Movement vs. base-generation in Georgian split DPs*

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1 Introduction

- In split DPs (also known as “split topicalisation” or “split scrambling”) material internal to the DP appears between a noun and its modifiers.
- Split DPs are observed in German, Croatian, Polish, Russian, Hungarian, Finnish, Latin, Ancient Greek, Warlpiri, and Japanese, among others (data from Farslow & Cavar 2002):

  a. Interessante Bücher hat sie mir keine aus Indien empfohlen. (German)
     ‘She has not recommended any interesting books from India to me.’
  b. Knjige mi je Marija zanimljive preporedila. (Croatian)
     ‘Mary has recommended interesting books to me.’
  c. Książki mi Marek interesujące sugerował.
     ‘Marek recommended interesting books to me.’

- Standard analysis: movement/subextraction (German (van Riemedikj 1989; Tappe 1989; Diezalng 1992; Knifits 1996; among others), Croatian (Frankis & Progrom 1994), and Russian (Yearley 1993; Selerina 1997)
- Alternative accounts:
  * Hybrid accounts (movement, no single constituent); copy-movement and deletion (Farslow & Cavar 2002 for German and Croatian), local instability (Ott 2014 for German)

Goal:

* To present new data on split DPs from Georgian and to demonstrate that Georgian split DPs are the result of base-generation.
* To derive certain differences between case concord in continuous and split DPs from NP-ellipsis.

2 Georgian basics

- Georgian is the largest member of the Kartvelian language family, spoken predominantly in Georgia by about 3 million native speakers.
- Basic SOV word order is assumed by most accounts (Harris 1981; Skopteas & Farslow 2009, 2010, among others).
- Clause-initial topic position and preverbal focus position (Harris, 1981); follow much of the literature in assuming a structural focus projection (ForP); focused constituents are moved into this position.1
- Georgian is split ergative. I consider three cases: ergative, nominative, dative.
- Georgian exhibits case concord; modifiers in fact are the case features of the head noun. All categories of modifiers in fact are the case concord, including regular adjectives, numerals, quantifiers, and pronominal possessors.

2.1 Noun phrases

(3) a. Nin-o-m sam-i biq’-j-i dainaxa marya-ni.
    Nin-o-NEG three-NOM buy-NOM see-3ST store-in
    ‘Nine saw three boys in the store.’
  b. sam-ja biq’-ja mardaxa marya-ni.
     three-NEG boy-NEG dog-NOM see-3ST store-in
     ‘Three boys saw a dog in the store.’
  c. Mariam-i sam biq’-ja xedaxa marya-ni.
     Mariam-LOC three-NEG buy-NEG see-3ST store-in
     ‘Mariam sees three boys in the store.’

- Two crucial properties:
  * Vowel-final modifiers do not show overt case concord.

2.2 Grammar

Under this analysis of focus, the focused element moves into Spec,ForP and the verb moves to the head of the Focus phrase, yielding the strict adjacency requirements between focus and verb. However, more recent work suggests there might not be a Focus projection or focus movement in Georgian at all. For discussion see Boros & Polinsky 2016.
- Given the interpretation and some tests for focus and topic, I assume the first part is in topic position in Spec,CP and the preverbal part of the split is in preverbal focus position Spec,FoCP.

3.2 Case concord
- Recall the key case concord facts from continuous DPs:
  - All modifiers enter into case concord with the head noun, unless the modifier is vowel-final.
  - The creative and nominative case markers each have the same form when suffixed onto nouns and onto modifiers, but the dative has a dedicated allomorph for nouns [-s] and for modifiers [-e].
  - In split DPs, vowel-final modifiers do participate in case concord.

(9) a. Maya-s elg-'na p'i-ara(-m) bift-[na] uq'-ida.  
   Maya-DAT book-NOM small-BEG buy-BEG bought  
   'The small boy bought Maya a book.'

b. p'i-ara(-m) Maya-s elg-'na bift-[na] uq'-ida.  
   small-BEG Maya-DAT book-NOM buy-BEG bought  
   'The small boy bought Maya a book.'

