A single-ellipsis analysis of Georgian split DPs

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1 Introduction

- Discontinuous, or split, DPs are potentially problematic for standard rules of syntax as they appear to be an instance of subextraction.

(1) a. continuous DP: \[D_P \text{ Mod } N \] V
b. example of split DP: N V Mod or Mod V N

- This presentation (and future generals paper) examines the structure of split DPs in Georgian, where it interacts with case concord

- Proposal: Georgian split DPs are actually two morphosyntactically autonomous DPs, one of which is elliptical and has a null element parallel to English one

Roadmap:

• Describe the relevant aspects of Georgian grammar
• Introduce the puzzle
• Discuss previous analyses and why they are unlikely to work for Georgian
• Make a proposal and discuss some challenges

2 The puzzle

- In a nutshell: In continuous DPs, some (but not all) modifiers enter into case concord with the head noun; in split DPs, all of them do (and in some unexpected ways). Why?

2.1 Case concord in continuous DPs

- Case concord: modifiers show agreement in case with the head noun
- In Georgian, numerals, pronominal possessor, quantifiers, and some adjectives must enter into case concord in continuous DPs; nominal possessors, demonstratives (?), and the remaining adjectives cannot

- For illustration:

(2) tjem-ma did-ma dzaɣl-ma Giorgi-s sam q’avisper dzaɣl-s ukbina
1SG.GEN-ERG big-ERG dog-ERG Giorgi-GEN three.DAT brown.DAT dog-DAT bit
‘My big dog bit Giorgi’s three brown dogs.’

- A full set of examples:

<table>
<thead>
<tr>
<th>Case concord on modifiers</th>
<th>NOM</th>
<th>ERG</th>
<th>DAT</th>
<th>ACC</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>head noun (dog)</td>
<td>dzaɣl-i</td>
<td>dzaɣl-ma</td>
<td>dzaɣl-s</td>
<td>dzaɣl-s</td>
<td>dzaɣl-s</td>
</tr>
<tr>
<td>adjective (big)</td>
<td>did-i</td>
<td>did-ma</td>
<td>did</td>
<td>did</td>
<td>did</td>
</tr>
<tr>
<td>adjective (small)</td>
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<td>patara</td>
<td>patara</td>
<td>patara</td>
<td>patara</td>
</tr>
<tr>
<td>numeral (big)</td>
<td>sam-i</td>
<td>sam-ma</td>
<td>sam</td>
<td>sam</td>
<td>sam</td>
</tr>
<tr>
<td>numeral (small)</td>
<td>at-i</td>
<td>at-ma</td>
<td>at</td>
<td>at</td>
<td>at</td>
</tr>
<tr>
<td>demonstrative (this)</td>
<td>is</td>
<td>im</td>
<td>im</td>
<td>im</td>
<td>im</td>
</tr>
<tr>
<td>demonstrative (that)</td>
<td>es</td>
<td>am</td>
<td>am</td>
<td>am</td>
<td>am</td>
</tr>
<tr>
<td>quantifier (some)</td>
<td>zog-i</td>
<td>zog-ma</td>
<td>zog</td>
<td>zog</td>
<td>zog</td>
</tr>
<tr>
<td>quantifier (all)</td>
<td>q’vela</td>
<td>q’vela</td>
<td>q’vela</td>
<td>q’vela</td>
<td>q’vela</td>
</tr>
<tr>
<td>quantifier (no)</td>
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<td>arts ert-ma</td>
<td>arts ert</td>
<td>arts ert</td>
<td>arts ert-i</td>
</tr>
<tr>
<td>quantifier (each)</td>
<td>titoeul-i</td>
<td>titoeul-ma</td>
<td>titoeul</td>
<td>titoeul</td>
<td>titoeul</td>
</tr>
<tr>
<td>possessor (my)</td>
<td>tʃem-i</td>
<td>tʃem-ma</td>
<td>tʃem</td>
<td>tʃem</td>
<td>tʃem-i</td>
</tr>
<tr>
<td>possessor (Nino’s)</td>
<td>Ninos</td>
<td>Ninos</td>
<td>Ninos</td>
<td>Ninos</td>
<td>Giorgis</td>
</tr>
</tbody>
</table>

