Explorations in Syntactic Government and Subcategorisation

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Predicting case frames across languages: a competing motivations approach to (differential) case marking

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Preview

- The talk addresses the issue of **variable government** discussed in terms of differential case marking and alignment splits
  - discusses prominence-based alignment splits (Differential Case Marking) from a typological and Optimality-Theoretic perspective
  - provides an extended typology of TAM-based alignment split as well as its formalization in terms of functional constraints
  - concludes with a brief discussion of how interaction of different hierarchies yields a predictive typology of alignment splits

Silverstein's Animacy Hierarchy and alignment splits

- **Silverstein's Hierarchy (alias Animacy Hierarchy or Nominal Hierarchy (Dixon 1994); (definiteness dimension disregarded)**

1,2 > 3 > proper name > human > animate >inanimate

- **Silverstein (1976) and Comrie (1981) argue that this hierarchy constraints alignment splits: ACC-marking starts from the top of Animacy Hierarchy, while ERG starts from the bottom.**
  - NB Silverstein's Hierarchy can be decomposed into Animacy Hierarchy and Definiteness Hierarchy (Croft 1990; Dixon 1994; Aissen 2003).

Differential Object Marking: basic facts

- In many languages marking of Os depends on animacy and definiteness: Os higher on Animacy Hierarchy are marked those lower may be not (Bossong 1985, Lazard 1998, Aissen 2003)
  - Turkish: ACC-marking of objects depends on definitenes/specificity
  - Hindi: only animates are (obligatorily) marked

Hindi (Mohanan 1990: 104, de Hoop & Narasimhan 2005):

a. Ilaa-ne bacce-ko uTaayaa
Ila-ERG child-ACC lift-PERF
'Ila lifted a/the child'

*a. *Ilaa-ne *baccaa uTaayaa*
Ila-ERG child.NOM lift-PERF
'Ila lifted a/the child'

Differential Object Marking

- Hindi (Mohanan 1990: 104): Inanimates are marked only if definite:

c. Ilaa-ne haar uTaayaa
Ila-ERG necklace lift-PERF
'Ila lifted a/the necklace'

d. Ilaa-ne haar-ko uTaayaa
Ila-ERG necklace-ACC lift-PERF
'Ila lifted the necklace'

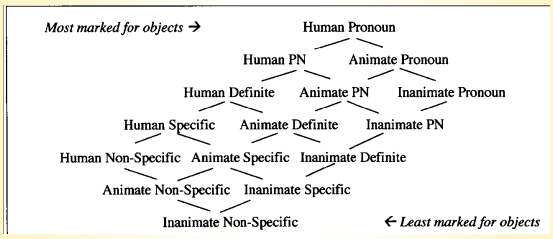
Explanation for DOM

- **Explanation of DOM in terms of markedness (Silverstein 1976; Comrie 1981)**
  - In the canonical transitive construction, O is lower than A in animacy/definiteness, hence deviation form this scenario (e.g. when O is animate/definite) should be (Case-)marked.

OT account of DOM

- **Aissen's (2003) optimality-theoretic account of DOM:**
  - Harmonic Alignment of role and animacy hierarchies
    - Subject Harmonically aligns with nominals higher on the scale (…*Sj/Inan >> *Sj/An…), Object Harmonically aligns with nominals lower on the scale (…*Oj/An >> *Oj/Inan…)
  - Models DOM through Interaction of harmonic alignment hierarchies with economy constraints; cf. a Hindi pattern (simplified)
    - …*Oj/Hum & Øc >> *Case >>….>> *Oj/Inan & Øc…

A two-dimensional hierarchy (Aissen 2003)



Differential Subject Marking: markedness

- Does the markedness explanation carry over to Differential Subject Marking (DSM)?
- Markedness prediction for DSM: inanimate/indefinite As which deviate form the prototype preferably marked (by the ergative case)
  - Cf. Qiang (Lapolla 2003), where A in a transitive causative clause does not take Agentive Case unless inanimate:

Qiang (Lapolla 2003, 125)

MoVu-wu qa da-tuə-Z
wind-AGT 1sg DIR-fall.over-CAUS
'The wind knocked me down'

Differential Subject marking

- More evidence for the markedness pattern in DSM (Silverstein's generalization):
  - More frequently markedness conditions a noun/pronoun split:
    - in many split-ergative languages with an NP-split (Dyirbal and many other Australian languages, some Tibetan and Caucasian), pronouns, which are highest on Animacy Hierarchy, lack ERG case.

