Information Structure and Differential Actor Marking in Kelabit

Charlotte Hemmings University of Oxford charlotte.hemmings@ling-phil.ox.ac.uk

1. Introduction

- ❖ This paper explores differential marking in the Kelabit language of Northern Sarawak, Malaysia, based on data collected during fieldwork in Bario between 2013-2017.
- ❖ Like other Western Austronesian (WAn) languages, Kelabit has a system of SYMMETRICAL VOICE ALTERNATIONS in which the mapping of arguments to functions alternate without changes in the syntactic transitivity (Riesberg 2014).
 - Actor Voice (AV): actor = subject, undergoer = object
 - ➤ Undergoer Voice (UV): undergoer = subject, actor = object
 - ➤ Instrumental Voice (IV): instrument = subject, actor & undergoer = objects
- ❖ In many WAn languages, the function of an argument within the voice system is indicated via case-marking.
- ❖ However, for Kelabit the function of nominal arguments is indicated via word order and case-marking is restricted to pronouns.
- ❖ Moreover, the patterns of distribution differ from other languages, and NOM and GEN pronouns alternate in certain contexts as a means of expressing UV actors.
- ❖ Consequently, I argue that this is a case of DIFFERENTIAL ACTOR MARKING and aim to show that the choice of NOM vs GEN is triggered by information structure.
- ❖ What makes this interesting is that information structure is known to affect differential marking of objects (or undergoers) and subjects (or actors) in different ways, yet in Kelabit the differentially-marked argument is both an actor and an object.
- ❖ It therefore has important implications for how we understand differential marking cross-linguistically.

* Roadmap:

- Symmetrical Voice
- > Kelabit Pronouns
- ➤ Differential Marking cross-linguistically
- > Differential Marking & Information Structure in Kelabit
- > Conclusion

2. Symmetrical Voice

Symmetrical voice alternations are alternations in verbal morphology that indicate different mappings of arguments to functions but do not affect SYNTACTIC TRANSITIVITY. In other words, there are multiple transitive clauses with two or more core arguments.

- ❖ This can be illustrated from Kelabit using the root *laak* 'cook':
 - (1) $Kelabit^{l}$

a. Actor Voice

Nengelaak *nuba'* **tesineh nedih**PFV.AV.cook rice mother 3SG.POSS
'Her mother cooked rice'

b. Undergoer Voice

Linaak tesineh nedih nuba'
PFV.UV.cook mother 3SG.POSS rice
'Her mother cooked rice'

- ❖ Both (1a) and (1b) express the same event of a mother cooking rice and both are syntactically transitive with two core arguments.
- ❖ However, they differ in terms of which argument is mapped to which function and this is reflected in the verbal morphology:

Table 1. Grammatical Functions in AV and UV

	subject	object	
ACTOR VOICE	actor	undergoer	
UNDERGOER VOICE	undergoer	actor	

- ❖ There is morphological and syntactic evidence for assuming the symmetrical voice analysis summarised in Table 1.
- ❖ Firstly, actor and undergoer are expressed as NP arguments in both AV and UV, whereas obliques are typically expressed as PPs:

(2) *Kelabit Obliques*

a. Actor Voice

La'ih sineh nemerey *nuba'* [ngen anak nedih]_{PP} man DEM PFV.AV.give rice to child 3SG.POSS 'The man gave rice to his child'

b. Undergoer Voice

Birey *la'ih sineh* **nuba'** [ngen anak nedih]_{PP} PFV.UV.give man DEM rice to child 3SG.POSS 'The man gave rice to his child'

Secondly, there are several SYNTACTIC TESTS that support the identification of both actor and undergoer as core arguments, as well as an alternation in the mapping of arguments to subject:

¹ Nb. word order is variable in Kelabit and the subject (or actor in AV and undergoer in UV) can appear both pre-verbally and clause-finally.