- In split DPs, the dative is realized as -s on modifiers:

(10) a. Nino gogos san-['s] eilg-'na uq'-ida.  
    Nino girl-DAT three-NOM buy-BEG bought  
    'Nino will buy the girl three books.'

b. san-['s] Nino gogos eilg-'na uq'-ida.  
    three-NOM Nino girl-DAT buy-BEG bought  
    'Nino will buy the girl three books.'

3 Split DPs in Georgian
3.1 Structure
- Georgian allows both pull splits (6a) and inverted splits (6b)

(6) a. Mod ... NP V  
   b. NP ... Mod V

- These constructions are strongly associated with a topic-focus interpretation: first part of the split is topic, preverbal part is focus.

(7) The boys in the class were divided into groups of various sizes and assigned different tasks in preparation for Maya's birthday party. Two boys bought the cake, one boy brought paper plates, and four boys went to buy balloons. Mentioning one more time some boys were assigned to do, Nino...

a. bift-na Maya-s eilg-'na sam-[m] uq'-ida.  
   buy-BEG Maya-DAT book-NOM three-BEG bought  
   'As for boys, (three) boys bought Maya a book.'

b. Nino is very superstitious. She has been noticing that everything today has been happening in sets of three.  
   Three dogs barked at her this morning, three students failed the test, and three plates broke this morning.  
   Her friend Mariam says another thing that happened that involved a set of three...

a. san-['s] Maya-s eilg-'na bift-[m] uq'-ida.  
   three-NOM Maya-DAT book-NOM buy-BEG bought  
   'As for three, (three) boys bought Maya a book.'
4 Analysis

Key parts of the analysis:

- Georgian splits DPs are underlyingly two full DPs.
- NP-ellipsis in one of these DPs yields the case concord facts.
- These two DPs are not connected by movement: one is base-generated in the left periphery, the other appears in focus position.

(12) CP
     /\   \\
    DP1:  \\
     \   /  \\
    DP2:  \\
     \ /  \\
    TP   

- Ellipsis is illustrated for a Mod...NP split in (13) (for inverted split, order for DPs is reversed, i.e. DP with modifier appears in preverbal position).

(13) a. Pre-ellipsis: \[DF [\:1 Mod NP \:2 \:3 | ... [DF NP] \]
    b. Ellipsis: \[\:1 DF [\:2 Mod NP \:3 | ... [DF NP] \]
    c. Output: Mod ... NP

4.1 NP-ellipsis in Georgian

- Key property of NP-ellipsis in Georgian: case falls outside the scope of NP-ellipsis; post-ellipsis it must be realized on the preceding modifier, resulting in sometimes unusual case concord:

(14) [DF p'at'ara hit' -ERG] \rightarrow [DF p'at'ara hit'-ERG] \rightarrow p'at'ara-an

- Do not have to stipulate any special behavior for modifiers or case markers based on whether they occur in continuous or split DPs:

  • The fact in (A) that vowel-final modifiers show overt case concord in split DPs but not continuous DPs is accounted for by the fact that in split DPs vowel-final modifiers simply 'inherit' the case marker from the clipped noun.
  
  • The difference between dative modifiers in continuous and split DPs as summarized in (B) above is accounted for by the fact that modifiers in split DPs take a phonologically null dative marker but inherit the overt -s dative marker from the clipped noun.

- Evidence from more typical instances of NP-ellipsis confirm that NP-ellipsis indeed preserves case:

(15) hit'-Maia-s did cogn-ee adleves, magram Giorgi p'at'ara-[s] (adlevs).
     "The boy will give Maya a big book, but Giorgi [will give her] a small one.'"

- A prediction: strict linear adjacency is required for special case concord properties to arise on a modifier in a split DP.

(16) [DF Mod1; Mod2 NP-case] \rightarrow [DF Mod1; Mod2 NP-case] \rightarrow Mod1; Mod2-case

- This is confirmed:

(17) a. mayal-a Vano komperene-i xe mceren-s clapa-ra.
    tail-DAT Vano conference-at scientist-DAT spoke
    'Vano spoke to the tail scientist at the conference.'
    b. #mayal-a axaligea-r-a Vano komperene-i xe mceren-s clapa-ra.
    tail-DAT young-DAT Vano conference-at scientist-DAT spoke
    'Vano spoke to the tail young scientist at the conference.'