DSM: markedness violations

- **In other ergative languages, however, DSM is not related to markedness.**
  - Hindi: DSM due to aspect (see below), and with some (transitive and intransitive) verbs also to volitionality (Mohanan 1990: 94):

a. Vah *cillaaya*
he.NOM shout/scream-PERF
'He screamed'

b. Us-ne cillaaya
he.ERG shout/scream-PERF
'He shouted (deliberately)'

- NB here ERG only on volitional (hence animate nouns) contrary to markedness predictions

Decomposing markedness effects

- De Hoop and Malchukov (2008): Markedness effects in DOM have different origins they are related to two different functions of case marking
- Functions of case marking (Comrie 1981, Kibrik 1985, Mallinson & Blake 1981, Song 2000):
  - differentiating (to distinguish between arguments)
  - indexing semantic roles (or macro-roles – Actor/Undergoer)
- NB markedness is primarily related to Diff: can be understood as local, generalized, or context independent distinguishability

Case marking strategies as constraints

- From an optimality-theoretic perspective, these case marking strategies can be conceived as two general constraints (or rather, constraint families); (De Hoop & Malchukov 2008)
  - Diff: The arguments (A and P) must be distinguishable.
  - Index: Encode semantic roles (A and P).
- In the domain of DOM the effects of both constraints converge, in the domain of DSM it results in the opposite patterns (Malchukov 2008)

Distinguishability

- In Panmari, when P is case marked, ergative case marking of A is dispensable
- Panmari (Chapman & Derbyshire 1991: 164; 271)

a. Dono-a bi-ko'dira-'a-ha ada isai hoariha
Dono-ERG 3SG-pinch-ASP-M DEM.M child other
' Dono pinched the other boy'

b. Kada-amia adani a'oni-ra va-ka-asar-ra
your-mother DEM.PL 2PL-OBJ 3PL-TRZR-cry-IMMED
'Your mothers are crying for you'

Indexing

- In Nez Perce, by contrast, the ergative case is mandatory only when P is case marked as well.
  - P is marked when high-prominent
- Nez Perce (Rude 1985: 88; 86)

a. kawó yasne púutéye piyéepim
then poor.ACC 3TR.whip.PERF brother.ERG
'Then the elder brother whipped the poor one'

b. kícuy hipap'láatana sooyáapoo
gold 3NOM.PL.mine_go.PERF whiteman
'The white men went to mine gold'

- This pattern, is clearly due to Indexing/faithfullness constraints: only in constructions with a full-fledged P (when P is prominent, as in (a)), A is marked

Asymmetries in Differential Case Marking

DOM: marking of prominent (O) and non-prominent (o) Objects

	Diff	Index
O-marking		
o-marking	*	*

DSM: marking of prominent (A) and non-prominent (a) Subjects

	Diff	Index
A-marking	*	
a-marking		*

Thus, interaction of the two constraints explains why DOM is more consistent cross-linguistically as compared to DSM

DOM reconsidered: indexing

- Sometimes Indexing vs. Distinguishability effects can be discerned for DOM as well
- DOM in Central Pomo (Mithun 1991: 521): OBJ marking on human O/S arguments

a. M'u·tu/ Mu·l ?a·hk'úm
3sg.OBJ/3sg.NOM killed
'I killed him/it'

b. Q'alá·w m'u·tu
died he.PAT
'He died'

