Formal modeling of case variation: a parametric approach

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Aim of the talk:
to explore the explanatory power of the two formal models of case assignment — Minimalist case assignment by lexical/functional heads and Configurational case assignment — with respect to different types of case variation (differential case marking, DCM).
Outline of the talk:
— Contexts of DCM
— Parameters of DCM
— Two formal theories of case
— Modeling of DCM in formal theories of case
1. Contexts of DCM

DOM


Definiteness-conditioned DOM, Hebrew

(1) a. Dan kara *(et) ha-itonim.
   Dan  read OM  DEF-newspapers
   ‘Dan read the newspapers.’

   b. Dan kara (*et) itonim.
   Dan  read (*OM) newspapers
   ‘Dan read <∅> newspapers.’ (Danon 2006: (1))

Animacy-conditioned DOM, Ossetian

(2) a. æž čizž-1 üników.
   I  girl-GEN see.PRS.1SG
   ‘I see a girl.’

   b. æž xæzar üników.
   I  house see.PRS.1SG
   ‘I see a house.’
DSM

Split ergativity, Silverstein 1976; deLancey 1981; Dixon 1994)

Formal nominal split in Dyirbal

<table>
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<tr>
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<th>1\textsuperscript{st} and 2\textsuperscript{nd} person pronouns</th>
<th>3\textsuperscript{rd} person pronouns</th>
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<tr>
<td>A</td>
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<td>-ŋgu</td>
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<td>S</td>
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<td>P</td>
<td>-na</td>
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<td>-Ø</td>
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Aspectual DSM in Hindi

(3) a. \texttt{laṛke-ne} kitāb \hspace{1cm} xarīdi.  
\texttt{boy-ERG} \hspace{1cm} \texttt{book.NOM} \hspace{1cm} \texttt{buy.PF}  
‘The boy bought a book.’

b. \texttt{laṛkā} kitāb xarīdtā hai.  
\texttt{boy.NOM} \hspace{1cm} \texttt{book.NOM} \hspace{1cm} \texttt{buy.IPF} \hspace{1cm} \texttt{AUX.PRS}  
‘The boy is buying a book.’ (Mohanan 1994: 70)
Active/semantic alignment, Mithun 1991; Donohue, Wichman (eds.) 2008
Control / volitionality conditioned DSM, Eastern Pomo

(4) a. há· ba·téc’ki
   I.AGT hit
   ‘I hit myself (deliberately).’

b. wí ba·téc’ki
   I.PAT hit
   ‘I got hit (accidentally).’ (Mithun 1991: 518–524)

DSM in involuntary agent constructions, Agul

(5) a. baw.a nek aťuzu-ne.
   mother.ERG milk.NOM pour-PST
   ‘Mother poured out the milk.’

b. baw.a-f-as nek aťuzu-ne.
   mother-AD-EL milk.NOM pour-PST
   ‘Mother spilled the milk.’ (Ganenkov, Maisak, Merdanova 2009:177)

DSM as a unified phenomenon: de Hoop, de Swart (eds.) 2009
**DSM+DOM**

independent

Hindi: aspectual DSM, animacy-conditioned DOM

(6) a. **rām-ne ravi-ko pīṭaa.**
    Ram-ERG Ravi-ACC beat.PF
    ‘Ram beat Ravi.’

b. **rām ravi-ko pīṭaa hai.**
    Ram.NOM Ravi-ACC beat.IPF AUX.PRS
    ‘Ram is beating Ravi.’

c. **laṛke-ne kitāb xarīdī.**
    boy-ERG book.NOM buy.PF
    ‘The boy bought a book.’

d. **laṛkā kitāb xarīdtā hai.**
    boy.NOM book.NOM buy.IPF AUX.PRS
    ‘The boy is buying a book.’ (Mohanan 1994: 70)
DSM+DOM covariation:

Georgian: aspectually determined DSM+DOM
(7)  a. Aorist (Series II), ergative subject, nominative object

nino-m  gia-s  surateb-i  ačvena.
Nino-ERG  Gia-DAT  picture-NOM  show.AOR
‘Nino showed Gia the picture.’

b. Present (Series I), nominative subject, dative object

nino  gia-s  surateb-s  ačvenebs.
Nino.NOM  Gia-DAT  picture-DAT  show.PRS
‘Nino is showing Gia the picture.’ (Marantz 1991:14)
DSM in embedded clauses: «clausal» and «nominal» case-marking of the subject
Specificity-induced DSM, Turkish (von Heusinger, Kornfilt 2005: (16))
   road-ABL one car pass-NML-3SG-ACC see-PST-1SG
   ‘I saw that a car [non-specific] went by on the road.’
   road-ABL one car-GEN pass-NML-3SG-ACC see-PST-1SG
   ‘I saw that a car [specific] went by on the road.’
DPM
— semantic type of the possessive relation (alienable / inalienable possession, Haiman 1983);
— structural position of the possessor (internal / external possessor, Shibatani 1994; Payne, Barshi (eds.) 1999);
— referential characteristics of the possessor (Pereltsvaig, Lyutikova 2014; Testelets 2014).
Referentiality-based DPM, Yalaku (Ndu / Sepic, Aikhenvald 2015)
(9) a. meda ñene
cassowary child
‘a cassowary child’
b. meda-na ñene
cassowary-GEN child
‘a child of a cassowary’
General scheme of DCM:
— The contexts of case variation correspond to basic grammatical relations: Subject, Object, Possessor.
— S, O and P receive a uniform morphosyntactic encoding and get marked with structural (independent from theta-roles) case.
— S, O and P are default controllers of the predicative and possessive agreement.
— The factors licensing DCM induce a non-canonic case marking (S, O or P receive special case morphology or lose their case marking, and this can influence their ability to control agreement.)
2. Parameters of DCM

- locality of the licensor;
- semantic motivation;
- positional differences;
- correlation with agreement.

**Locality of the licensor**

**Local DCM:** licensed by the properties of the argument itself
- formal feature (noun/pronoun, locutor/non-locutor)
- syntactic category (DP/NP)
- semantic features (animacy, definiteness, referentiality, topicality...)

**Non-local DCM:** licensed by external factors
Non-local DCM
Predicate determined DCM: based on properties of the predicate (possibly in combination with the properties of the argument)
   — aspectual, temporal, modal features (correlate with quantization and referential characteristics of the argument)
   — agentivity and volitionality (correlate with animacy of the argument)

(10) a. Ta ehitas **silla** (kahe aasta-ga).
    he build.PST bridge.GENT two.GEN year.OBL-COMIT
    ‘He built a bridge (in two years).’

b. Ta ehitas **silda** (kaks aastat).
    he build.PST bridge.PART (two.PART year.PART)
    ‘He was building a bridge (for two years).’
Non-local DCM

Coargument determined DCM: licensed by characteristics of a coargument (and their values as compared to the DCM-argument)

Coargument determined DOM in Awtuw (Sepik-Ramu): DO the direct object receives accusative marking only if it overranks the subject in animacy

(11) a. Tey **tale-re** yaw d-æl-i.
   3F.SG woman-ACC pig F.AGT-bite-PAT
   ‘The pig bit the woman.’

b. Tey **tale** yaw d-æl-i.
   3F.SG woman pig F.AGT-bite-PAT
   ‘The woman bit the pig.’ (de Hoop, Malchukov 2007)
Coargument determined DSM in Bagwalal (Andic): the choice of ERG/NOM of the external argument depends on NOM/LEX case marking of the internal argument (which reflects its thematic role)

(12)  
a. **anwar** / *anwar-i-r **ila-ľa** w-alli.  
    Anvar.NOM / *Anvar-OBL-ERG mother-OBL.SUP.LAT M-cry.PST  
    ‘Anvar addressed to his mother.’