### 2.2 Case concord in split DPs

- Case marking is obligatory (even if it was not obligatory with the modifier adjacent to the noun)

(4) a. Nino gogo-s sam c’ign-s uq’itis
    Nino girl-DAT three book-DAT will.buy
    ‘Nino will buy the girl three books.’

b. Nino gogo-s c’ign-s uq’itis sam-s
    Nino girl-DAT book-DAT will.buy three-DAT
    ‘Nino will buy the girl three books.’

c. *Nino gogo-s c’ign-s uq’itis sam
    Nino girl-DAT book-DAT will.buy three
    ‘Nino will buy the girl three books.’

- even if that modifier does not usually have case concord
Georgian split DPs

(5) a. Maya-s c’ign-i patara bitS-ma uq’ita
   Maya-DAT book-NOM small boy-ERG bought
   ‘The small boy bought Maya a book.’
b. *Maya-s c’ign-i patara-m bitS-ma uq’ita
   Maya-DAT book-NOM small-ERG boy-ERG bought
   ‘The small boy bought Maya a book.’
c. Maya-s c’ign-i bitS-ma uq’ita patara-m
   Maya-DAT book-NOM boy-ERG bought small-ERG
   ‘The small boy bought Maya a book.’
d. ??Maya-s c’ign-i bitS-ma uq’ita patara
   Maya-DAT book-NOM boy-ERG bought small
   ‘The boy bought Maya a small book.’ (note that small has to modify book here,
but the speaker doesn’t like the sentence anyway

- results in case stacking (the ergative in on Nino in (6) and the nominative on Giorgi in (7)
are both obligatory)

(6) Maya-s c’ign-i bitS-ma uq’ita Nino-s-am
   Maya-DAT book-DAT boyERG bought Nino-GEN-ERG
   ‘Nino’s boy bought Maya a book.’

(7) Nino-m gogo-s c’ign-i uq’ita Giorgi-s-i
   Nino-ERG girl-DAT book-NOM bought Giorgi-GEN-NOM
   ‘Nino bought the girl Giorgi’s book.’ (where Giorgi is the author)

- (full)ish paradigm:

(8) Case concord on modifiers in split DPs

<table>
<thead>
<tr>
<th>DS</th>
<th>NOM</th>
<th>ERG</th>
<th>DAT</th>
<th>ACC</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>head noun (dog)</td>
<td>dzaGl-i</td>
<td>dzaGl-ma</td>
<td>dzaGl-s</td>
<td>dzaGl-s</td>
<td>dzaGlis</td>
</tr>
<tr>
<td>adjective</td>
<td>tsitel-i</td>
<td>did-ma</td>
<td>lamaz-s</td>
<td>lamaz-s</td>
<td></td>
</tr>
<tr>
<td>adjective (small)</td>
<td>patara</td>
<td>patara-m</td>
<td>patara-s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>numeral (3)</td>
<td>sam-i</td>
<td>sam-ma</td>
<td>sam-s</td>
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<td></td>
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<tr>
<td>numeral (10)</td>
<td>at-i</td>
<td>at-ma</td>
<td>at-s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>demonstrative (this)</td>
<td>*</td>
<td>*</td>
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<td></td>
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</tr>
<tr>
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<td>q’vela</td>
<td>q’vela-m</td>
<td>q’vela-s</td>
<td></td>
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<tr>
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<td>#</td>
<td>arts ert-ma</td>
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<td>tJems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>possessor (Nino’s)</td>
<td>Giorgi-s-i</td>
<td>Ninos-am/ma</td>
<td>??Giorgis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Some key differences between this table and the forms of modifiers in case concord in (3):
  - Modifiers that did not enter into case concord at all in (3), now do (check out patara
    and the quantifier q’vela)
• Note the different form of the dative. In (3), the dative on modifiers appears to be null case (or no case?), but here in (8), the dative always takes the form -s, which is the form of the dative that nouns usually take.