- Two further characteristics of concord in split DPs can be captured by this proposal: number concord (Section 4.2) and concord on possessives (not discussed).

4.2 Number concord

- In continuous DPs, number concord is ungrammatical.

(18) a. Nina go-gos did cigne-th-s uqitis.
    Nina girl-DAT big-DAT book-pl-DAT will buy
    'Nina will buy the girl big books.'
    b. *Nina go-gos did-eb cigne-th-s uqitis.
    Nina girl-DAT big-DAT pl-book-DAT will buy
    'Nina will buy the girl big books.'

- But number concord is available in split DPs.

(19) a. jamas-eb Maia go-gos cigne-th-s uqitis.
    pretty-pl-DAT Maya girl-DAT book-pl-DAT will buy
    'Nina will buy the girl pretty books.'
    b. di-kheba-me Maya-s cigne-th illa-nil-nun uqitis.
    big-pl-DAT Maya-DAT book-nom buy-ING bought
    'The big boys bought Maya a book.'

- This can be easily accounted for under the present proposal, assuming that number is projected high in the DP structure:

(20) CP
     /\   \\
    DP  \\
     \   /  \\
    Num   

- Proposal: that the target of ellipsis optionally includes or excludes the number projection.

(21) [DF Mod NP-num-case] \rightarrow [DF Mod Num-num-case] \rightarrow Mod-case
(22) [DF Mod NP-num-case] \rightarrow [DF Mod Num-num-case] \rightarrow Mod-num-case

- Evidence from typical instances of NP-ellipsis:

(23) hit'-Maia-s did cigne-ee adlevs, magram Giorgi p'at'ara-[s] (adlevs).
     "The boy will give Maya a big book, but Giorgi [will give her] a small (one)."

- This proposal allows us to maintain that Georgian does not allow for number concord in either continuous or split DPs, but captures the illusion of number concord in split DPs by a simple extension of the analysis above.

\*My informants' intuitions about case were very strong in this instance, but they were uncertain as to the kind of concluded context that would need to be constructed in order to make the split DP with two fronted modifiers feel natural.
5 Alternatives

- Two main alternatives: subextraction (Section 5.1) and hybrid/copy-deletion account (Section 5.2)

5.1 Subextraction

- Subextraction is the null hypothesis for split DPs and has been proposed for split DPs in German (van Riemsdijk 1989; Tappe 1989; Dietz 1982, Kniffka 1996; among others), Croatian (Prank & Pregovec 1994), and Russian (Yarkey 1993; Sokirina 1997).

- The split DP is at some level of representation a single DP, the clause-initial part of the split is extracted from the clause-internal DP and moved to topic position.

(24) a. NP1 ... [aP Mod t] → inverted split
b. Mod2 ... [aP t2 NP2] → pull split

- Get case matching between two parts of the split for free: case is assigned to the full DP before subextraction.

5.1.1 Diagnostic 1: Imperfect splits

- Imperfect splits are reported for several languages (Panzewicz and Čevec 2002; Puig Waldmüller 2006; Nolda 2007, Oit 2011, 2012b).

- In these ‘gapped’ or ‘imperfect’ splits, the two parts of the split DP appear to contain overlapping syntactic categories. In other words, it would be impossible to “put the split together” (example from Oit 2014).

   French books have I so far never any read
   I have never read any French books.

b. Ich habe noch nie welche Französischen Bücher gelesen.
   I have so far never any French books
   Intended: I have never read any French books.

- Georgian also allows imperfect splits: In (26) Giorgi’s ‘Giorgi’s’ and mسم ‘his’ overlap.

   Giorgi-FOSS-ERG one-week-FOSS before his-ERG dog-ERG bit small girl-DAT
   ‘As for Giorgi’s (things), a week ago his dog bit a little girl.’

b. "eti kvir-is c’i Giorgi-i ma misma daav-ima uk’bina p’ata ra goga-a.
   one-week-FOSS before Giorgi-FOSS-ERG his-ERG dog-ERG bit small girl-DAT
   Intended: A week ago, Giorgi’s dog bit a little girl.