  - Mithun's conclusion: OBJ marking on O/S is driven by affectedness.
- Since DOM spills over to S, it must be due to Indexing
  - Cf. DSM in Hindi (shout/scream) which equally spills over to S

DOM reconsidered: distinguishability

- In Awtuw (Feldman 1986: 110) ACC is obligatorily used if O equals or is higher than A on Animacy Hierarchy:

a. tey tale-re yaw d-æl-i
3FS woman-ACC pig FA-bite-P
'The pig bit the woman'

- Cf.

b. tey tale yaw d-æl-i
3FS woman pig FA-bite-P
'The woman bit the pig'

NB here DOM is related to Diff, as it is context-dependent.

Case marking strategies and formal types of DCM

- **Formal types of DCM:**
  - asymmetrical: (overt) case (ACC, ERG) alternates with zero
  - symmetrical: alternation of two (overt) cases (ERG ~ OBL, ACC ~ OBL)
- **NB only the former can be related to Differentiating function (and Economy); the latter due to the Indexing strategy.**

Case marking strategies and formal types in DSM

- A symmetrical alternation usually due to indexing
  - Cf. ERG -> OBL alternation in Involuntary Agent Constructions in Lezgian

Lezgian (Haspelmath 1993: 292):

a. Ajal-di *get'e* *xa-na*
child-ERG pot(ABS) break-AOR
'The child broke the pot'

b. Zamiira.di-waj *get'e* *xa-na*
Zamira-AdEl pot(ABS) break-AOR
'Zamira broke the pot (accidentally/involuntarily)'

Case marking strategies and distributional types of DCM

- Distributional types of DCM:
  - 'fluid' DCM: transitivity alternation
    - (cf., e.g., Transitivity alternation in Involuntary Agent Constructions)
  - 'split' DCM: different types of nominals select different cases
    - (cf. differential marking of nouns vs. pronouns in split ergative languages of the Australian type)

Case marking strategies and distributional types of DCM

- The split type (as, e.g. in split ergative Australian languages) is due to Diff & Economy
- the fluid type (cf. Manipuri and other role-dominated languages) is motivated by Indexing
  - Manipuri (Bhat & Ningomba 1997)
    - Only agentive subjects take the "nominative" (*-nə*) marker
    - Only patientive objects take the ACC (*-pu*) marker
- NB semantic contrast depends on availability of paradigmatic opposition

DCM typology and case marking strategies

- Symmetrical DCM of the Fluid type is due Indexing (cf. Involuntory Agent Alternation in Lezgian, or ACC ~ Part alternation in Finnish)
- Asymmetrical DCM of the split type is due to Differentiating strategy (cf. NP-based split intransitivity of the Dyirbal type)
- Asymmetrical fluid type may be either Indexing, but may be also 'global' Differentiating (cf. Nez Perce vs. Panmari)
- Symmetrical split DCM appears rather to correlate with different declensional classes
  - (cf. Spencer's 2006, analysis of two ergative markers used for animates and inanimates in Chukchi).

Correlations between DCM parameters

DCM types and case-marking strategies

	Symmetric	**Asymmetric**
Fluid	**Indexing**	**Indexing / Differentiating**
Split		**Differentiating**

Conclusions

- Differential case marking across languages can be accounted for in terms of two constraints: Indexing vs. Distinguishability
- The effects of the two constraints can be more clearly distinguished for the domain of subject marking than object marking, as they predict two opposite patterns
- There are also formal and distributional characteristics of DCM patterns which correlate which each of these functions (Malchukov 2008; de Hoop & Malchukov 2007)

TAM (tense/aspect/mood) based splits

- Well-known splits due to aspect and tense: perfective aspect and past tense favor ergative patterns, imperfective/present favor accusative pattern.
  - **In Hindi transitive verbs pattern ergatively in perfective aspect, and accusatively in imperfective**

Hindi (Mohanan 1990: 94)
Raam-ne ek bakre-ko bec-aa
Raam-erg one goat-acc sell-pfv.sg.m
'Raam sold a goat'

Raam ek bakre-ko bec-taa hae
Raam.nom one goat-acc sell-ipfv.sg.m be.prs.3sg
'Raam sells a goat'

TAM-splits in Georgian

- In Georgian, the split is rather driven by tense: alignment is accusative in the present ("Series 1"), but ergative in the past ('aorist') ("Series 2").