- Privileged actors and undergoers have a range of subject properties that uniquely identify them (e.g. relativisation, raising, external position etc.)
 - (3) *Kelabit Relative Clauses*
 - a. Relativising the Actor

la'ih [suk nenekul *nuba'*] man REL PFV.AV.spoon rice 'the man who spooned up rice'

b. *la'ih [suk sikul nuba']
man REL UV.PFV.spoon rice
For: 'the man who spooned up rice'

c. Relativising the Undergoer

nuba'[suksikulla'ihsineh]riceRELUV.PFV.spoonmanDEM'the rice that the man spooned up'

- d. *nuba' [suk nenekul la'ih sineh]
 rice REL UV.PFV.spoon man DEM
 For: 'the rice that the man spooned up'
- Non-privileged actors and undergoers behave as core arguments (and differ from obliques) since they cannot be separated from the verb with adjuncts of time (4) and cannot be fronted before a pre-verbal subject (5):
 - (4) *Kelabit Post-verbal Position (adjuncts of time)*
 - a. Actor Voice

La'ih sineh ne-kuman (*ngimalem) *bua' kaber* man DEM PFV-AV.eat (*yesterday) fruit pineapple For: 'I ate pineapple yesterday'

b. Undergoer Voice

Kinan (*ngimalem) *la'ih sineh* **bua' kaber sineh** UV.PFV.eat (yesterday) man DEM fruit pineapple DEM For: 'The man ate that pineapple yesterday.'

- c. **La'ih sineh** nenekul *nuba'* (ngimalem) ngen tekul man DEM AV.PFV.spoon rice yesterday with spoon 'The man spooned up rice yesterday with a spoon'
- d. **Nuba'** sikul *la'ih sineh* (ngimalem) ngen tekul rice UV.PFV.spoon man DEM yesterday with spoon 'The man spooned up the rice yesterday with a spoon'

(5) Kelabit Adjunct Fronting

a. Fronted AV Oblique

[Ngen tekul], **la'ih sineh** nenekul *nuba'* with spoon man DEM AV.PFV.spoon rice 'With a spoon, the man spooned up rice'

b. Fronted AV Undergoer

*nuba', la'ih sineh nenekul [ngen tekul] rice man DEM AV.PFV.spoon with spoon FOR: 'Rice, the man spooned up with a spoon'

c. Fronted UV Oblique

[Ngen tekul], **nuba'** sikul *la'ih* sineh with spoon rice UV.PFV.spoon man DEM 'With a spoon, the rice was spooned up by the man'

d. Fronted UV Actor

*la'ih sineh, **nuba'** sikul [ngen tekul] man DEM rice UV.PFV.spoon with spoon FOR: 'the man, rice was spooned up by him'

- This supports the conclusion that AV and UV are both transitive and that the UV undergoer is a subject and the UV actor is an object (see Table 1).
- ❖ Let us now explore how case-marking in Kelabit interacts with the voice system and how this differs from other Western Austronesian languages.

3. Kelabit Pronouns

- ❖ Kelabit is a Western Austronesian language spoken mainly in the fourth and fifth divisions of Northern Sarawak, Malaysia.
- ❖ It is a member of the Apad Uat subgroup which also includes Lun Bawang/Lundayeh, Sa'ban and Tring (Kroeger 1998).
- ❖ Basic pronouns in Kelabit demonstrates SINGULAR, DUAL, PAUCAL and PLURAL number distinctions and an INCLUSIVE and EXCLUSIVE opposition²:

Table 2. Kelabit basic pronouns

2 1.INCL 1.EXCL 3 uih iko ieh **SINGULAR** kiteh kediweh meduweh diweh DUAL teluh keteluh meteluh deteluh PAUCAL kamih muyuh **PLURAL** tauh ideh

² There is also an impersonal pronoun *narih* which is used in typical irrealis contexts, e.g. wishes/requests

❖ There is also a reduced paradigm of variant pronouns in 1sg, 2sg, 3sg and 3pl:

Table 3. Kelabit variant pronouns

	1		
	NOM	GEN	
1s _G	uih	kuh	
2 SG	iko	muh	
3 SG	ieh	neh	
3PL	ideh	deh	

These are labelled NOM and GEN on the basis that they appear to be cognate with case marked pronouns in the more conservative Philippine-type languages:

Table 4. Pronouns in Proto-Southwest Sabah (Lobel 2013: 103)

	NOM	GEN
1sg	*aku	*=ku
2sG	*(əi)-ka[w], *=kə	*=mu, *=nu
3sg	*[s]*	*=yə, *=nə, *nyə
1DU.INCL	*[k]itə	*=tə
1PL.INCL	*[ki]ta-kau	*=ta-kau
1PL.EXCL	*ə-kai	*=mai
2PL	*ə-kau, *=kau	*=muyu[n]
3PL	*[s]idə	*=[ni-]də

❖ In Phillipine-type languages, NOM pronouns mark subjects (i.e. actor in AV and undergoer in UV) and GEN pronouns mark non-subject actors and possessors:

(6) Kimaragang Dusun

a. Actor Voice

Mangalapak **okuh** *do niyuw*.

