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Roviana fronting and the relationship between syntactic and morphological ergativity[2]

1 Introduction

- A syntactically ergative phenomenon groups S (the intransitive sole argument) and P (the transitive object) to the exclusion of A (the transitive subject).
- A classic example: in West Greenlandic, only S and P (not A) may be relativized.

(1) a. [*miiqqa-t_i*]$_S$ [t_i *sila-mi pinnguar-tu-t*]
child-ABS outdoors play
'the children who are playing outdoors.' Bittner 1994

b. [*miiqqa-t_i*]$_P$ [*Juuna-p* t_i *paari-sa-i*]
child-ABS Juuna-ERG look.after
'the children that Juuna is looking after.'

c. *[*angut$_i$*]$_A$ [t_i *aallaat tigu-sima-sa-a*]
man.ABS gun.ABS take
'the man who took the gun.'

- So far, the literature on syntactic ergativity has examined 'absolutive-only' phenomena, i.e., phenomena applying to absolutives but not ergatives.
- Polinsky 2016 even defines the term *syntactic ergativity* in 'absolutive-only' terms:

(2) *Syntactic ergativity* (Polinsky 2016:9):
the inaccessibility of ergative arguments to A'-movement ... as contrasted with the accessibility of absolutive arguments to such movement.

- **Our key question**: what is the status of 'ergative-only' syntactic phenomena?
  - We observe a A'-movement phenomena in Roviana (Oceanic; Solomon Islands) which applies *only* to *non-absolutive* core arguments.
  - We show that 'inversion'-based theories of ergativity don't generalize to such phenomena.
- We argue that the Roviana case study supports a feature-based approach to ergativity (along the lines of Deal 2016; Marantz 1991; Otsuka 2006, and so on), as opposed to an inversion-based account.
- In particular, we propose a category of features on nominals, signalling their relative rank along a thematic hierarchy, in the style of Kiparsky 1997.
- The paper suggests a new way to distinguish ergative and non-ergative languages as featurally distinct.

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2 Roviana ergativity

2.1 Morphological ergativity

- Roviana is a verb-initial language with an ergative-absolutive alignment in case marking.
- Roviana word order: VS in intransitive clauses, VAO in transitive clauses.

(3) *mae* [*sa siki*]$_S$
come ABS dog
'The dog comes.' Intransitive VS

(4) *taka=ia* [*Bili*]$_A$ [*sa siki*]$_P$
kick=3SG.OBJ Bill ABS dog
'Bill kicked the dog.' Transitive VAP

- A pronominal clitic on the verbal complex indexes the ϕ-features of P.

(5) a. *taka=**au*** [*sa*]$_A$ [***si rau***]$_P$
kick=1SG.OBJ 3SG ABS 1SG
'He kicked me.'
b. *taka=**igo*** [*rau*]$_A$ [***si goi***]$_P$
kick=2SG.OBJ 1SG ABS 2SG
'I kicked you.'

- We assume the following forms for m-case markers and a semantically unmarked determiner.

(6)

	Case markers		Determiner
ERG	ø	Common noun	*sa*
ABS	*si*	Pronoun	ø
DAT	*koa*	Proper noun	*e*

- The case-markers and determiner form portmanteaus.

(7)

	ERG	ABS	DAT
Common noun	*sa*	*sa*	*koa sa*
Pronoun	ø	*si*	*koa*
Proper noun	*e*	*se*	*koe*

- In the case of A, the determiner is present if the argument is fronted.

(8) {*sa siki* | *asa* | *e Bili*} *hena=ia* *sa* *rereke*
D dog | 3SG | D Bill eat=3SG.OBJ ABS mango
'The dog/(s)he/Bill ate the mango.'

- If A is post-verbal, neither the case marker nor determiner appear.

(9) *hena=ia* {*siki* | *asa* | *Bili*} *sa* *rereke*
eat=3SG.OBJ dog | 3SG | Bill ABS mango
'The dog/(s)he/Bill ate the mango.'

2.2 Syntactic ergativity

- As in (8), A may be fronted pre-verbally, for *wh*-questions, topicalization etc, with no extra material.
- To front S and P, the absolutive marker *si* must be inserted.
- We refer to the fronting in (10-a) as 'null-fronting' and the fronting in (10-b) as '*si*-fronting'.