Georgian (Hewitt 1989)
(a) *Šina.ber.a jagl-s jval-s mi-ø-s-c-em-s*
spinster(NOM) dog-DAT bone-DAT Prev-(it)-it-give-TH-she
'The spinster will give a bone to the dog'(Series 1)

(b) *Šina.ber.a-m jagl-s jval-i mi-ø-s-c-a*
spinster_ERG dog-DAT bone-NOM Prev-(it)-it-give- she.AOR
'The spinster gave a bone to the dog'(Series 2)

TAM splits: continued

- Similarly in many other Indo-Arian, Caucasian, also Mayan (Dixon 1994: 100) present/imperfective correlates with accusative, and past/perfective with ergative pattern.
- Usual explanation (Dixon 1979; De Lancey 1981): imperfectives are A-centred as action is not completed (P not affected), while perfectives focus on P (register change of state of P).
  - Alternative explanation, in the line of Hopper & Thompson (1980) and Dowty (1991), attributes this TAM-split to an inherent higher transitivity value of perfectives (cf. de Hoop & Narasimhan 2005)
  - Yet, the latter approach is more difficult to extend to other patterns of TAM-splits (Malchukov & de Hoop 2011)

Extending the TAM-hierarchy

- **The perfective/imperfective split a part of a larger pattern**
  - Comrie 1976 noted that Perfect is especially apt for ergative (or rather non-accusative) pattern, citing Classical Armenian.
  - cf. Nedjalkov 1979 on degrees of ergativity in Chukchee (agreement system):
    - On Nedjalkov's (1979) approach, "degree of ergativity" in Chukchi is established on the basis of the number of S/P vs. S/A agreement homophonies in verbal paradigms

Thus:

imperfect > aorist > perfect

Extending the TAM-hierarchy II

- **Predictions of the hierarchy:**
  - if aorist is non-accusative, perfect (if available) will be non-accusative as well;
    - cf. DAT-subject in Georgian perfect tenses (Hewitt's "Series 3")

Georgian (Hewitt 1989)
Šina.ber.a-s jagl-is=tvis jval-i mi-ø-u-c-i-a
spinster-DAT dog-GEN=for bone-NOM Prev-(she)-OV-give-PF-it
'The spinster apparently has given a bone to the dog'

Extending the TAM-hierarchy III

- **Lazard (1994/1998) added Future and Present to this pattern, citing the following data in favor of particular ranking.**
  - Future > Present (in Burushaski, in future an accusative pattern, in present ergative)
  - Present > Imperfect (imperfective past) (in Kurdish, future and present are accusative, rest ergative);
- **Thus (cf. Lazard 1998):**

Future> Present > Imperfect > Aorist > Perfect

Further extensions: imperative

- **Imperative > other**
  - in Päri, Sumerian, Kuikúro all tense/aspect/mood forms have an ergative pattern except for imperative; Dixon 1994: 101);

Kuikúro (Franchetto 1990: 414)

a. *Kagá* *egé-la* *kupehé-ni*
fish eat-PNCT 1INC.ERG-PL
'We all eat fish'

b. *E-g-egé-ke* *kagá*
2ABS-DEERG-eat-IMP fish
'Eat fish!'

Ergative imperatives: continued

- **In other ergative languages reanalysis is under way due to a constraint against ergative pattern in imperatives:**
  - *In Shipibo-Conibo, the ergative* A cannot be expressed in IMP; but also the absolutive S is optional (absolutive O is regularly retained):

Shipibo-Conibo (Valenzuela 1997)

a. (*mi-n) piti pe-we
(2-ERG) fish.ABS eat-IMP
'Eat fish!'

b. (Mi-a) kata-we
(2-ABS) go.do-IMP
'(You) go!'