AV.TR.split 1SG.NOM GEN coconut
'I will split a coconut/some coconuts.'

b. Undergoer Voice

Lapak-on *kuh* **it niyuw.** split-UV 1SG.GEN NOM coconut 'I will split the coconut(s).'

c. Instrumental Voice (IV)

Nokuroh.tu n-i-lapak *nuh do niyuw inoh* why PST-IV-split 2SG.GEN GEN coconut MED.NOM

dangol kuh? knife 1sg.gen

'Why did you use my bush knife to split coconuts?' (Kroeger 2005)

- ❖ In Lundayeh, a closely related language to Kelabit, NOM pronouns are used for subjects (i.e. actor in AV, undergoer in UV); GEN pronouns for UV actors and oblique pronouns for AV undergoers:
 - (7) Lundayeh
 - a. Actor Voice

Ikonguitnenehaménekuh.2SG.NOMAV.bring3SG.OBLgo1SG.OBL'You bring him to me.'

b. Undergoer Voice

Inapung *kuh* **ieh** rat neneh.

UV.PFV.hide 1SG.GEN 3SG.NOM from 3SG.OBL

'I hid it from him.' (Clayre 2005: 25)

- ❖ Hence, the primary function of case-marking in Kimaragang Dusun and Lundayeh is to indicate information about the grammatical function (and semantic role) of the pronominal argument within the voice system.
- ❖ In Kelabit, NOM pronouns are also used for subjects and GEN pronouns for non-subject actors:
 - (8) Kelabit Voice Alternations
 - a. Actor Voice (AV)

Nekuman *bua' kaber* **uih**PFV.AV.eat fruit pineapple 1SG.NOM
'I ate pineapple'

b. Undergoer Voice (UV)

Kinan *kuh* **bua' kaber ih**UV.PFV.eat 1SG.GEN fruit pineapple DEF
'I ate pineapple'

- * However, NOM pronouns are used for both subject (actor) and object (undergoer) in AV clauses:
 - (9) *Kelabit*
 - a. Actor Voice

Uih ni'er ieh
1SG.NOM AV.see 3SG.NOM
'I see him.'

b. Actor Voice

Ieh ni'er *uih* 3SG.NOM AV.see 1SG.NOM 'He sees me.'

- ❖ Moreover, although GEN is typically used for expressing UV actors, NOM and GEN alternate in the following contexts:
 - > non-AV actors
 - > single argument of certain non-voice marked predicates
 - > following prepositions
 - > for possessors (along with other strategies)

(10) Kelabit

Undergoer Voice

- a. Seni'er *kuh* **ieh**UV.see 1SG.GEN 3SG.NOM
 'I saw him'
- **b.** Seni'er *uih* **t=ieh**UV.see 1SG.NOM PT=3SG.NOM
 'I saw him'

(11) Kelabit

Experiential Predicates

- a. Na'am uih keli'.

 NEG 1SG.NOM know
 'I don't know.'
- b. Na'am keli' kuh.

 NEG know 1SG.GEN
 'I don't know.'
- b. Na'am sekenan kuh ngadan ih

 NEG remember 1SG.GEN name PT

 'I don't remember the name' (text, BAR21082014CH 06)
- c. Am neto' uih sekenan ridtu' ineh kemuh
 NEG PT 1SG.NOM remember fold DEM say.2SG.GEN
 'I don't remember that bit, you know.' (pear story, BAR02082014CH 01)

(12) Kelabit

Accidental Predicates

- a. Ne-bila' uih bigan ih.

 ACCID-break 1SG.NOM plate PT
 'I accidentally broke the plate.'
- b. Ne-bila' kuh neh bigan ih.

 ACCID-break 1SG.GEN PT plate PT

 'I accidentally broke the plate.'

(13) Kelabit

Prepositional Phrases

- a. [ruyung kuh]pp b. [ruyung uih]pp with 1SG.GEN with 1SG.NOM 'with me'
- (14) Kelabit

Possession

- a. ruma' uih b. ruma' kuh c. ruma' kudih house 1SG.NOM house 1SG.GEN house 1SG.POSS 'my house' 'my house' 'my house'
- d. duih ruma'
 1SG.POSS house
 'my house' (elicitation, fieldnotes)
- ❖ The function of the pronouns is (seemingly) the same in the pairs above. Hence, NOM and GEN pronouns constitute DIFFERENTIAL MARKING in these contexts.
- ❖ This leads to the question of what motivates the differential use of NOM and GEN pronouns and what differences in interpretation emerge?
- ❖ The rest of the paper will address this specifically in relation to the alternation in the expression of UV actors in (10), leaving other contexts for future research.