b. **anwar-i-r** / *anwar **ila** j-alli.  
    Anvar-OBL-ERG / *Anvar.NOM mother.NOM F-cry.PST  
    ‘Anvar called his mother.’
Semantic motivation
semantically motivated vs purely configuraional case variation
Causee encoding in the causative construction: Balkar and Hungarian

(13) a. kerim **alim-ni / *alim-ge sekir-t-ti.
   Kerim Alim-ACC / Alim-DAT jump-CAUS-PST.3SG
   ‘Kerim made Alim jump.’

   b. kerim *alim-ni / **alim-ge suu ic-ir-di.
   Kerim Alim-ACC / Alim-DAT water drink-CAUS-PST.3SG
   ‘Kerim let Alim drink water.’

(14) a. Az orvos pisiltette a gyereket.
    DET doctor.NOM pee.CAUS.3SG DET child.ACC
    ‘The doctor made the child pee.’

   b. Az orvos pisiltetett a gyerekkel.
    DET doctor.NOM pee.CAUS.3SG DET child.INSTR
    ‘The doctor had the peeing done by the child.’ (Ackerman 1994:537)
Positional distribution

DOM in different structural positions: Sakha

(15)  a. Masha  [VP türgennik salamaat-(y) sie-te].
      Masha  quickly  porridge-(ACC) eat-PST.3SG
      ‘Masha ate porridge quickly.’
    b. Masha  salamaat-(y)  [VP türgennik sie-te].
      Masha  porridge-(ACC)  quickly  eat-PST.3SG
      ‘Masha ate the porridge quickly.’  (Baker&Vinokurova 2010)

DOM in the same structural position: Tatar

(16)  Bajras  kat-kat xat-(m)  ukı-dı.
      Bayras  again-again letter-(ACC)  read-PST
      ‘Bayras read a/the letter again and again.’
DPM in different structural positions: Tatar

(17) a. **bala-lar-nın** kızıklı kitab-1
    child-PL-GEN interesting book-3
    ‘<the> children’s interesting book’

b. kızıklı **bala-lar** kitab-1
    interesting child-PL book-3
    ‘an interesting children book’
Correlation of DCM with agreement
case variation accompanied by agreement variation: DSM in Tatar RCs
(18)  a. Marat Kazan-nan al-ip kajt-kan kitap
Marat Kazan-ABL take-CONV return-PF book
‘the book that Marat brought from Kazan’
b. Marat-niŋ Kazan-nan al-ip kajt-kan kitab-ı
Marat-GEN Kazan-ABL take-CONV return-PF book-3
‘the book that Marat brought from Kazan’
Correlation of DCM with agreement
case variation independent of agreement: object agreement in Amharic

(19) a. Ləmma  \textit{wifja-w-in}  j-aj-al  \\
    Lemma  dog-DEF-ACC  3M.SU-see-AUX.3M.SU  \\
    ||  j-aj-əw-al.  \\
    3M.SU-see-3M.OBJ-AUX.3M.SU

‘Lemma sees the dog.’

b. L-\textit{Aster}  lidʒ-u-n  assajj-əhw-\textit{at}.
    DAT-Aster  baby-DEF-ACC  show-1SG.SU-3F.OBJ

‘I showed the baby to Aster.’
3. Two competing formal theories of case


Case assignment under AGREE:

(20)

```
(20)  
    F 
   / 
  /   
\   \  
  F    
 [uφ:_ ]  
    |   
    V  
    DP  
   [iφ:Val]  
   [ uCase:_ ] 
```
Inherent (lexically governed) case:
— assigned by a lexical head;
— theta-related;
— strictly local;
— often obligatory to realization.

Structural case:
— assigned by a functional head;
— not theta-related;
— not obligatory local;
— can remain non-realized.

