10) a. To maeke e ekekafo$_i$ [ke lagomatai ___$_i$ e tama].
FUT possible ABS doctor SBJ help ABS child
'The doctor could help the child.'

b. To maeke e tama$_i$ [ke lagomatai he ekekafo ___$_i$].
FUT possible ABS child SBJ help ERG doctor
'The doctor could help the child.' (Seiter 1980:158)

2.3 Accounting for syntactic ergativity

- We treat ergative as an inherent case (Woolford, 1997; et seq.), assigned by Voice^0 to the external argument.
  - See Assmann et al. (2015), where ergative is a structural case, assigned via spec-head Agree.
  - We follow Massam (2006, 2009) and Tollan (2018) who argue that unergative subjects are base-generated lower than transitive subjects.

(11) Inherent ergative



- We adopt an 'Absolutive Inversion' approach to ABS case assignment for Tongan and Niuafoʻou (Campana 1992; Bittner & Hale 1996; Aldridge 2004, a.o.).
  - ABS is assigned by T^0 (i.e., ABS = NOM)
  - The object must move into a local configuration with T^0—past the intervening ERG subject
  - Movement of the ABS argument traps the ERG argument

- Coon et al. (2014) use this approach to account for the covariance of syntactic ergativity and the position of the absolutive marker in Mayan languages (Tada 1993).
  - High ABS = syntactic ergativity, e.g. Q'anjob'al
  - Low ABS = no syntactic ergativity, e.g. Ch'ol

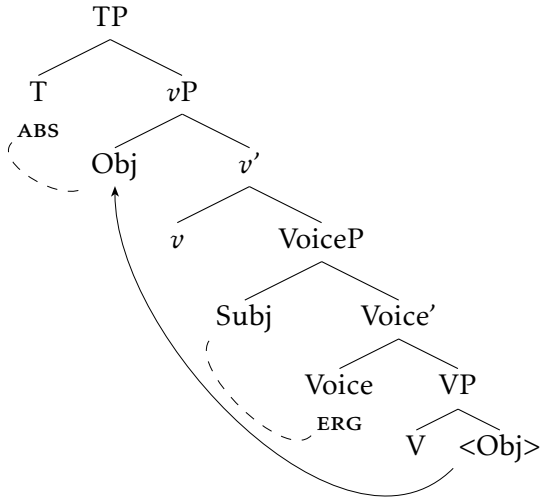
- High ABS: ABS is assigned 'high' by T^0 and the absolutive marker precedes the ergative marker.

- Movement of the ABS argument traps the ERG argument and the language is syntactically ergative.

- Low ABS: ABS 'low,' assigned by Voice^0 (Legate 2002, 2008; Aldridge 2004) and the absolutive marker is also low.
  - The ERG argument is available for extraction and thus the language does not display syntactic ergativity.

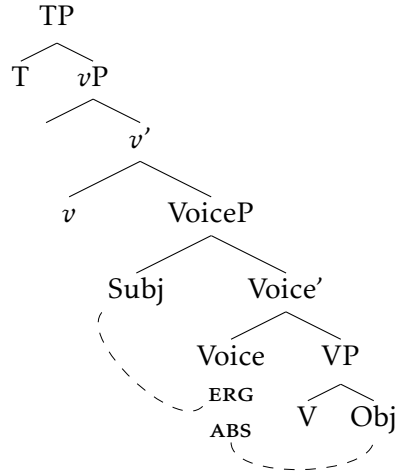
- Applying this style of analysis to Tongic, we claim that the locus of ABS in **Tongan** and **Niuafo'ou** is high (T^0).
  - For Coon et al. (2014), the phase introduced by v^0 projects only one specifier.
  - The ABS argument moves into a case licensing position, occupying the vP phase edge.
  - No other vP internal elements can escape the phase; the ERG argument is trapped in its base position.
  - See Section 5 for an alternative approach that does not appeal to the phase edge.

