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

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Asymmetries in differential case marking and case marking strategies

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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 definiteness/specificity (Kornfilt 1997 et passim; Kornfilt, Spring School lectures)
  - Hindi: only animates are (obligatorily) marked (Mohanan 1990: 104):
    
    \[ \text{Ilaa-ne \ bacce-kọ \ (*bacca) uTaayaa} \]
    
    Ila-ERG child-ACC (*NOM) lift-PERF
    
    ‘Ila lifted a/the child’
Differential Object Marking

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

  \[ Ilaa-ne \ haar \ uTaayaa \]
  Ila-ERG necklace lift-PERF
  ‘Ila lifted a/the necklace’

  \[ Ilaa-ne \ haar-ko \ uTaayaa \]
  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.

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...)

- Interaction of harmonic alignment hierarchies with economy constraints; cf. a Hindi pattern (simplified)
  - ...*Oj/Hum & Øc >> *Case >>....>> *Oj/Inan & Øc...
Aissen’s OT account of DOM

- Aissen provides evidence for the definiteness and animacy hierarchy constraining DOM (only definiteness dimension shown in the figure below, from 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, 125), where A in a transitive causative clause does not take Agentive Case unless inanimate:
    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, and in some cases volitionality (Mohanan 1990: 94):

  \[\begin{align*}
  &Vah \quad cillaaya \\
  &he.NOM \text{ shout/scream-PERF} \\
  &'He screamed' \\
  &Us-ne cillaaya \\
  &he.ERG \text{ shout/scream-PERF} \\
  &'He shouted (deliberately)' \\
  \end{align*}\]

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

- In Samoan (Mosel & Hovdhaugen 1992: 423), Agents when inanimate may be demoted from ERG to OBL:

  \[ \text{Na tapuni e le matagi le faitotoʻa} \]
  PAST close ERG ART wind ART door
  ‘The wind closed the door’

  \[ \text{Na tapuni i le matagi le faitotoʻa} \]
  PAST close LOC ART wind ART door
  ‘The wind closed the door’

- Also this case incompatible with the markedness predictions
DSM controversy

  Markedness explanation of differential case marking:
    - Differential Case Marking is not a uniform phenomenon
    - DSM effects cannot be always reduced to markedness, but are due to (variation in) argument structure and syntactic patterns
    - Markedness effects in DSM are superficial: a (morphonological) PF phenomenon

- NB but then Silverstein’s generalization is lost. Clearly, markedness plays a role (cf. Aissen), but is not the only factor (cf. Woolford)
Case marking: functions and strategies

  - 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 2006)
  - Diff: The arguments (A and P) must be distinguishable.
  - Index: Encode semantic roles (A and P).
Case marking strategies and asymmetries in DCM patterns

- These functions of case marking can also explain asymmetries between DOM and DSM patterns (De Hoop & Malchukov 2006; cf. De Hoop & Narasimhan 2005, De Swart 2003)
- DOM, marking prominent (animate) O is consistent with both functions:
  - mark [animate] O, to distinguish from A
  - mark [animate] O, as it is more prominent.
Asymmetries in DCM

- **With regard to DSM conflicting predictions:**
  - indexing: only prominent (animate) subjects should be case-marked (by ERG)
  - markedness: only non-prominent (inanimate) subjects should be case-marked

- **This leads to a cross-linguistic variation resulting from a different ranking of Index and Diff constraints**
  - Hindi: only prominent subjects take ERG
    - Index-A >> Econ >> {Index-a, Diff-a, Diff-A}
  - Dyirbal: most prominent subjects (1,2 pronouns) cannot take ERG
    - Diff-a >> Econ >> {Diff-A, Index-A, Index-a}
Asymmetries in DCM patterns: DOM

Marking of prominent (P) and non-prominent (p) Objects

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<tr>
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<th>Diff</th>
<th>Index</th>
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<td>P-marking</td>
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<td>p-marking</td>
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DOM is cross linguistically consistent as the two constraints favor the same pattern with high prominent Ps marked.
Asymmetries in DCM patterns: DSM

Marking of prominent (A) and non-prominent (a) subjects

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This can account for less cross-linguistic consistence of DSM as compared to DOM, as in the former case the two constraints are in conflict.
Animacy effects in DOM: Indexing

- Do we need Index (in addition to Diff) to account for DOM?
  - gives a better explanation for definiteness (unlike animacy, definiteness per se does not help to distinguish arguments)
  - can explain animacy effects in DOM which extend to an S argument
Animacy effects in DOM: Indexing

- DOM in Central Pomo (Mithun 1991: 521): OBJ case only on human Ps:
  M’u·tu/ Mu·l ?a·hkw’úm
  3sg.OBJ/3sg.NOM killed
  ‘I killed him/it’
  - And human patientive subjects:
    Q’alá·w m’u·tu
died he.PAT
  ‘He died’
- Mithun’s conclusion: OBJ marking on O/S is driven by affectedness. NB relation between affectedness and animacy/prominence.
Indexing strategies