• Note again the case-stacking on the nominal possessors, which we did not see in (3).

### 2.3 When DPs can split

- One part of the split DP must be in the preverbal (focus) position.

- Note that when it occurs postverbally, the adjective “pretty” unambiguously modifies the immediately preverbal noun (9c-d)

(9) a. Nino lamaz gogo-s c’ign-s uq’itis
   Nino pretty girl-DAT book-ACC will.buy
   ‘Nino will buy the pretty girl a book.’

b. Nino gogo-s lamaz c’ign-s uq’itis
   Nino girl-DAT pretty book-ACC will.buy
   ‘Nino will buy the girl a pretty book.’

c. Nino gogo-s c’ign-s uq’itis lamaz-s
   Nino girl-DAT book-ACC will.buy pretty-DAT
   ‘Nino will buy the girl a pretty book.’

d. Nino c’ign-s gogo-s uq’itis lamaz-s
   Nino book-ACC girl-DAT will.buy pretty-DAT
   ‘Nino will buy the pretty girl a book.’

- Further, if an adverb is in the preverbal position (between the verb and the head noun), a split NP is impossible

(10) a. Nino gogo-s c’ign-s uq’itis lamaz-s
    Nino girl-DAT book-ACC will.buy pretty-DAT
    ‘Nino will buy the girl a pretty book.’

b. Nino gogo-s stsraxad uq’itis c’ign-s lamaz
    Nino girl-DAT quickly will.buy book-ACC pretty
    ‘Nino will quickly buy the girl a pretty book.’

c. *Nino gogo-s c’ign-s stsraxad uq’itis lamaz-s
    Nino girl-DAT book-ACC quickly will.buy pretty-DAT
    ‘Nino will quickly buy the girl a pretty book.’

d. Nino gogo-s stsraxad c’ign-s uq’itis lamaz-s
    Nino girl-DAT quickly book-ACC will.buy pretty-DAT
    ‘Nino will quickly buy the girl a pretty book.’ (judgment: could say it in a poem)

- An ergative subject cannot be in a split NP unless it is in the preverbal position

(11) a. Sam-ma bitf-ma Maya-s c’ign-i uq’ita
    three-ERG boy-ERG Maya-DAT book-NOM bought
‘Three boys bought Maya a book.’

b. *bitf-ma Maya-s c’ign-i uq’ita sam-ma
   boy-ERG Maya-DAT book-NOM bought three-ERG
   ‘Three boys bought Maya a book.’

c. Maya-s c’ign-i bitf-ma uq’ita sam-ma
   Maya-DAT book-NOM boy-ERG bought three-ERG
   ‘Three boys bought Maya a book.’

- this is not just about not being in sentence-initial topic position, as moving the subject into any other non-sentence-initial position is still ungrammatical with a split NP

(12) *Maya-s bitf-ma c’ign-i uq’ita sam-ma
    Maya-DAT boy-ERG book-NOM bought three-ERG
    ‘Three boys bought Maya a book.’

- Note that you can also have splits where one part of the DP is in the preverbal position and one is in the sentence-initial (presumably topic) position. However, there are some restrictions on what can be in the fronted position. These restrictions at first glance all appear to be restrictions on what can be a topic, not on what can be split off, but I won’t go into detail in this presentation.

3 Previous analyses

3.1 Ott 2015: Symmetric merge

- The proposal (for German): two predicatively-related nominal phrases merge, but labeling fails, and one has to move, stranding the other:

(13)

<table>
<thead>
<tr>
<th>DP</th>
<th>NP</th>
</tr>
</thead>
</table>

- Case is assigned by a head via Multiple Agree before movement

- Arguments against this analysis for Georgian:

  1. Ott’s proposal is based on restrictions on what can be split from the DP (only predicates; quantifiers, for instance, cannot be split). Georgian does not exhibit any such restrictions, which suggests that at least the details of this analysis won’t account for the data.

  2. This proposal is also not explanatory. It’s unclear why case concord would be obligatory for all modifiers within the NP, but not the DP.