(12) Tongan and Niuafo'ou high ABS (cf. Q'anjob'al)



- In contrast, ABS case is assigned low in Niuean, by Voice^0 (cf. Massam 2006).
  - The ABS argument does not move; both core arguments freely extract.

(13) Niuean low ABS (cf. Ch'ol)



2.4 Interim summary

- Data from relativization and raising show that Tongan and Niuafo'ou, but not Niuean, are syntactically ergative:
  1. While both ERG and ABS arguments relativize with a gap in Niuean, only ABS arguments can in Tongan and Niuafo'ou. ERG arguments require a resumptive element.
  2. In Niuean, both ERG and ABS arguments can raise out of an embedded clause. In Tongan, ABS arguments can raise, but ERG subjects cannot.

- ABS case and syntactic ergativity are connected as follows:
  - In Tongan and Niuafo'ou, the object moves into a local configuration with T^0 in order to check ABS case. High ABS languages are syntactically ergative, because the movement of the ABS argument blocks the ERG argument from moving out of vP.
  - In Niuean, both core arguments receive case locally from the Voice head. In low ABS languages like Niuean, either argument can undergo raising.

Road Map: ☑Ergativity • □Word Order • □Coordination • □Blocking

3 Word order variation

3.1 Availability of VSO and VOS

- One extension of the approach to syntactic ergativity outlined above is to account for word order differences in Tongic.
- Beginning with **Tongan**, in transitive clauses with two DP arguments, both VSO (14a) and VOS (14b) order is allowed.

(14) a. Na‘e ‘ave ‘e Sione ‘a Mele.
PST take ERG Sione ABS Mele
‘Sione took Mele.’

b. Na‘e ‘ave ‘a Mele ‘e Sione.
PST take ABS Mele ERG Sione
‘Sione took Mele.’ (Otsuka 2000:282)

- Otsuka (2005) argues that Tongan VOS is A-scrambling, which is consistent with our account:
  - No Weak Crossover Effects arise (15a).
  - Binding relations are altered: the subject cannot bind the object in the VOS order (15b).

(15) a. Na‘e fili ‘a e taha kotoa$_i$ ‘e he‘ene$_i$ tamai ___$_i$.
PST choose ABS DEF one every ERG his father
‘His father$_i$ chose everyone$_i$.’

b. Na‘e fili ‘a ia$_i$ pe ‘e Sione$_{*i/j}$ ___$_i$.
PST choose ABS 3SG only ERG Sione.
‘Sione chose him/*himself.’ (Otsuka 2005)

- **Niuafo‘ou** patterns with Tongan: both VSO (16a) and VOS (16b) orders are permitted.

(16) a. Ne taa‘i ‘e Sione ‘iá te tamasi‘î.
PST hit ERG Sione ABS DET boy
‘Sione hit the boy.’

b. Ne taa‘i ‘iá te tamasi‘î ‘e te tangatá.
PST hit ABS DET boy ERG DET man
‘The man hit the boy.’ Tsukamoto 1988:405, 408

- Turning to **Niuean**, the word order of transitive clauses with two DP arguments is strictly VSO (17). (PNI constructions with an NP object are a different story altogether.)

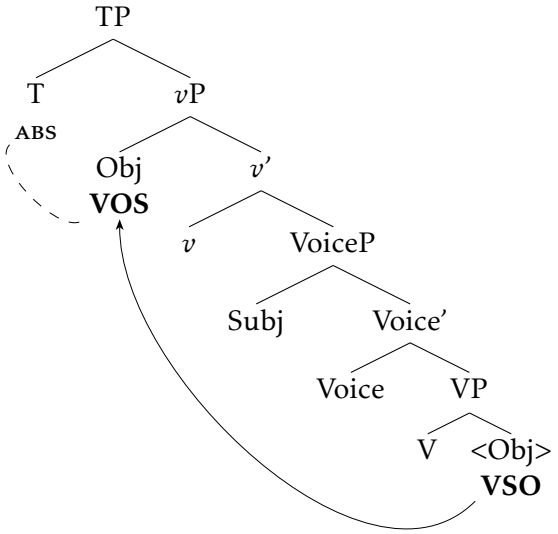
(17) a. Kua kai he tama e niu.
PFV eat ERG child ABS coconut
‘The child ate coconut.’