4. Differential Marking and Information Structure

- ❖ Differential marking is the non-uniform marking of grammatical arguments.
- ❖ It is known to be affected by SEMANTIC FACTORS and INFORMATION STRUCTURE:³
 - ➤ In some languages, differential marking is related to animacy, referentiality and definiteness (Aissen 2003, Bossong 1985, de Swart 2007)
 - ➤ In some languages, differential marking is related to properties of event semantics, e.g. volitionality, control, affectedness (Naess 2004)
 - ➤ In some languages, differential marking is related to topicality and focus (Iemmolo 2010, Dalrymple and Nikolaeva 2011)
- ❖ DIFFERENTIAL OBJECT MARKING is often linked to topicality (Dalrymple and Nikolaeva 2011):
 - (15) Tundra Nenets
 - a. Non-topical object

What happened? What did a/the man do? What did a/the man kill?

xasawa ti-m xada° /*xada°da

man reindeer-ACC kill.3sg.subj kill.0bj.3sg.subj

'A/the man killed a/the reindeer'

³ Information structure can be understood as a formal mechanism for facilitating effective information exchange (Dalrymple and Nikolaeva 2011) or information update (Erteschik-Shir 2007)

b. Topical object

What did a/the man do to a/the reindeer?

xasawa ti-m xada°da /*xada° man reindeer-ACC kill.OBJ.3SG.SUBJ kill.3SG.SUBJ 'A/the man killed a/the reindeer' (Dalrymple and Nikolaeva 2011: 128)

- ❖ DIFFERENTIAL ACTOR MARKING (or optional ergativity) is often used to mark focus, contrastive and unexpected information:
 - > e.g. Warrwa or Umpithamu (Australia)
 - > e.g. Ku Waru (Papuan)
 - ➤ e.g. Meithei and Lhasa (Tibeto-Burman) (see Witzlack-Makarevich and Seržant 2018 and references therein, McGregor 2010)

(16) *Central (Lhasa) Tibetan*

a. Given Actor (context: 'what does he do?')

khōng khāla' so-kiyo:re'

he food make-IPFV.GNOM

'He prepares the meals.'

b. Contrasted actor

khōng-ki' khāla' so-kiyo:re' he-ERG food make-IPFV.GNOM

'He prepares the meals.' (Tournadre 1995: 264)

- ❖ This is particularly true in contrastive contexts or question/answer pairs that represent 'argument focus' in the sense of Lambrecht (1994) (Fauconnier and Verstraete 2014)
- ❖ Since differential marking only occurs with pronouns in Kelabit (nominal arguments are unmarked), animacy, referentiality and definiteness do not apply...
- Q: Does information structure play a role? Does it follow the patterns of DOM or DAM?

5. Differential Actor Marking in Kelabit

- ❖ Interestingly, it seems the choice of NOM or GEN does reflect the information structural status of the actor in UV constructions.
 - > GEN pronouns are favoured out of context for UV actors and used in naturalistic discourse when the actor is a continuing topic.
 - ➤ In contrast, NOM pronouns represent focus/contrastive/unexpected actors.
- This can be seen in naturally occurring data, as well as grammaticality judgements for elicited structures.
- ❖ In a small corpus of folk stories, pear story retellings and news reports of 122 UV clauses with pronominal actors, 119 had GEN marking, 2 had NOM marking and in one case the actor was partitive with NOM case, *edteh burur ideh* 'one of them'.
- As in (17), the GEN actor of a UV clause is typically a continuing topic (NB. the status of the undergoer is less important):

(17) Kelabit GEN as topic

Nalap neh pupu'

UV.PFV.fetch 3SG.GEN hitting.implement

'She [Dayang Beladan] fetched something to hit with'

Nukab **neh** bubpu' daan UV.PFV.open 3SG.GEN door hut

'Opened the door to the hut'

Nalap **neh** dteh kayuh UV.PFV.fetch 3SG.GEN one stick

'Picked up a piece of wood'

Nulin **neh** kuyad sineh UV.PFV.throw 3SG.GEN monkey DEM

'And threw it at the monkey' (narrative, PDA10112013CH 01)

- ❖ In contrast, (18) illustrates the use of NOM where the undergoer is given and the actor contrasted:
 - (18) Kelabit NOM as focus

Uih keli' naru' baney let uih i'it ngilad 1SG.NOM know AV.make necklace from 1SG.NOM small past

Nuuk maya' edteh tetepuh menaken kuh keyh AV.string follow one great.aunt 1SG.GEN PT 'I've known how to make necklaces since I was young, I used to string beeds following a great aunt of mine' [...]