Structural cases: $T_{\text{fin}} \rightarrow \text{NOM}$; $v_{\text{tr}} \rightarrow \text{ACC}$; $D_{\text{poss}} \rightarrow \text{GEN}$. 
ERG of the external argument and «regular» DAT (bitransitive and causative constructions)?

2 types of non-structural case (Woolford 2006):

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<tr>
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<th>Non-structural</th>
<th>Structural</th>
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<tbody>
<tr>
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<td>Inherent</td>
<td></td>
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<tr>
<td>Case-assigning head</td>
<td>lexical</td>
<td>functional</td>
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<tr>
<td></td>
<td>functional</td>
<td>functional</td>
</tr>
<tr>
<td>Theta-relatedness</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Regularity</td>
<td>no</td>
<td>yes</td>
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<td></td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>Example</td>
<td>quirky-case in Icelandic</td>
<td>ERG, regular DAT глаголов</td>
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</tbody>
</table>
Configurational case theory

(21) Case realization disjunctive hierarchy
   — lexically governed case
   — “dependent” case (accusative and ergative)
   — unmarked case (environment-sensitive)
   — default case

(22) Case competition

   a. \[
      \text{TP} \quad \text{NP}_1 \quad \ldots \quad \text{NP}_2 \quad \ldots
   \]

   b. \[
      \text{TP} \quad \text{NP}_1 \quad \ldots \quad \text{NP}_2 \quad \ldots
   \]
Configurational model in syntax
Case domains: TP and VP (phase complements)
(23) Sakha (Baker, Vinokurova 2010: 602 (11))
Min Masha-qa kinige-ni bier-di-m.
I.NOM Masha-DAT book-ACC give-PAST-1SG
‘I gave Masha a book.’
(24) a. [vP min [VP Masha-qa [v kinige bier]] v]
     I Masha-DAT book give

     ↓     ↓

     d. [CP [TP min [vP min [VP Masha-qa [v kinige-ni bier]] v] T] C]
     I I Masha-DAT book-ACC give
Agreement in configurational models
Case-discriminating agreement: only those DPs that bear a specific case are visible as goals for a probe looking for a source of valued $\varphi$-features.

(25) Case-marked DPs as controllers of agreement (Bobaljik 2008)
unmarked case $\gg$ dependent case $\gg$ lexical case
4. Evaluating theories wrt DCM
Lexically governed case: same in both theories
Explanational mechanisms for structural cases

Configurational theory: positional alternative
(26)  a. \[ \text{XP} \quad \text{DP}_1 \quad \ldots \quad \text{DP}_2 \quad \ldots \quad \]

\[ \text{b. DP}_1 \quad \text{XP} \quad \ldots \quad \text{DP}_2 \quad \ldots \quad \]

Configurational theory: case marking of a coargument
(27)  a. \[ \text{XP} \quad \text{DP}_1 \quad \ldots \quad \text{DP}_2 \quad \ldots \quad \]

\[ \text{b. XP} \quad \text{DP}_1 \quad \ldots \quad (\text{DP}_2) \quad \ldots \quad \]

Case assignment under AGREE theory:
— different m-realizations of one s-case (cf. realization of acc in Russian);
— parametrization of the Case filter (some classes of nominals remain caseless, i.e. (pseudo)incorporated, Small Nominals);
— external licensors of case variation are easily represented as heads or features of heads (cf. genitive as the case of Q);
— positional alternative (DP in the government domain of different heads).
Locality of the licensor

Local DCM: easy to represent in both theories (nominals of different structure, variable m-realization)

Predicate determined DCM: easily realized in Case assignment under AGREE theory; in Configurational theory, different structural configurations are needed

Coargument determined DCM: easily represented in Configurational theory; problematic in Case assignment under agree theory

(28)  

a. **anwar / *anwar-i-r  ila-љa  w-alli.**
   Anvar.NOM / *Anvar-OBL-ERG  mother-OBL.SUP.LAT  M-cry.PST
   ‘Anvar addressed to his mother.’