b. *Kua kai e niu he tama.
PFV eat ABS coconut ERG child
‘The child ate coconut.’ *authors’ notes*

3.2 Analysis

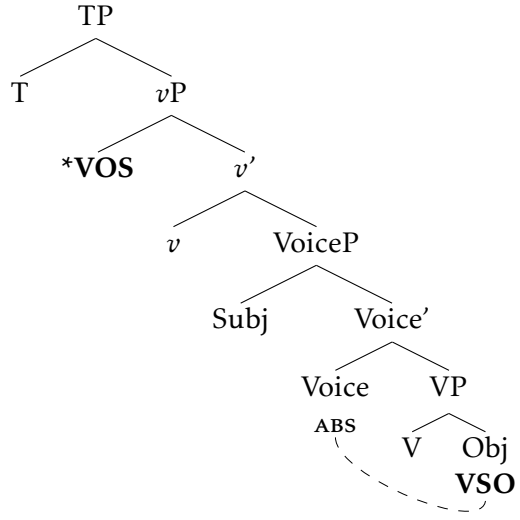
- Our account of the relative order of core post-verbal arguments is compatible with both VP-(remnant)-raising and V^0-movement accounts of V1 order in Tongic (Massam 2001; Otsuka 2005; Clemens 2014, to appear).
- We propose that A-movement in **Tongan** and **Niuafo‘ou** VOS is a reflex of ABS case assignment: the base position of the object follows the subject, while the case position precedes it.
- The object can be pronounced in either syntactic position and the choice is governed by pragmatic factors (i.e. movement is covert in VSO clauses).
  - Word order affects the prominence of the object in the interpretation of the utterance such that the object in VOS constructions is emphasized (Otsuka 2000). The factors determining VSO~VOS in Niuafo‘ou are unknown to us.

(18) Tongan and Niuafo'ou high ABS; VSO and VOS



- Object *wh*-questions display WCO effects (Otsuka 2005); we are working to account for this surprise.
- In Niuean, the ABS object only has the low option; VSO is therefore obligatory.

(19) Niuean low ABS; VSO only



Road Map: ☑Ergativity • ☑Word Order • □Coordination • □Blocking

4 Coordination

- In this section, we consider contrasts between Tongan and Niuean only (data for Niuafo'ou is unavailable).
- Tongan has two types of coordination: *mo* and *pea* (Otsuka 2000, 2010).
- Niuean has two analogous types of coordination: *mo (e)* and *ti*.
- *Mo (e)* and *pea/ti* coordinate XPs of different sizes (see Otsuka 2010, on Tongan).
  - *Pea* and *ti* may be followed by a tense marker or a clausal conjunction. *Mo (e)*, however, cannot (20 and 21).
  - This suggests that *pea* and *ti* coordinate XPs at least as big as TP, while *mo (e)* coordinates smaller XPs (e.g., AspP, *v*P, VoiceP, AdjP, DP).

(20) Tongan *pea*- vs. *mo*-coordination

a. [Na'e kai lahi 'a Sione] **pea/*mo** [**na'e** inu lahi
PST each much ABS Sione and PST drink much
'a Pita].
ABS Pita
'Sione ate a lot and Pita drank a lot.' Otsuka 2000:121

b. **Pea/*mo** [**kapau** kuo 'osi 'a e ngaué]
and if PERF finished ABS DEF work
'and if the work has been done...'
(Churchward 1953, via Otsuka 2010:323)