- Thus DCM pattern for both subjects and objects in Pomo can be accounted through a single constraint ranking:
  - Index-P >> Econ > Index-p

- The same is true for “role-dominated languages” (Van Valin & Lapolla 1997), where case marking is determined by Indexing:
  - Manipuri (Bhat & Ningomba 1997)
    - Only agentive subjects take the NOM (-nə) marker
    - Only patientive objects take the ACC (-pu) marker
Differentiating strategy and Animacy effects

- Radical differentiating languages
  - In Awtuw (Feldman 1986: 110) ACC is obligatorily used if O equals or is higher than A on Animacy Hierarchy:
    
    tey tale-re yaw d-æl-i
    3FS woman-ACC pig FA-bite-P
    ‘The pig bit the woman’
    - Cf.
    
    tey tale yaw d-æl-i
    3FS woman pig FA-bite-P
    ‘The woman bit the pig’
Differentiating strategy and Animacy effects

- In Fore ERG (Scott 1978: 116) is used if O is higher on Animacy Hierarchy than A:

  Yagaa-wama wá aegúye
  pig-ERG man 3sg.hit.3sg
  ‘The pig hits the man’

  Cf.
  Yagaa wá aegúye
  pig man 3sg.hit.3sg
  ‘The man hits (or kills) the pig’
Differentiating strategy

- Clearly differential case-marking in Awtuw and Fore follows the Diff function:
  - E.g. DOM in Awtuw can be accounted by the following constraint ranking where Diff ranks high while Index ranks low:
    Diff-P >> Econ >> {Diff-p, Index–P, Index-p}.
  - NB in Papuan languages animacy effects are ‘global’ (relative animacy of A and O) and not ‘local’ as in classic cases of the markedness effects in DOM (cf. also De Swart 2006 on global distinguishability)
Conclusions on Animacy effects and case-marking strategies

- Animacy effects more directly related to Differentiating function:
  - may be local (cf. classical cases of DOM)
  - or global (as in Papuan)

- Indexing conditions animacy effects only indirectly, exploiting a correlation with volitionality and affectedness.

- Explanation: from an indexing perspective marking animacy *per se* is redundant.
Definiteness effects in DCM

- DOM: in accordance with the markedness pattern more prominent (definite and/or specific) Ps are preferentially marked (Bossong 1985)

- But do we find definiteness effects in DSM as well?
  - NB. Comrie (1981) reports no cases where only indefinite As appear in the ergative case, as expected under the markedness approach.
Definiteness effects in DSM: markedness

- Cf., however, Ika (Frank 1985), where we find exactly this pattern: new, indefinite As take the ergative case, while given/definite As do not:

  - Ika (Frank 1985: 149)

    *Ik*í *gäža* *kua* *iki*-se *gäža?*

    man eat.MED or *man*-ERG eat.MED

    ‘They eat people or people eat them?’
Focal ergativity

- Similar patterns of “focal ergativity” are attested in a number of other languages where ERG marking appears on emphatic, new or contrastive As:
  - **Newari (Givón 1984: 154)**
    
    \[ \text{Wō manu-nā ihya tajua-na co-na} \]
    
    the man-ERG window break-AUX be –AUX
    
    ‘The man is breaking the window’

    \[ \text{Wō manu ihya tajua-na co-na} \]
    
    the man window break-AUX be –AUX
    
    ‘The man is breaking the window’

Definiteness in DSM: markedness violations

However, the opposite pattern where the ergative case is missing on low-prominent/non-referential As is attested as well.

Semelai (Kruspe 1999:253)

\textit{CO jəl jkOs}
dog.DIR bark.at porcupine.DIR
‘Dogs bark at porcupines’

\textit{JkOs ki-ʃəl la-ʃO}
porcupine.DIR 3SG-bark.at ERG-dog
‘The dogs barks at the porcupine’
Definiteness effects in DCM: conclusions

- Thus, asymmetries between DOM and DSM, in the domain of definiteness/topicality are parallel to those observed in the domain of animacy.

- Preferential ERG marking of referential subjects (strong As) in Semelai can be attributed to Index:
  - Index-A >> Econ >> \{Index-a, Diff-a, Diff-A\}

- Preferential marking of non-topical, new, indefinite subjects (weak as) as in Ika can be attributed to Diff, as given/topical arguments are likely to be construed as As otherwise:
  - Diff-a >> Econ >> \{Diff-A, Index-A, Index-a\}).
Animacy and distinguishability in ditransitives

- Extending a DOM pattern to ditransitives may cause a problem for distinguishability of direct and Indirect Objects (both marked by ACC=DAT), in case when O is animate (cf. Kittilä 2006):