(10) a. [*esei*]$_A$ (**si*) *hena=ia sa rereke*
who ABS eat=3SG.OBJ ART mango
'Who ate the mango?' null fronting

b. [*esei*]$_{S/P}$ *(*si*) {*taloa* | *taka=ia Bili*}
who ABS left kick=3SG.OBJ Bill
'Who left/Who did Bill kick?' *si* fronting

- Both *si*- and null-fronting are instances of long-distance extraction.
  - They can both cross clause boundaries, and they both trigger island effects.
- These effects are shown below for null-fronted As.

(11) a. *esei balabala=n=ia agoi hena=ia* [GAP] *sa rereke*?
who think=APPL=3SG you eat=3SG.OBJ ART mango
Who do you think ate the mango?

b. **esei ele kamo si goi mudina ngaza=au* [GAP]?
who ASP arrive ABS you after hugged=1SG
*Who did you arrive after hugged me?

- We argue for the following informal characterization of null-fronting:

(12) **Null-fronting generalization**:
only non-absolutive core arguments may be null-fronted

- Why make null-fronting 'anti-absolutive'? We find that dative core arguments (R) can be fronted.

(13) *koe Pita ele vala=ia Zone sa heta*
DAT Peter PERF give=3SG John ART betelnut
John gave *Peter* the betelnut.

- In general non-core obliques are unable to be null fronted.[3]

(14) a. **pa inuma garat=au siki si rau*
LOC garden ABS bite=3SG.OBJ dog ABS 1SG
"The dog bit me in the garden"

b. **pa velvelu kote tozi=ni=go rau*.
LOC evening FUT tell=APPL=2SG.OBJ 1SG
I will tell you in the evening.

[3]Though we do see obliques fronting as constrastive topics, with a marked intonation break. We believe this is a distinct sort of operation, though further diagnostics are needed.

- Is Roviana null-fronting an instance of syntactic ergativity?
  - We take any syntactic phenomenon to be ergative if it distinguishes S and P from A.
- Roviana null-fronting is somewhat unusual, as it *excludes* S and P.
- Other syntactically ergative A'-extraction phenomena *exclude* A, e.g., W. Greenlandic relative clause formation (data from Bittner 1994:55–58).

(15) a. [*miiqqa-t_i*]$_S$ [t_i *sila-mi pinnguar-tu-t*]
child-ABS outdoors play
'the children who are playing outdoors.'

b. [*miiqqa-t_i*]$_P$ [*Juuna-p t_i paari-sa-i*]
child-ABS Juuna-ERG look.after
'the children that Juuna is looking after.'

c. *[*angut$_i$*]$_A$ [t_i *aallaat tigu-sima-sa-a*]
man.ABS gun.ABS take
'the man who took the gun.'

- We argue that any theory of syntactic ergativity must account for 'anti-absolutive' phenomena (like Roviana null fronting) as well as 'anti-ergative' phenomena (like West Greenlandic relative clauses).

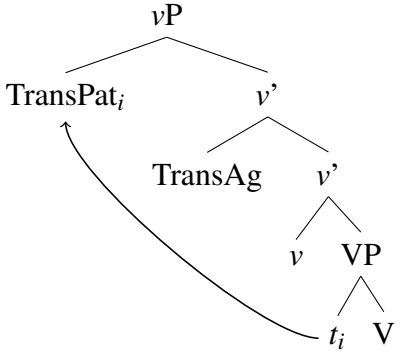
3 Approaches to extraction restrictions

- 'anti-absolutive' phenomena are a challenge to some theories extraction restrictions.
- We argue for a Case-based account following Otsuka 2006, 2010 and Deal 2016.