(21) Niuean *ti*- vs. *mo (e)*-coordination

a. [Ne kai e Mele e apala] **ti/*mo e** [**kua** kai e
PFV eat ERG Mele ABS apple and PERF eat ERG
Sione e pea].
Sione ABS pear
'Mele ate an apple and Sione ate a pear.'

b. **ti/*mo e** [**kaeke** ke tutuli e Sione a Mele]
and if TNS chase ERG Sione ABS Mele
'...and if Sione chases Mele...' *authors' notes*

- Starting with *mo (e)*—the smaller XP connective—we find a consistent **accusative** coordination pattern both languages.
- When all participants are *not* overtly expressed:
  - The overt subject of the first conjunct (an intransitive ABS subject or a transitive ERG subject) and the unexpressed participant in the second conjunct must be the same.
  - Furthermore, the unexpressed participant in the second conjunct can *only* be the subject of its clause (intransitive ABS or transitive ERG).
  - In *mo (e)*-coordination we propose that case is eventually assigned to the ABS arguments in both conjuncts via multidominance, whereby both conjuncts are equidistant to the case assigning head (Williams 1978).

(22) TONGAN *mo*-coordination: Accusative pattern

a. **ERG subject + elided ABS subject**
Na'e taa'i 'e Hina 'a Mele **mo** kata.
PST hit ERG Hina ABS Mele and laugh
'Hina hit Mele and (Hina/*Mele) laughed.'

b. **ABS subject + elided ERG subject**
Na'e tangi 'a Hina **mo** taa'i *'e/'a Mele.
PST cry ABS Hina and hit *ERG/ABS Mele
'Hina cried and (Hina/*Mele) hit Mele.'
Not: '...Mele hit (Hina).' (Otsuka 2000:129)

(23) NIUEAN *mo (e)*-coordination: Accusative pattern

a. **ERG subject + elided ABS subject**
Ne tutuli e Sione a Mele **mo e** kata
PST chase ERG Sione ABS Mele and laugh
'Sione chased Mele and (Sione/*Mele) laughed.'

b. **ABS subject + elided ERG subject**
Ne kata a Sione **mo e** tutuli *e/a Mele.
PST laugh ABS Sione and chase *ERG/ABS Mele
'Sione laughed and (Sione) chased Mele.
Not: '...and Mele chased (Sione). *authors' notes*

- Turning to the larger XP connective—*pea* (Tonagn) and *ti* (Niuean)—we find a contrast.
- TONGAN exhibits an **ergative** coordination pattern (see Dixon 1994 for Dyirbal).
- When all participants are not overtly expressed:
  - If an argument in the second conjunct contains an unexpressed participant, the unexpressed participant must correspond to an overt participant in the first conjunct marked with a matching case.
  - An overt ERG argument in the first conjunct can be coindexed with an unexpressed ERG argument in the second.
  - An overt ABS argument (either intransitive subject or transitive object) in the first conjunct can be coindexed with an unexpressed ABS argument (either intransitive subject or transitive object) in the second conjunct.

(24) TONGAN *pea*-coordination

a. **ABS object + elided ABS subject** ➤*Compare to 22a*
Na'e taa'i 'e Hina **'a Mele** pea tangi.
PST hit ERG Hina ABS Mele and cry
'Hina hit Mele and (*Hina/Mele) cried.'

b. **ABS subject + elided ABS object** ➤*Compare to 22b*
Na'e tangi **'a Hina** pea taa'i 'e/*'a Mele.
PST cry ABS Hina and hit ERG/*ABS Mele
'Hina cried and Mele hit (Hina).'
Not: '...and (Hina) hit Mele. (Otsuka 2000:123)

- NIUEAN, on the other hand, maintains an **accusative** coordination pattern for the larger XP connective as well.