Korku (Nagaraja 1999: 46)
raja ra:ma-ke sita-ke ji-kne-nec
king.NOM Ram-OBJ Sita-OBJ give-PAST-PERS
‘The king gave Sita to Ram’

- **NB here DOM preserved, but Diff(o/io) violated**
Ditransitives II

- Diff wins: DOM suspended in ditransitives:
  
  Awa Pit (Curnow 1997: 72; Kittilä 2006)
  
  santos-ta-na pyan-a-ma-t
  Santos-ACC-TOP hit-PL-COMP-PF
  ‘They beat up Santos’
  
  na-na santos-ta pashu mIla-ta-w
  I-TOP Santos-ACC daughter give-PAST-AGR
  ‘I gave my daughter to Santos’
Ditransitives III

- Diff causes IO demotion:

  Kikuyu (Blansitt 1973:11; Kittilä 2006)

  `mUthuri UriA  mukUrU  nIanengerire  mUtumIa  ihUa`
  man  ?  old  gave  woman  flower
  `The old man gave the woman the flower`

  `mUtumIa  nIanengerire  mwarI  wakegwIkahII`
  woman  gave  daughter-her  to-boy
  `The woman gave her daughter to the boy`

- NB here global distinguishability effects: animacy of O causes OBL marking of IO
Marking of objects (themes) in ditransitives

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- A prediction: given Diff (as well as Economy considerations) if inanimate (low-prominent) objects/themes are unmarked in a monotransitive construction, they will remain unmarked in a ditransitive construction as well.
### Marking of objects (themes) in ditransitives

Marking of animate objects (themes) in ditransitives

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- If Index-P outranks Diff, the DOM pattern is extended to ditransitives (as in Korku),
- under the opposite ranking (Diff >> Index-P), the DOM pattern will be suspended in ditransitives (as in Awa Pit).
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.**
An illustration: 3-way DOM in Finnish

- **DOM1:** O ACC -> NOM, if A is missing (in impersonal, imperative)
  
  - nainen näk-i poja-n
  - woman.NOM see-3SG.PAST boy-ACC
  - ‘The woman saw the boy’
  - hae poika
  - fetch.IMPER boy.NOM
  - ‘Fetch the boy’

- **DOM2:** ACC=GEN -> PART to indicate less affected/indefinite O or imperfective aspect (i.e. related to affectedness)

- **NB** Both types completely independent. As predicted DOM1 triggered by Diff, while DOM2 by Indexing
Case marking strategies and formal types in DSM

- DSM 1 (asymmetrical), can be related to Diff/Economy, hence Animacy Effects possible
- DSM2 is normally related to volitionality/control.
  - Cf. ERG -> OBL alternation in Involuntary Agent Constructions in Lezgian (Haspelmath 1993: 292):

  \[
  \text{Ajal-di \; get’e \; xa-na} \\
  \text{child-ERG \; pot(ABS) \; break-AOR} \\
  \text{‘The child broke the pot’} \\
  \text{Zamiira.di-waj \; get’e \; xa-na} \\
  \text{Zamira-AdEl \; pot(ABS) \; break-AOR} \\
  \text{‘Zamira broke the pot (accidentally/involuntarily)’}
  \]
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)
Case marking strategies and distributional types of DCM II

- 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
- NB semantic contrast depends on availability of paradigmatic opposition
DCM typology and animacy effects

- Symmetrical DCM of the Fluid type is due to Indexing, hence no immediate Animacy Effects
- Asymmetrical DCM of the split type is due to Differentiating, hence frequent Animacy effects
- Asymmetrical fluid may be either Indexing, but may be also ‘global’ Differentiating (cf. global Animacy Effects in Awtuw and Fore)
## Correlations between DCM parameters

### DCM types and case-marking strategies

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<tr>
<td>Fluid</td>
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<td>Indexing / Differentiating</td>
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<tr>
<td>Split</td>
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<td>Differentiating</td>
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Conclusions: animacy effects

- **Animacy Effects on structural case are complex due to:**
  - interaction of Indexing and Differentiating strategies
  - under Indexing strategy Animacy Effects are epiphenomenal (as it is redundant to mark animacy *per se*)
  - under Differentiating strategy Animacy Effects may be obscured by availability of other disambiguating strategies (agreement; word order)
    - in Fore, case marking is dispensable in case the arguments are already disambiguated through person agreement (Foley 1986: 173).
    - In Lakhota (Foley & Van Valin 1977), when A and O are animate only AOV order possible.
Final conclusions

1) Asymmetries in differential case marking with regard to encoding animacy distinctions can be attributed to interaction of two case-marking strategies which conspire in the domain of DOM and are in conflict in the domain of DSM;

2) Definiteness effects in DCM parallel animacy effects and may be provided a similar explanation;

3) Variation in ditransitive constructions can be also explained through interaction of Index and Diff constraints;

4) The same two constraints can account for correlations between different types of animacy effects and different formal and distributional patterns of DCM.