3.2 Cavar&Fanselow 2000, Nash 2002: Double ellipsis

- The proposal: Split DPs are in fact two morphosyntactically autonomous DPs, each of which undergoes ellipsis:
Georgian split DPs

(14) \[[DP \text{ Mod N}] \ldots [DP \text{ Mod } N]\]

- Arguments against this kind of analysis:

  1. Not explanatory: We need case concord in one of the DPs above to be obligatory for all of its modifiers, but not in the other one. This analysis does not capture that.

  2. Ellipsis under this analysis is a weird process. Ellipsis typically elides topics, but in order to make (14) work, it would have to elide the focus in one of the DPs and the topic in the other.

  3. A subargument of the last one. Could we even have ellipsis that does something like \[[DP \text{ Quant Mod N}] \ldots [DP \text{ Quant Mod } N]\]?

4 Proposal

- The proposal: A modification of Cavar&Fanselow and Nash, in that we still have two autonomous DPs, but only one of them is elliptical, with a null head noun (more on this in a second)

(15) \[[\text{NP}] \ldots [\text{Modifier NULL.NP-case}]\]

- Main evidence comes from nominal ellipsis, the other domain in Georgian where case concord appears to be required on all modifiers:

(16) bitf-i Maya-s did c’ign-s atslevs, magram Giorgi patara-*(s)
    boy-NOM Maya-DAT big.ACC book-ACC brought but Giorgi.NOM small-ACC
    ‘The boy brought Maya a big book, but Giorgi (brought her) a small (one).’

- Assuming that the syntax cannot anticipate the phonological process of ellipsis, it is not possible to posit that case concord obligatorily occurs on all modifiers within a DP that is about to undergo ellipsis

- Recall English nominal ellipsis:

(17) Mary bought a red car and John bought a blue one

- What if Georgian is like English in that it has a required element in nominal ellipsis, but this element is null?

- This null head noun has to bear case, but since it is phonologically null, we perceive the case as appearing on the modifier

- This appears to make correct predictions for split DPs with two modifiers (although needs some formal prosodic work... I have very little background here)

  • If you have two modifiers split off, the final one (linearly) must bear case
• The first one has optional case

• If the first modifier has case, we predict that there are two post-verbal elliptical clauses [Mod NULL-case][Mod NULL-case], and accordingly each modifier should have its own intonational phrase (\(?\))

• If the first modifier does not have case, then we predict there is only one elliptical clause [Mod$_1$ Mod$_2$ NULL-case] and the two modifiers should belong to the same intonational phrase

(18) Maya-s c’ign-i bitʃ-ma uq’ita patara(-m) lamaz-ra
    Maya-DAT book-NOM boy-ERG bought small-ERG pretty-ERG
    ‘The small pretty boy bought Maya a book.’

- We thus have an explanation for the first of the three differences between modifiers in continuous and split DPs (or the modifiers in the table in (3) and the table in (8), respectively)

- The same analysis provides ready explanations for the other two differences we noted:

  • Recall that the dative form for modifiers that do enter into case concord in continuous DPs is null, but in discontinuous DPs it’s -s, which is the form of the dative that nouns take. Rather that stipulating that the dative for modifiers has two different forms, and one surfaces in split DPs, we can say that the modifiers still take null dative in split DPs, but appear to take the -s because that is just the dative case that’s on the null head noun.

  • A similar logic explains why nominal possessors appear to have case stacking in split DPs but not in continuous DPs. No stipulation necessary: the second case in split DPs is just the case that is on the null head noun, the modifier itself only takes one case.

- This works out kind of nice but leaves some unanswered questions:

  • Ok, so we have two autonomous DPs, but how does case get to that second DP in the first place? We can’t have one head assigning the same case to two DPs...

  • Following the logic of the case-stacking and dative above, why don’t we get ‘stacking’ in other cases? If we have a modifier that usually enters into case concord, like a pronominal possessor, why doesn’t it surface as, for example, tfjem-ma-ma in ergative split DPs, since we would predict the second of the two autonomous DPs to be [tfjem-ma NULL-ma]?

5 References