Leipzig Spring School on Linguistic Diversity
Competing Motivations and the Typology of Case-Marking

Leipzig, March 26-29, 2008

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**

- Similarly in many other Indo-Aryan, 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

- 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-o-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

- **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

- 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.

  \[ *\text{Imper} \& \ A/\text{ERG} \gg *\text{Fut} \& \ A/\text{ERG} \gg *\text{Pres} \& \ A/\text{ERG} \gg \ldots \gg *\text{Res} \& \ A/\text{ERG} \]
  \[ *\text{Res} \& \ O/\text{ACC} \gg *\text{Perf} \& \ O/\text{ACC} \gg \text{Aor} \& \ O/\text{ACC} \gg \ldots \gg *\text{Imper} \& \ O/\text{ACC} \]

- Or in an Aissen-style fashion:

  \[ *\text{A} \& \ øc \& \text{Res} \gg *\text{A} \& \ øc \& \text{Perf} \gg *\text{A} \& \ øc \& \text{Aor} \ldots \]

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

  \[ \ldots *\text{A} \& \ øc \& \text{Fut} \gg *\text{Erg} \gg *\text{A} \& \ øc \& \text{Imper} \]
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(nā) 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 Ps (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] & φc& Pfv >> *ERG >> *Su[-vol] & φc& Pfv,
*Su[+vol] & & φc& 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.

\[ Hae \quad h\text{ä}ne-t \]
\[ \text{fetch.IMPER he-ACC} \]
‘Fetch the boy/him’

\[ \ldots \quad *O/pro & øc & Imper >> *Acc (Dist) >> *O/human & øc & Imper..., *O/pro & øc & Indic \]
Conclusions

- Alignment splits are constrained by the TAM hierarchy, which is better seen as comprising several subhierarchies.
- These splits can be modeled through 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.