Inversion-based approaches

- A prominent theory of ergativity (e.g., Aldridge 2004; Coon, Mateo Pedro, and Preminger 2015)
  - In a transitive clause, A and P 'invert', via movement of P above A (e.g., for Case)

(16) e.g., movement of P to a higher Spec,*v*P



- Proposed reasons why inversion blocks the movement of A:
  - P intervenes between A and its potential landing site (Campana 1992)

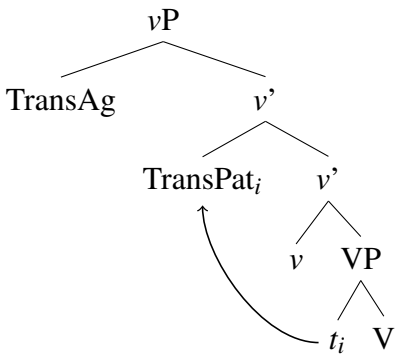
  - P occupies an intermediary position necessary for A's movement (Aldridge 2004)
  - P, but not A, moves above an intervening phase boundary (Coon et al. 2015).

- *A priori*, we disfavor inversion-based accounts.
  - Intervention-based approaches must explain why inversion doesn't block extraction of *all* vP-internal material (see Assmann et al. 2015).
  - Syntactically ergative languages don't always show evidence of inversion (see Polinsky 2016), requiring stipulation of covert inversion (Aldridge 2004 on Tagalog).
- Empirically, we argue that inversion cannot account for anti-absolutive phenomena.
- Recall null-fronting of both S and P is blocked in Roviana.

(17) [*esei*]$_{S/P}$ *(*si*) {*taloa* | *taka=ia* *Bili*}
who ABS left kick=3SG.OBJ Bill
'Who left/Who did Bill kick?'

- An obvious adaptation of the inversion-based account simply requires A to block P.

(18)

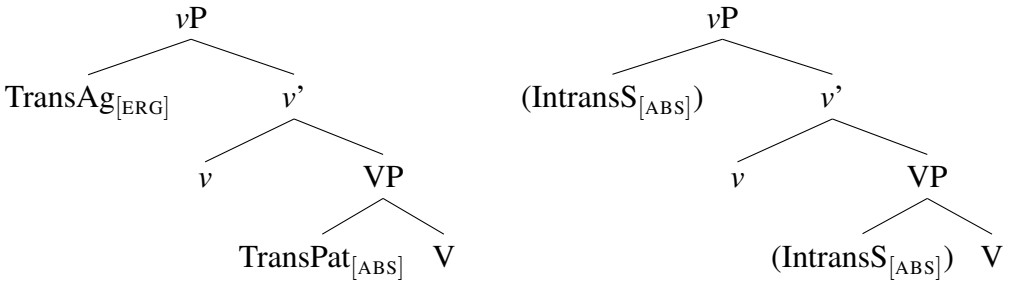


- But neither the standard account nor this adaptation explains why extraction of S is blocked in (17).
  - No other core argument blocks the extraction of S.
  - Further, inversion-based accounts (see Coon et al. 2015) require intransitives to not impose phase boundaries on extraction. No obvious reason why S should be blocked from moving.
- Thus, inversion doesn't provide a unified explanation of anti-absolutive and anti-ergative extraction.

Case-based approaches

- Otsuka 2006 argues against the inversion-approach for Tongan syntactic ergativity.
- Instead, Otsuka proposes that ergative A'-extraction in Tongan is 'case-sensitive'.
  - Arguments receive Case features in the syntax proper (see also Aldridge 2004; Legate 2008 etc.)

(19)



- Extraction operations target Case features: W. Greenlandic relative clause formation targets [ABS].
- Extraction of A is blocked simply because its Case feature is [ERG] (and thus not targetted).
- Deal 2016; Otsuka 2006, 2010 criticize inversion-approaches as they require ergative to be inherent (A receives Case in Spec,*v*P), contra Baker 2014; Deal 2019 and others.
  - Case-based approaches impose no such requirement.
- Further, the link between morphological and syntactic ergativity is clear:
  - both syntactic and morphological rules target Case features.
- Applying the case-based approach to Roviana:

(20) a. [*esei*]$_{S/P}$ *(*si*) {*taloa* | *taka=ia* *Bili*}
who ABS left kick=3SG.OBJ Bill
'Who left/Who did Bill kick?' *si* fronting S/P

b. [*esei*]$_{A}$ (**si*) *hena=ia* *sa* *rereke*
who ABS eat=3SG.OBJ ART mango
'Who ate the mango?' null fronting A

c. [*koe esei*]$_{R}$ *vala=ia* [*Zone*]$_{A}$ [*sa* *heta*]$_{P}$
DAT who give=3SG John ART betelnut
Who did John give the betelnut to? null fronting R

(21) **Case-based account of Roviana**

a. *si*-fronting targets [ABS][4]
b. null-fronting targets [ERG] ∨ [DAT]

- This approach satisfies the basic data. Next, we adapt the proposal to eliminate the disjunction in (b).
- The proposal is a feature-based theory of grammatical relations.