Further extensions: Resultative

- **Other > Resultative (stative perfect):**
  - transitive resultatives usually pattern ergatively even in accusative languages (Nedjalkov (ed.) 1988); cf. *He is gone*; *Door is open*.
  - Languages that allow A-resultatives are exceptional and those typically allow P-resultatives as well:
  - Even (Tungusic; Malchukov 1995)

a. Urke anga-t-ta-n
door open-RES-AOR-3SG
'The door is open' (P-resultative)

b. Bej urke-v anga-t-ta-n
man door-ACC open-RES-AOR-3SG
'The man holds the door open'(A-resultative)

TAM hierarchy

- **A generalized TAM-hierarchy for alignment splits**

Imper > Fut > Pres > Imperf > Aorist > Perfect > Result
Acc/*Erg→ **←Erg/*Acc**

- The hierarchy generates usual predictions:
  - for example, if accusative pattern is found in the future in the predominantly ergative Burushaski, then it will be found in imperative as well (cf. Klaiman 1987 on Burushaski).

Modeling the TAM-hierarchy

- Again can be captured in OT-fashion by interpolating Economy constraints (*Erg, *Acc) into markedness hierarchies (or Faithfullness Hierarchies as in Woolford 2001; Deo & Sharma 2006).

*Imper & A/ERG >> *Fut & A/ERG>> *Pres& A/ERG >>.....>> *Res & A/ERG

*Res & O/ACC >> *Perf & O/ACC >> Aor& O/ACC >> .....>> *Imper & O/ACC

- Or in an Aissen-style fashion:

*A & øc & Res >> *A & øc & Perf >> * A & øc & Aor …

- E.g. the following constraint ranking models a situation when ERG is disallowed only in Imperative (cf. Kuikúro):

… *A& øc& Fut >> *Erg >> *A& øc& Imper

Qualifications and counterexamples

- **Like Animacy Hierarchy, TAM-hierarchy is better viewed as a complex hierarchy subsuming several hierarchies:**
  - Aspect Hierarchy: Imperfective > Perfective > Perfect > Resultative
  - Tense Hierarchy: Future > Present > Past
  - Mood Hierarchy: Imperative > Indicative (non-imperative)
- **Usually, these hierarchies do not conflict and can be unified as above; sometimes however, they do conflict.**

Newari: a problematic case

- In Newari (Givón 1984:155), ERG marking is obligatory in the past, in future it is optional, moreover in present it is prohibited (for certain verb classes);

a. *Wō manu mē ha-yi cō-gu du*
the man song sing-IMPERF be-NOM be
'The man is singing (a song)'

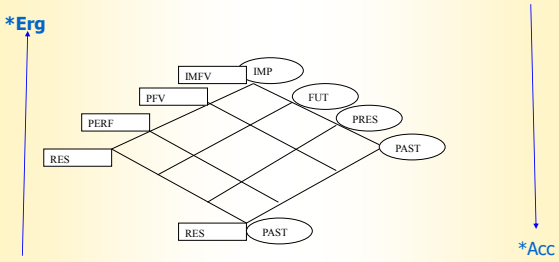
b. *Wō manu(nā) mē ha-yi*
the man(ERG) song sing-IMPERF
'The man will sing (a song)'

  - Givón (1984: 153) hence erroneously: present > future > past

Newari: a possible explanation

- Note that ranking present > future is clearly an effect of the aspect hierarchy, due to the inherent imperfective value of the present which is absent in both past and future.
- This also argues for decomposing a one-dimensional hierarchy into two separate dimensions of aspect vs. tense/mood.