Nuuk teh kedieh petaa ngilad, petaa ba'o rawir AV.string PT 3SG.EMPH bead.cap past bead.cap rawir.beed 'She would make bead caps in the past, of orange beeds'

En kuh ni'er ieh naru' ih
UV 1SG.GEN AV.see 3SG.NOM AV.make DEM
'I'd watch her doing it'

Naru' n=uih petaa ba'o rawir Av.make pt=1sg.nom bead.cap beed rawir

'Then I'd make my own orange bead cap'

Kayu' inih, senuuk **uih** neh. Like DEM UV.PFV.string 1SG.NOM DEM

'Like that one, I strung that [pointing to the bead cap on the table].'

- ❖ In fact, if you establish the actor as a hanging topic, then GEN is preferred:
 - (19) *Kelabit Hanging Topics*

c. GEN marked actor

Paul kedieh, kinan **neh** bua' ebpuk Paul 3SG.EMPH UV.PFV.eat 3SG.GEN fruit passion 'As for Paul, he ate the passion fruit'

a. NOM marked actor

#Paul kedieh, kinan **ieh** bua' ebpuk Paul EMPH.3SG UV.PFV.eat 3SG.NOM fruit passion FOR: 'As for Paul, he ate passion fruit'

- ❖ But, if you make the UV actor a focus by making it the answer to a wh-word, then NOM is preferred:
 - (20) Kelabit
 - Q. senuru' *iih* tieh ngelaak ngen tauh?
 UV.PFV.order who PT+3SG.NOM AV.cook for 1PL.INCL
 'who ordered her to cook for us?'

a. NOM marked actor

senuru' **uih** tieh
UV.PFV.order 1SG.NOM PT+3SG.NOM
'I ordered her'

b. GEN marked actor

*senuru' **kuh** tieh
UV.PRF.order 1SG.GEN PT+3SG.NOM
'I ordered her'

- Similarly, in (21) the use of NOM is preferred when the actor is contrasted, GEN if the undergoer is contrasted and the actor is given:
 - (21) Kelabit Differential Marking

a. Contrasted Actor

Pinupu' uih (*/#kuh) tieh pu'un, am dih iko UV.PFV.hit 1SG.NOM PT=3SG.NOM first NEG DEM 3SG.NOM 'I hit him first, not you' (i.e. you didn't hit him first))

b. Contrasted Undergoer

Ieh teh suk pinupu' kuh (*/#uih), am dih iko 3SG.NOM PT REL UV.PFV.hit 1SG.GEN NEG DEM 3SG.NOM 'He's the one I hit, not you' (i.e. I didn't hit you)

❖ Hence, NOM pronouns appear to mark an actor that is information structurally marked, as focus, contrastive or unexpected, whereas GEN pronouns are typically continuing topics (the default function of actor pronouns?).

Table 5. Summary of differential actor marking in UV

	Expectedness	Information Structure
GEN ACTOR	expected	A = continuing topic
NOM ACTOR	unexpected	A = focus/contrastive topic

- ❖ The pattern is similar to DIFFERENTIAL ACTOR MARKING as discussed in section 4 (Bruil 2016, Witzlack-Makarevich and Seržant 2018)
- ❖ However, it is the marked case (GEN) that is used for continuing topics, and the unmarked case (NOM) that is used for focus/contrastive etc.
- ❖ Is this related to the grammatical function of the UV actor?
- ❖ Or is it that GEN case is expected for Austronesian UV actors (and possibly found in an earlier stage of the Kelabit language, given the Lundayeh patterns) as well as less marked in terms of discourse frequency?

6. A puzzling question

An interesting question is why you would choose to focus pronominal actors in a UV construction, when actors can also be focused/contrasted by appearing pre-verbally in an AV construction:

(22) Kelabit AV actor

Tulu	uih	na'am	ngimet	ceiling,	lit
if	1sg.nom	NEG	AV.hold	ceiling	suddenly

tebpa teh langit ih keneh fall.in PT sky DEM he.said

'If I don't hold up the ceiling, it will fall in, he said.'