[4]At least for *wh*-questions. In declaratives, any core argument can *si*-front. We take the heterogeneity of *si*-fronting as further evidence against an inversion based approach to syntactic ergativity, following Polinsky 2016.

4 A streamlined theory of grammatical relations

- Our approach adapts Otsuka's Case-sensitive approach: extraction operations target features.
- However, unlike Otsuka, these operations don't target Case features.
  - Rather, we propose a new category of *grammatical relation (GR)* features.
  - *Both* morphological case and extraction rules are sensitive to GR features.

4.1 GR features

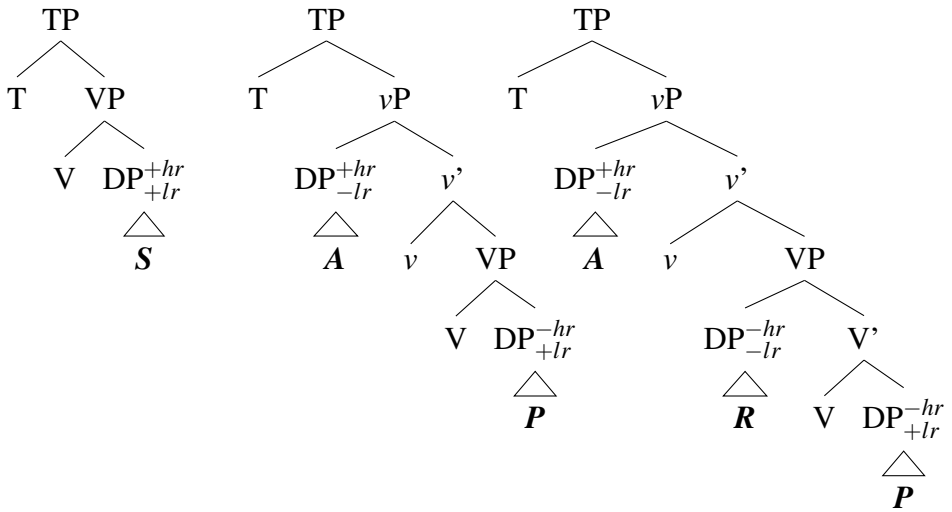
- Like case in Marantz 1991, GR features are assigned to core arguments configurationally.
- Following the system in Kiparsky 1997, GR features mark a core argument's thematic ranking.
- We spell this out in terms of relative c-command within a relevant domain (for us, a clause).

(22) **Assigning highest role features**: $[-\text{HR}]/[+\text{HR}]$
  a. To any DP c-commanded by another DP, assign $[-\text{HR}]$.
  b. Elsewhere, i.e., if there is no c-commanding DP, assign $[+\text{HR}]$.

(23) **Assigning lowest role features** $[-\text{LR}]/[+\text{LR}]$
  a. To any DP c-commanding another DP, assign $[-\text{LR}]$.
  b. Elsewhere, i.e., if there is no c-commanded DP, assign $[+\text{LR}]$.

- Features are assigned on merge, i.e., in non-derived positions only.
- Below is a toy language showing the distribution of GR features.

(24)



- We immediately have formal definitions for some intuitive notions, e.g.:

(25)
  a. **Subject**: The argument bearing $[+\text{HR}]$
  b. **Direct Object**: The argument bearing $[+\text{LR}]$ and $[-\text{HR}]$
  c. **Indirect Object**: The argument bearing $[-\text{HR}]$ and $[-\text{LR}]$

- The requirement that all clauses with arguments have subjects is derived as an entailment.

(26) **The 'EPP'**: If there is at least one core argument, there is a subject.

4.2 Linking features with phenomena

Case marking

- GR features are assigned at merge, so they are visible to the syntax proper.
- Like abstract Case features in Otsuka 2006, Legate 2008, GR features feed m-case rules.