(25) Niuean *ti*-coordination

a. **ABS subject + elided ERG subject** ➤*Compare to 23a*

Ne tutuli e Sione a Mele **ti** kata
PST chase ERG Sione ABS Mele and laugh

'Sione chased Mele and (Sione/*Mele) laughed.'

b. **ERG subject + elided ABS subject** ➤*Compare to 23b*

Ne kata a Sione **ti** tutuli *e/a Mele.
PST laugh ABS Sione and chase *ERG/ABS Mele

'Sione laughed and (Sione) chased Mele.
Not: '...and Mele chased (Sione). *authors' notes*

- In sum, an ergative pattern in Tongan arises precisely when XPs at least as large as TP are coordinated with *pea*. Smaller XPs, coordinated with *mo*, show an accusative pattern.
- Niuean consistently has an accusative coordination pattern, with both smaller XPs and TP/CPs.

➤ The presence of T^0 triggers a syntactically ergative coordination pattern in Tongan, but not in Niuean.

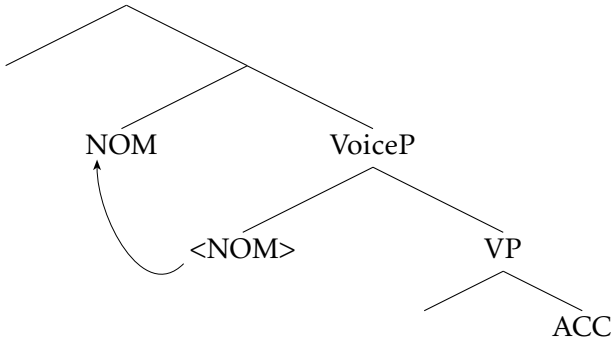
Road Map: ☑Ergativity • ☑Word Order • ☑Coordination • □Blocking

5 Blocking ERG movement

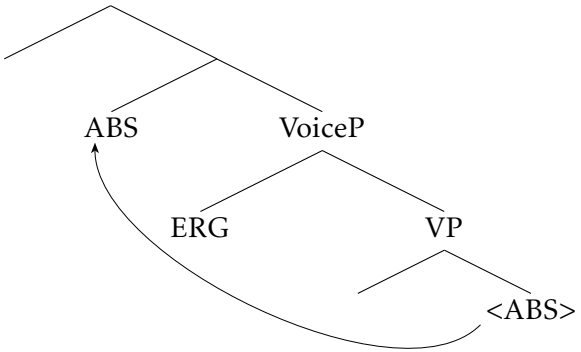
- A crucial question: *why* does movement of the ABS argument to the vP phase edge block movement of the ERG argument?
  - Superiority (e.g. Aldridge 2004)?
  - Single *v*P escape hatch (e.g. Coon et al. 2014)?
- Appealing to superiority or a ban on multiple *v*P specifiers predicts that accusative objects in NOM-ACC languages should be *at least* as impervious to A-bar movement as ergative subjects in ERG-ABS languages (see discussion in Assmann et al. 2015).
  - Just as high ABS blocks ERG movement, so should (high) NOM block ACC movement.
  - Syntactic ergativity is more prevalent than syntactic accusativity (~ 69% vs. 38%). (Polinsky 2016, Tollan 2018)

(26) Ergative versus accusative

a. Nominative-accusative



b. Ergative-absolutive



- Following Tollan (2018), we suggest that the culprit in cases of syntactic ergativity—at least, in Tongic Polynesian (and possibly Mayan)—is the **trajectory** of movement.
- **Constraint on Crossing Dependencies** "CCD" (Kuno & Robinson 1972; Steedman 1984): movement which results in nested dependencies (27a) is preferred to movement which results in crossed dependencies (27b).