A two-dimensional hiererarchy for TAM-based alignment splits



Mixing Animacy Hierarchy and TAM hierarchy

- **In Burushaski, nominals in the A function get ERG in the past, except for 1,2 p pronouns:**

***A/human & øc & Past >> *A/3rd & øc& Past >> *Erg >> *A/1st, 2nd & øc& Past**

- **In Kuikúro (Dixon 1994: 105), 1st person only in Imperative (and some other 'interactive' moods) is unmarked for Erg.**

… *A/2nd & øc& Imper >> *Erg >> *A/1st & øc& Imper

Interaction of TAM hierarchy with Indexing

- **Indexing/Identify: requires proper encoding of (proto) role properties of As and Ps (de Hoop & Malchukov 2008)**
- **DSM of intransitives in Hindi: ERG marks volitionality only in perfective aspect.**
  - Thus, interaction of Indexing and TAM-hierarchy for Hindi:

***Su [+vol] & øc& Pfv >> *ERG >> *Su [-vol] & øc& Pfv, *Su [+vol] & øc& Imfv.**

- **Similarly, cases of a symmetric patterns involved in TAM-splits are expectedly due to indexing**
  - Cf. a familiar case of ACC/GEN ~ PART alternation in Finnish, usually attributed to "boundedness" (Kiparsky 1998)

Interaction of TAM hierarchy with Distinguishability

- Distinguishability requires that A and P are distinguished
  - On global (context sensitive) Distinguishability; see Donohue 1999; De Swart 2007; De Hoop & Lamers 2005; DeHoop & Malchukov 2007; Malchukov & de Swart 2009)
- In some languages like Finnish DOM is suspended in imperatives:

a. Nainen *näk-i* *poja-n*
woman.NOM see-3SG.PAST boy-ACC
'The woman saw the boy'

b. Hae *poika!*
fetch.IMPER boy.NOM
'Fetch the boy!'

NB this goes against the general tendency for imperatives to favor accusative alignment.

Interaction of TAM hierarchy with (global) Distinguishability

- Lack of ACC on nouns is due to Distinguishability: there is no need to distinguish between arguments, if A is obligatorily missing (cf. Comrie 1975 on "Anti-ergative" pattern in Finnish).

Dist (O) >> *Acc >> *O & øc & Imper… >> *O & øc & Indic

- However, pronominals are exempt from this pattern: they preserve the ACC marking in imperatives.

c. Hae *häne-t*
fetch.IMPER he-ACC
'Fetch him'

… *O/pro & øc & Imper>> Dist (O) >> *Acc >> *O/human & øc & Imper…, *O/pro & øc & Indic

Conclusions

- Alignment splits are constrained by the TAM hierarchy, which is better seen as comprising several subhierarchies
- These splits can be modeled through constraint conjunction in an Aissen-style OT analysis
- TAM-based constraints can be further integrated with other hierarchies/constraints to yield a comprehensive picture of alignments splits
  - Apart from function-based constraints underlying markedness hierarchies, also form-based constraints should be taken into account (e.g., constraints on Output-Output Correspondences, modeling analogical effects in OT, will be needed to explain why the ergative pattern in Georgian has been extended from perfectives (‚aorist') to other ("Series-2") forms based on aorist, including imperatives

Outlook: Leipzig Valency Classes Project

- A similar approach to transitivity splits (valency classes) is adopted in Leipzig Valency Classes Project addressing cross-linguistic clustering of verbs with respect to coding frames and valency alternations
- The project seeks to explain to what extent valency patterns can be predicted on the basis of the 5 variables, conceptualized as competing motivations (cf. Malchukov 2005)
  - Role relations (FaithRole, Indexing)
  - Analogy (Transitive Default, extension of the transitive pattern to other verb types)
  - Uniqueness (Distinguishability)
  - Structural factors (e.g., derived ditransitives (applicatives, causatives) may behave differently from basic ditransitives; Malchukov, Haspelmath, Comrie 2010)
  - Polysemy/inheritance (OOC-type constraints, capturing analogical effects with polysemous verbs)

Basic references

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