(27) Feature to m-case mapping (sequenced):

a. Absolutive m-case: $[+\text{LR}] \Rightarrow$ */si/*

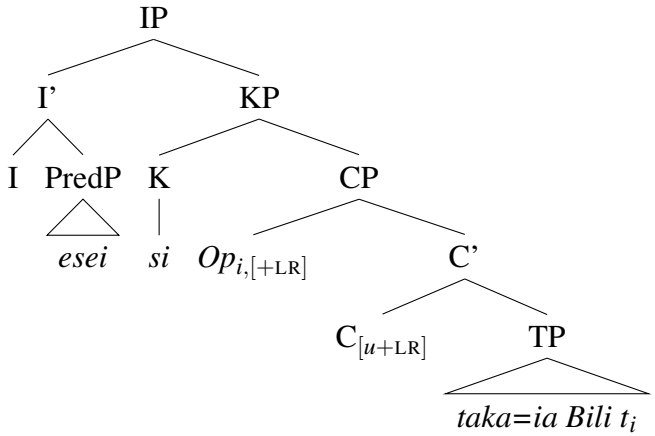
b. Dative m-case: $[-\text{HR}] \Rightarrow$ */koa/*

- This ensure absolutive *si* marks S and P, while dative *koa* marks R.
- No specific m-case rule is specified for A in Roviana, deriving the unmarked ergative.

Fronting

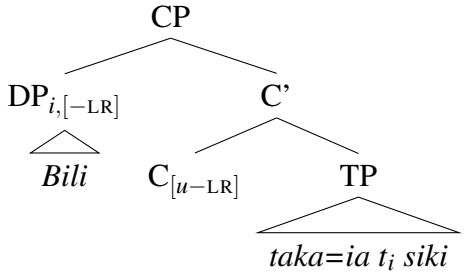
- We leave the precise structure of *si-* and null-fronting for future work.
- What we can implement at this stage is the argument-structural sensitivity of each type of fronting.
  - Here, *si*-fronting is analyzed as a cleft. The C head is specified to attract only $[+\text{LR}]$ (absolutive).

(28) Example implementation (tentative analysis): *si-fronting is clefting*



- Ordinary syntactically ergative A'-extraction (e.g., West Greenlandic relative clauses, Mayan agent focus), targets $[+\text{LR}]$, deriving the absolutive-only restriction.
- Null-fronting on the other hand is tentatively analyzed as regular A'-movement.

(29) Tentative analysis: *null-fronting is ordinary A'-mvt*



- As only $[-\text{LR}]$ arguments move, we target only A (ergatives) and R (datives).
- $[-\text{LR}]$ groups A and R. We eliminate the disjunction ($[\text{ERG}] \vee [\text{DAT}]$) from the Case-based approach.

Object clitics

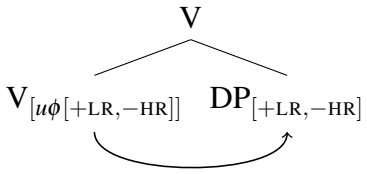
- One key reason to shift to the more abstract GR features over Case features:
  - Not all morphosyntactic processes in Roviana are sensitive to Case.
  - GR features offer a unified approach.
- Roviana object clitics track the ϕ-features of the direct object.
  - To implement a Case-sensitive rule for clitics, we'd need an $[\text{ACC}]$ feature.
  - But no accusative m-case (i.e., on direct objects only) is realized in Roviana.
  - If the clitic targets $[\text{ABS}]$ we wrongly predict it appears on intransitives.

(30) a. *mae(*=ia) si asa*
come=3SG.OBJ ABS 3SG
'She/he comes.' Intransitive VS

b. *taka*(=ia) Bili sa siki*
kick=3SG.OBJ Bill ART dog
'Bill kicked the dog.' Transitive VAP

- Thus, operations which target GRs but not case are independently necessary for Roviana.

