

# Leipzig Spring School on Linguistic Diversity

## Competing Motivations and the Typology of Case-Marking

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### TAM hierarchy for ergativity splits

**Andrej Malchukov**

*(MPI EVA, Leipzig & PIONIER Project Case Cross-  
linguistically)*



# 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 bakraa / ek bakre-ko bec-aa*

Raam-erg one goat.nom / one goat-acc sell-pfv.sg.m

'He sold a goat / the goat'

*Raam ek bakraa / ek bakre-ko bec-taa hae*

Raam.nom one goat.nom/ one goat-acc sell-ipfv.sg.m be.prs.3sg

'Raam sells a goat / the 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 ("Series 2").

**Georgian (Hewitt 1989)**

*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)

*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

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- 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).

# Extending the TAM-hierarchy

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- **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 (AGR system):

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 1998) added Future and Present to this pattern, citing the following data in favour 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 (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-DETR-eat-IMP fish  
'Eat fish!'



# Further extensions: Resultative

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- **Other > Resultative (stative perfect):**
  - transitive resultatives usually pattern ergatively even in accusative languages (Nedjalkov 1988);  
cf. *He is gone; Door is open.*

# 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.

\*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 imperfective and future it is optional, moreover in imperfective/present it is sometimes prohibited (for certain verb classes);

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

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

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

## 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/Identify

- **Indexing/Identify: requires proper encoding of (proto) role properties of As and P s (de Hoop & Malchukov 2007)**
- **DSM of intransitives in Hindi: ERG marks volitionality only in perfective aspect.**
- **Thus, interaction of Indexing and TAM-hierarchy:**

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

## Interaction of TAM hierarchy with Distinguishability

- Distinguishability requires that A and P are distinguished
  - On global (context sensitive) Distinguishability; see Donohue 1999; De Swart 2003; De Hoop & Lamers 2005; DeHoop & Malchukov 2006)
- In some languages like Finnish DOM is suspended in imperatives:

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

*Hae*                    *poika*  
fetch.IMPER boy.NOM  
'Fetch the boy/him'



# 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).
- However, pronominals are exempt from this DOM pattern: they preserve the ACC marking.

*Hae häne-t*

**fetch.IMPER he-ACC**

**‘Fetch the boy/him’**

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

# Conclusions

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- Alignment splits are constrained by the TAM hierarchy, which is better seen as comprising several subhierarchies
- These splits can be modeled through constraints conjunction in an Aissens-style OT analysis
- TAM-based constraints can be further integrated with other hierarchies/constraints to yield a comprehensive picture of alignments splits.