- If (26a) were the result of subextraction, the split DP would underdivisely have to be as in (26b); since this is impossible, we have reason to believe that Georgian split DPs are not generated through subextraction.

5.1.2 Diagnostic 2: Objects of negated verbs

- Objects of negated verbs are islands for subextraction (Obenauer 1984):

(27) a. Combien, as-tu lu [t. de livre]?
   how-many have-you read t. of books
   How many books have you read?

b. "Combien, l’a pas vendu [t. de livre]?
   how-many he not has sold t. of books
   Intended: ‘How many books has he not sold?’

- If Georgian split DPs are the result of subextraction, then the Georgian equivalent of (27b) should also be ungrammatical; this prediction is not supported by the data:

(28) a. Ramendi m student-i ar caa Giorgi-m?
   how-many-NOG student-NOMNEG not see Giorgi-NOM
   ‘How many students did Giorgi not see? (i.e. How many students passed?)’

b. Ramendi ar caa Giorgi-m m student-i?
   how-many-NOG not see Giorgi-NOM student-NOMNEG
   ‘How many students did Giorgi not see?’

5.1.3 Diagnostic 3: Coordinate structure constraint

- Coordinate Structure Constraint (Ross 1967): in a coordinate structure, (i) no conjunct can be moved, and (ii) no element contained in a conjunct can be moved out of that conjunct.

- Under a subextraction analysis, split DPs in a coordinate structure would be a violation of (ii).

- Georgian split DPs do not obey the Coordinate Structure Constraint.

(29) a. gogo-m orti k’aba magram ati perangi iq’ida.
   girl-ERG one-NOM dress-NOM but ten-NOM shirt-NOM DAYS-POST
   ‘The girl bought one dress but ten shirts.’

b. k’aba gogo-m orti magram ati perangi iq’ida.
   dress-NOM girl-ERG one-NOM but ten-NOM shirt-NOM DAYS-POST
   ‘As for the dress, the girl bought one (dress) but ten shirts.’

- The analysis put forth in Section 4 does predict split DPs to be grammatical across negative islands and coordinate structures: base-generation implicates no movement and therefore no island effects.

5.1.4 Diagnostic 4: Adjective scope reconstruction

- Differences in the relative order of adjectival modifiers with respect to each other can lead to subtle differences in interpretation:

(30) a. the young tall basketball player
b. the tall young basketball player

- Georgian has a similar sensitivity to relative ordering of adjectival modifiers:

(31) a. Vano konperencia-xa malex analagardia merynta-claparka.
   Vano conference-GEN malex analysis work-GEN present-ELAP
   Vano conference-at tall-DAT young-DAT work-GEN DAT spoke
   Vano spoke to the tall young/junior scientist at the conference.

b. Vano konperencia-xa analagardia malex merynta-claparka.
   Vano conference-GEN analagardia analysis work-GEN present-ELAP
   Vano conference-at young-DAT tall-DAT work-GEN DAT spoke
   Vano spoke to the tall young/junior scientist at the conference.

- ‘young’ reading: the scientist is young in age, but may have received her PhD some time ago (possibly a child prodigy);

- ‘junior’ reading: scientist is junior, having received her PhD within the last five years, but not necessarily young in age (a latecomer to academia).

- If split DPs are the outcome of subextraction, we expect a split DP of the form Mod1 ... Mod2 N to be ambiguous between the two following structures:

\[ (1) \quad \text{Mod1 ... Mod2 N} \]

\[ (2) \quad \text{Mod1 ... Mod2 N} \]

One possible objection that has arisen to this ambiguity is that (18b) might not be a possible underlying structure – some evidence suggests that subextraction can target only the leftmost modifier within the following DP. However, this restriction does not apply in Georgian.
- If, however, there is a lack of ambiguity, then we have evidence contra subextraction.

- The test case: no ambiguity \rightarrow evidence against subextraction.

- (32) [a. Mod1 \rightarrow [NP 1; Mod1 NP]

- (33) [a. Mod1 \rightarrow [NP 1; Mod1 NP]

- [a. Mod1 \rightarrow [NP 1; Mod1 NP]

- The test case: no ambiguity \rightarrow evidence against subextraction.