(31) *object clitics ϕ-agree with objects*



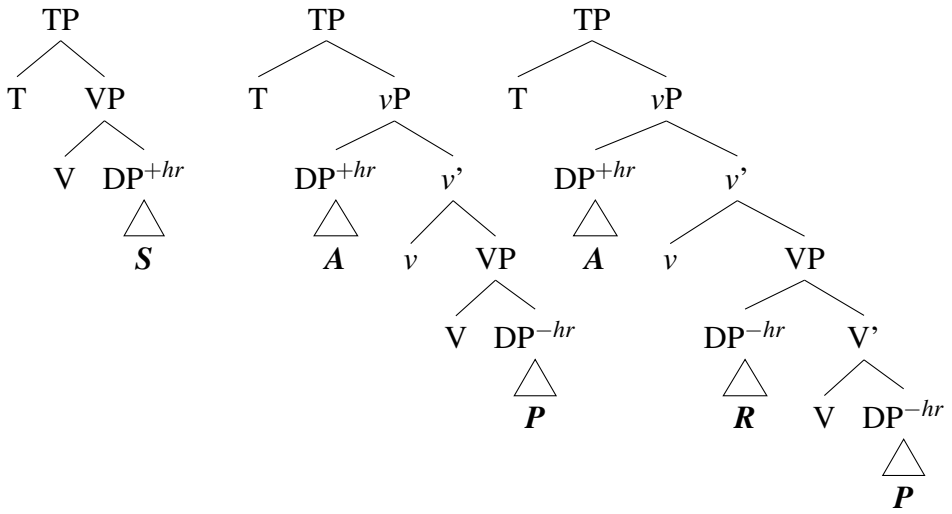
5 The ergative parameter

- A generalization: no morphologically accusative languages show syntactic ergativity (Dixon 1979).
- Nothing in the present system rules out an "absolutive-only" extraction rule in, e.g., German.
  - A language could assign accusative to $[-\text{HR}]$, but A'-movement targets $[+\text{LR}]$.
- To curb this, we suggest a new perspective on the "ergative parameter".

(32) **Ergative languages**:
Ergative languages are those with $[\pm\text{LR}]$ features.

- A sketch for languages without $[\pm\text{LR}]$ features (non-ergative languages):

(33)



- The profile of a $[+/-\text{HR}]$-*only* language like in (33).
  - Now, S and A aren't distinguishable (both marked $[+\text{HR}]$).
  - Moreover, S ($+\text{HR}$) and P ($-\text{HR}$) are not featurally grouped.
  - P and R aren't distinguished via GR-features, but could be distinguished positionally/thematically.
- Japanese etc. can be analyzed like (33): predicting no absolutive/ergative aligned phenomena.
- A final problem:
  - What we call 'ergative languages' have $[\pm\text{LR}]$ and $[\pm\text{HR}]$
  - This accounts for why such languages have *strictly more options*.
  - They allow either accusative or ergative aligned agreement/extraction etc.
- But, such a system permits an unattested language type:
  - Nominative/accusative case marking (using $[+\text{HR}]$ and $[-\text{HR}]$)
  - Ergative/absolutive extraction/agreement (using $[+\text{LR}]$ and $[-\text{LR}]$)
- To rule this out, we stipulate a constraint on languages with $[\pm\text{LR}]$ (ergative languages).

(34) **The 'use it or lose it' principle on m-case**:
Ergative languages must impose an m-case rule of the format: $[\pm\text{LR}] \Rightarrow X$
where X is some (possibly empty) string

- This principle ensures that only languages with ergative/absolutive m-case systems will demonstrate syntactically ergative phenomena.
- One could think about (34) in terms of parameter setting: a learner observes ergative/absolutive m-case and thus infers the language uses $[\pm\text{LR}]$ features.
- Absent such evidence, the learner posits a system like (33).

6 Conclusion

- Syntactic ergativity sheds light on:
  - the intersection between morphology and syntax
  - how syntactic phenomena are sensitive to argument structure
  - how morphological case is linked to related phenomena
- We argue that an 'anti-absolutive' restriction observed in Roviana bears on our understanding of syntactic ergativity:
  - The phenomena biases against an 'inversion'-based account of ergativity
  - It is well suited to a feature based account, e.g., one that targets features marking abstract Case or grammatical relations.
- We propose a new understanding of (syntactic) ergativity, one that involves signalling an argument's grammatical relation featurally.
- We maintain that this approach opens up new ways of understanding ergative phenomena.

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