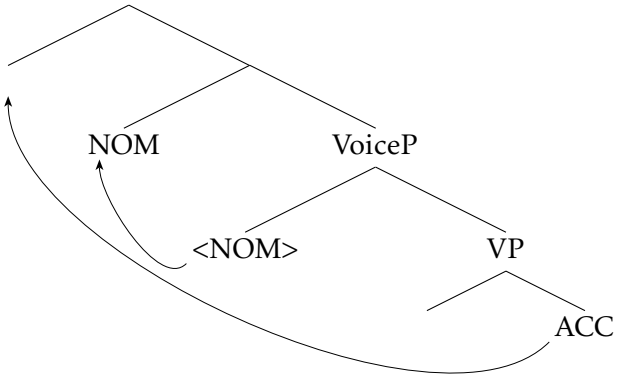
(27) a. The violin$_j$ that I wonder which sonatas$_i$ to play___$_i$ on___$_j$.

b. *The sonatas$_j$ that I wonder which violin$_i$ to play___$_j$ on___$_i$.

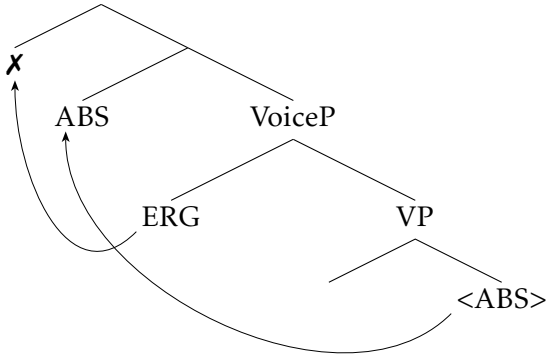
- Returning to an Absolutive Inversion account of syntactic ergativity, the asymmetries between the attested restrictions on ergative extraction as compared to the unattested restrictions on accusative extraction can be captured by the CCD.
  - Syntactic ergativity manifests as ban on A-bar movement of the ERG argument across the ABS argument's A-movement path.

(28) Ergative versus accusative

a. Movement of ACC: Nested dependency



b. *Movement of ERG: Crossing dependency



- This explanation makes a number of predictions, including:
  1. In nominative-accusative languages, the nominative argument may move to the specifier of TP and the object should still be able to undergo A-bar movement.
  2. Goal arguments (lower than direct objects) should A-bar move in high ABS languages, as they do not cross the path of the ABS argument (cf. Assmann et al.'s (2015) concern that ABS *and* goal arguments A-bar move in Kaqchikel).

Road Map: ☑Ergativity • ☑Word Order • ☑Coordination • ☑Blocking

6 Conclusion

- We connect variation in syntactic ergativity in Tongic to differences in post-verbal word order.
  - Niuean = VSO/*VOS; ERG argument freely displaced
  - Tongan/Niuafo'ou = VSO/VOS; ERG displacement restricted
- To do so, we adopt the position that syntactic ergativity is the result of Absolutive Inversion (i.e. A-movement of the ABS argument past the ERG argument for case-licensing), in the spirit of Coon et al. (2014) for Mayan.
  - Tongan/Niuafoou = high ABS assigned by T^0
  - Niuean = low ABS assigned by $Voice^0$
- We find additional support for the analysis with differences in coordination patterns between Tongan and Niuean.
  - With small XP coordination (*mo (e)*): Tongan and Niuean both exhibit an accusative pattern.
  - With TP/CP coordination (*pea*/*ti*): Tongan exhibits a syntactically ergative pattern; Niuean maintains an accusative pattern.
  - If syntactic ergativity is connected to T^0 assigning ABS, syntactically ergative patterns should only arise in constructions involving T^0 (e.g. TP but not *v*P coordination).
- Finally, we evaluate the Absolutive Inversion approach in view of the typological rarity of syntactic accusativity, suggesting that the ban on ERG movement is tied to the prior movement of the ABS around the ERG argument, rather than superiority or a phase-based movement *per se*.

7 Acknowledgements

Thanks to Jessica Coon, Diane Massam, Yuko Otsuka, Maria Polinsky, Kara Tukuitonga, and Lynsey Talagi for helpful conversation about the data and analysis we present here. Thanks also to LSA 2019, LAGB 2016, and NELS 47 reviewers for useful feedback at different stages of this research project.

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