b. **anwar-i-r / *anwar  ila  j-alli.**
   Anvar-OBL-ERG / *Anvar.NOM  mother.NOM  F-cry.PST
   ‘Anvar called his mother.’
Semantic motivation
Configurational theory can manage structurally determined, but not semantically determined variation of structural cases

(29)  a. kerim **alim-ni / *alim-ge sekir-t-ti.
      Kerim Alim-ACC / Alim-DAT jump-CAUS-PST.3SG
      ‘Kerim made Alim jump.’

      b. kerim *alim-ni / **alim-ge suu ic-ir-di.
      Kerim Alim-ACC / Alim-DAT water drink-CAUS-PST.3SG
      ‘Kerim let Alim drink water.’

(30)  a. Az orvos pisiltette a gyereket.
      DET doctor.NOM pee.CAUS.3SG DET child.ACC
      ‘The doctor made the child pee.’

      b. Az orvos pisiltetett a gyerekkel.
      DET doctor.NOM pee.CAUS.3SG DET child.INSTR
      ‘The doctor had the peeing done by the child.’ (Ackerman 1994:537)
Positional alternative
Configurational theory can’t deal with DCM in the same structural configuration.
DOM in different structural positions: Sakha
(31) a. Masha [VP türgennik salamaat-(*)y sie-te].
Masha quickly porridge-(*ACC) eat-PST.3SG
‘Masha ate porridge quickly.’

b. Masha salamaat-*(y) [VP türgennik sie-te].
Masha porridge-*(ACC) quickly eat-PST.3SG
‘Masha ate the porridge quickly.’ (Baker&Vinokurova 2010)

DOM in the same structural position: Tatar
(32) Bajras kat-kat xat-(ni) ukı-dı.
Bayras again-again letter-(ACC) read-PST
‘Bayras read a/the letter again and again.’
Correlation of DCM with agreement
Case assignment under AGREE theory predicts one-to-one correlation between case and agreement.

(33) a. Masha-qa **at-tar** ber-ilin-ni-ler || *ber-ilin-ne.
    Masha-DAT horse-PL.NOM give-PASS-PST-3PL || give-PASS-PST.3SG
    ‘Horses were given to Masha.’

b. Masha-qa **at-tar-y** *ber-ilin-ni-ler || ber-ilin-ne.
    Masha-DAT horse-PL-ACC give-PASS-PST-3PL || give-PASS-PST.3SG
    ‘Masha was given horses.’
Correlation of DCM with agreement
Configurational theory is more flexible in representing various mismatches between case and agreement...
... but it fails to delimit agreement with a nominal by only one target.
(34)  a. **En** süüj-büt e-bik-*kin*.
    you win-PTPL AUX-PTPL-2SG
b. **En** süüj-bük-*kün* e-bit.
    you win-PTPL-2SG AUX-PTPL
    you win-PTPL AUX-PTPL
d. *En* süüj-bük-*kün* e-bik-*kin*.
    you win-PTPL-2SG AUX-PTPL-2SG
‘As a result, you won.’ (Baker, Vinokurova, 2010: (76))
Parameters of DCM in formal theories of case

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<th>Case assignment under AGREE theory</th>
<th>Configurational theory</th>
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<td>local DCM predicate-determined DCM</td>
<td>local DCM coargument-determined DCM</td>
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<td>Semantic motivation</td>
<td>easily representable</td>
<td>non-representable outside of lexical government</td>
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<td>Positional alternatives</td>
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<tr>
<td>Correlation with agreement</td>
<td>one-to-one correspondence</td>
<td>various splits between case and agreement</td>
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Lyutikova, Ekaterina, Sergei Tatevosov, Mikhail Ivanov et al. (2006). Event structure and verb semantics in Karachay-Balkar [Struktura sobytiya i semantika glagola v karachaevo-balkarskom yazyke]. Moscow: IMLI RAN.


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