5.2 Copy-movement

- Like the base-generation proposal, the hybrid proposal suggests that split DPs are underlyingly two DPs rather than a single constituent.

- Unlike the base-generation proposal, the hybrid account implicates movement. After the clause-internal DP has been focus-moved into (Spec, FocP) it undergoes further A'-movement into topic position, and the resulting two copies (one in topic position, one in focus position) undergo scattered deletion (as first suggested for Georgian by Nach (2002) following Panzirer & Cavar (2002)).

5.2.1 Diagnostic 5: revisiting imperfect splits

- Copy-movement account requires strict identity between the two DPs, base-generation allows for differences as long as the two DPs are conjoined.

- Copy-movement predicts (35) should not be grammatical, because it would require two independent DPs of the form [DP Giorgi expensive gifts are little; [NP nice expensive gifts]].

- Georgians do not have strict linear ordering among certain modifiers, as discussed in Section 2.2.2; for the modifiers are too large, p'atala are small, and amersikhi are A’amerikhi, only the order in (a) is grammatical. All other permutations of these three modifiers are ungrammatical, as exemplified in (b) and (c) in which amersikhi appears before one or both of the other adjectival modifiers. But in (d) amersikhi is in topicalized position, indicating that Georgian allows any modifier to be topicalized in a split DP, even if it is a clause in a continuous DP it would be structurally lower than the non-topicalized modifiers in the split DP (3b) is therefore a possible underlying structure for a split DP involving two modifiers as discussed above.

5.2.2 Diagnostic 6: Also revisiting coordinate structures

- The Coordinate Structure Constraint: in a coordinate structure, (i) no conjunct can be moved, and (ii) no element contained in a conjunct can be moved out of that conjunct.

- A copy-movement-type account would predict that DPs cannot be split across coordinate structure in Georgian as a violation of (i).

- (36) a. gogo-m erei k'aha magram ati perangi iqilda.

- 'The girl bought one dress but ten shirts.'

- b. *ati perangi gogo-m erei k'aha magram iqilda.

- 'The girl bought one dress but ten shirts.'

- c. k'aha gogo m erei magram ati perangi iqilda.

- 'As for the dress, the girl bought one (dress) but ten shirts.'

- c. k'aha gogo m erei magram ati perangi iqilda.

- 'As for the dress, the girl bought one (dress) but ten shirts.'

- In a base-generation account of split DPs, no movement connects the two DPs that underly the split DP construction, and so the availability of (36c) is predicted.

6 Conclusion

Outcomes:

1. Georgian split DPs are underlyingly two independent DPs.

2. One of these DPs undergoes NP-ellipsis, which preserves case and optionally number - this results in the illusion that modifiers in split DPs participate in concord differently than modifiers in continuous DPs.

3. The two DPs are not connected by movement, as evidenced by various movement diagnostics such as island violations and imperfect splits. Rather, one DP is base-generated in topic position.

- Outstanding question: we know there is a DP in topic position and we know how cases behave within the DP, but we don't know how case is assigned to DP in the first place.

- Georgian split DPs are an additional example of how case-connectivity is not a fully reliable indicator of movement and motivate a further investigation into what might fuel case-matching effects in the absence of movement.

- One possibility for case-matching: predicative evidence that predicative can also transmit case comes from Icelandic ECIL-type constructions.

- (37) a. *graf tel Maris (pera) sitting.

- 'I believe Mary, ACC (be, IN) genieus, ACC

- I believe Mary to be a genius.'

- b. *Maris er talm (pera) sitting.

- 'Mary, NOM is believed [be] genieus.'

- Mary is believed to be a genius.'

- Predication as licensing additional arguments has been implemented in analyses of the multiple subject constructions in Japanese (Fukuda 1991, Nami 1997, Hasegawa 1993) and for English topics (Den Dikken 2006).
7 Selected references


Barrie, Lena & Maria Polinsky. 2016. *Word order, process, information structure*. What can we learn from Georgian focal Paper presented at Word Order Variation at the Interfaces, Ben-Gurion University.