Uihtehne-ngimetinihkeneh1SG.NOMPTPFV-AV.holdDEMhe.said

- ❖ In (22), the actor is contrasted, but also the primary topic. Perhaps the use of NOM actors in UV constructions is restricted to cases where the actor is focused *and* the undergoer is the topic?
- ❖ This might explain why it occurs relatively infrequently...

5. Conclusion

❖ Although many Western Austronesian languages reserve NOM marking for subjects and GEN marking for non-subject actors, in Kelabit both NOM and GEN can alternate as a means of marking UV actors.

^{&#}x27;I am the one holding this [the ceiling] up'

- ❖ In this paper, I have argued that the choice is not random, or indicative of the general loss of case-marking in Borneo languages, but rather systematically reflects a contrast between focus actors and topic actors a common pattern of differential actor marking cross-linguistically (Fauconnier and Verstraete 2014, Witzlack-Makarevich and Seržant 2018).
- ❖ This is interesting because it indicates that the status of the actor is at least as important as that of the undergoer in UV − and argues against motivating the voice alternations in terms of the pragmatic function of the privileged argument
- ❖ Moreover, the felicity of the construction also depends on the status of the undergoer argument. Hence, differential marking may not only depend on information structure characteristics of the argument encoded, but also on other relevant referents in the clause.

6. References

- Aissen, Judith. 2003. "Differential Object Marking: Iconicity vs. Economy." *Natural Language & Linguistic Theory* 21 (3):435-483.
- Bossong, Georg. 1985. Empirische Universalienforschung. Differentielle Objektmarkierung in der neuiranischen Sprachen. Tübingen: Narr.
- Bruil, Martine. 2016. "Differential argument marking in Ecuadorian Siona." LDLT5, SOAS, University of London.
- Clayre, Beatrice. 2005. "Kelabitic languages and the fate of 'focus': evidence from the Kerayan." In *The many faces of Austronesian voice systems: some new empirical studies*, edited by I. Wayan Arka and Malcolm Ross, 17-57. Canberra: Pacific Linguistics.
- Dalrymple, Mary, and Irina Nikolaeva. 2011. *Objects and Information Structure*. Cambridge: Cambridge University Press.
- de Swart, Peter. 2007. "Cross-linguistic Variation in Object Marking." PhD Dissertation, Department of Linguistics, Radboud University.
- Erteschik-Shir, Nomi. 2007. *Information structure: The syntax-discourse interface*. Oxford: Oxford University Press.
- Fauconnier, Stefanie, and Jean-Christophe Verstraete. 2014. "A and O as each other's mirror image? Problems with markedness reversal." *Linguistic Typology* 18 (1):3-49.
- Iemmolo, Giorgio. 2010. "Topicality and differential object marking: Evidence from Romance and beyond." *Studies in Language* 34 (2):239-272.
- Kroeger, Paul R. 1998. "Language classification in Sarawak: a status report." *Sarawak Museum Journal* 53 (74):137-73.
- Kroeger, Paul R. 2005. "Kimaragang." In *The Austronesian Languages of Asia and Madagascar*, edited by Alexander Adelaar and Nikolaus P. Himmelmann, 397-428. Routledge.
- Lambrecht, Knud. 1994. Information Structure and Sentence Form: Topic, Focus, and the Mental Representations of Discourse Referents. Cambridge: Cambridge University Press.
- Lobel, Jason. 2013. "Philippine and North Bornean Languages: Issues in Description, Subgrouping and Reconstruction." PhD Dissertation, University of Hawai'i at Manoa.
- McGregor, William B. 2010. "Optional ergative case marking systems in a typological-semiotic perspective." *Lingua* 120 (7):1610-1636. doi: http://dx.doi.org/10.1016/j.lingua.2009.05.010.

- Naess, Åshild. 2004. "What markedness marks: the markedness problem with direct objects." *Lingua* 114 (9-10):1186-1212.
- Riesberg, Sonja. 2014. Symmetrical voice and linking in western Austronesian languages, Pacific Linguistics,. Berlin: De Gruyter Mouton.
- Tournadre, Nicolas. 1995. *Tibetan ergativity and the trajectory model*. Edited by Y. Nishi, J.A. Matisoff and Y Nagano, *New Horizons in Tibeto-Burman Morphosyntax*. Osaka: National Museum of Ethnology.
- Witzlack-Makarevich, Alena, and Ilja A. Seržant. 2018. "Differential argument marking: Patterns of variation." In *The Diachronic Typology of Differential Argument Marking*, edited by Alena Witzlack-Makarevich and Ilja A. Seržant. Berlin: Language Science Press.