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Valency Increasing Derivations in Georgian: Theoretical Approaches

Two regular valency increasing verbal derivations in the Kartvelian languages are 1) the **benefactive**, traditionally called **version** (i.e. the benefactive derivation which adds a non-core indirect object), or **locative**, and 2) **causative**.

Theoretical approaches interpret facts of different languages within frameworks, or research projects, that try to characterize what a grammar of a human language can or cannot be. To achieve that goal, theoretical frameworks employ more or less formal models.

1. Akaki Shanidze

(Šaniʒe 1973 *kartuli gramaṭiḳis sapuʒvlebi*. I 'Foundations of Georgian Grammar'):

inflectional categories   vs.   **derivational** categories
(*uɣlebis ḳaṭegoriebi*)   (*çarmokmnis ḳaṭegoriebi*)

The latter include **version** (*kceva*), **transitivity** (*gardamavloba*), **contact** (*ḳonṭakṭi*), and **locative derivation** (*siṭuacia*).

The traditional notion of **person** (*ṗiri*) is more than a mere morphological category — it denotes any participant grammatically encoded in the verb via derivation and/or agreement. Implicitly, Šaniʒe's theory of derivation involves three grammatical levels:

- syntax: verb and its nominal arguments morphologically indexed in the verb via 'persons' (subject, direct object, indirect object)
- verbal morphology (persons, markers of derivation)
- semantic relationships between pairs of arguments

Any valency increasing derivation (adding a non-core participant), according to Šaniʒe, is motivated by a semantic relationship.

The verbs in Georgian have up to three (rarely four) persons that correspond to the nominals – subject and objects. The marked values of version (viz. object version) and contact (viz. indirect contact) involve new, additional persons like Causative Agent (*xelmʒɣvaneli*). With version, Šaniʒe does not use terms like recipient (*mimɣebi*) or possessor (*mplobeli*), speaking instead of the semantic relationships: **benefactivity** (*danišnuleba*) and **possession** (*ḳutvnileba*) respectively.

Version has three values:

- neutral (*saarviso*), e.g.   çer-s 'He/She writes (it)',
- subject-oriented, or reflexive (*sataviso*), e.g.   **i**-çer-s 'He/She writes (it) for himself/herself'
- object-oriented, (*sasxviso*), with transitive verbs only, e.g.
                                       u-çer-s 'He/She writes (it) for him/her'

With a benefactive:

(1)   a.   v-ḳerav   ḳaba-s
            1SG.SB-sew   dress-DAT
            'I'm sewing a dress.' (neutral)

b. v-**u**-ḳerav   ḳaba-s   bavšv-s
   1SG.SB-**OV3**-sew   dress-DAT   child-DAT
   'I'm sewing a dress for the child.' (object-oriented)

c. v-**i**-ḳerav   ḳaba-s
   1SG.SB-**SV**-sew   dress-DAT
   'I'm sewing a dress for myself.' (subject-oriented)

With a possessor:

(2) a. ḳoḳa   ga-ṭq̇d-a
       jar   PR-break-3SG.SB.AOR
       'The jar broke.'

    b. bavšv-s   ḳoḳa   ga-**u**-ṭq̇d-a
       child-DAT   jar   PR-**OV3**-break-3SG.SB.AOR
       'The child's jar broke.'

Šaniӡe distinguished version from what he called **situation** (*siṭuacia*), a locative derivation which other authors regard as a value of the version/applicative (**local**, or **superessive** version, Vogt 1971: 124; Hewitt 1995: 184, a.o.):

(3) a. mama   çer-s   misamart-s
       father.NOM   write-3SG.PRS   address-DAT
       'Father is writing the address.'

    b. mama   **a**-çer-s   misamart-s   ḳonverṭ-s
       father.NOM **SV**-write-3SG.PRS   address-DAT   envelope-DAT
       'Father is writing the address on the envelope.'

"The term c o n t a c t means the form of the transitive verb which denotes whether the subject person affects the direct object directly or through (mediated by) another person" (357–358). The category has two values:

- direct (*ušualo*), e.g.   çer-s 'He/She writes (it)', and
- indirect (*šualobiti*), e.g.   a-çer-**ineb**-s 'He/She makes/lets/allows him/her (to) write (it)'

Three participants: the **causer** (*xelmӡɣvaneli*), the **causee** (*šemsrulebeli*), and the **object** (*sam-izno*).

(3)   a. bavšv-i   çer-s   çeril-s
           child-NOM   write-3SG.PRS   letter-DAT
           'The child writes a letter.'

        b. mama   a-çer-**ineb**-s   bavšv-s   çeril-s
           father.nom   TR-write-**CAUS**-3SG.PRS   child-DAT   letter-dat
           'Father makes/lets/allows the child to write a letter.'

Šaniӡe distinguished contact from **transitivity** (*gardamavloba*), although he emphasized their similarity and the fact that they are formally indistinguished in many languages:

(4)   ṭiri-s 'cries' (intransitive) → **a-ṭir-eb**-s 'makes cry' (transitive) → a-ṭir-eb-**ineb**-s 'causes to make cry' (transitive, indirect contact)

Šaniӡe's analysis of derivations was fine-grained, but he did not distinguish clearly between the syntactic derivation, i.e. addition of a participant ("person"), and semantic relationships like "possession" or "position". His notional system is unable to distinguish between inherent and derived properties, i.e. "transitivity" may mean (i) the inherent or (ii) derived property of a verb and (iii) a derivation. In spite of that he considers pairs or triples, as in (4), of constructions, he employs no formal system of derivation which could produce one construction from another, or them both from an abstract underlying representation.

2. St.-Petersburg's school approach to derivation

(Gecadze, Nedjalkov, Xolodovič 1969)
A typologically oriented theoretical approach which distinguishes between semantics (structure of situations that involves predicates and roles) and syntax. The syntactic structure is represented in terms of grammatical relations (subject, direct object, indirect objects).
Causative is defined as a verb which refers to a **causative situation**, that is to a causal relation between two events, one of which is believed by the speaker to be caused by another (i.e. a father causes a child to write a letter, as in (3b)). The causative agent of the causing event is expressed as the subject in the syntactic **causative construction**, whereas the subject of the non-causative counterpart may be syntactically demoted, i.e. expressed by a nominal that is structurally less prominent than the subject.
The approach achieved clarity and precision in the grammatical classification of constructions, i.e. it was able to distinguish the genuine causatives from the homophonous comitative (5) or applicative (6–7) derivations (op. cit. 136):

(5)   ceķv-av-a 'dances'   →   **a**-ceķv-**eb**-s 'dances with him/her'
(6)   brǫqin-av-s 'glitters'   →   **a**-brǫqin-**eb**-s 'illuminates, shines over it/him/her'
(7)   ṭ̣qu-i-s 'lies'   →   **a**-ṭ̣qu-**eb**-s 'deceives him/her'

Moreover, the precise definition of the causative as a pair consisting of a semantic and a syntactic object made it possible for Gecadze, Nedjalkov & Xolodovič to outline the main meanings of the causative construction in the strict sense. Like causatives in many other languages, Georgian causatives show regular polysemy:

Distant causation, mainly from transitive and medial verbs:

(8)   çer-s 'he/she writes (it)' → a-çer-**ineb**-s 'he/she makes (**factitive**)/allows (**permissive**)/helps (**assistive**) him/her to write(it)'
(9)   muša-ob-s 'he/she works' → a-mušav-**eb**-s 'he/she makes (**factitive**)/allows (**permissive**)/helps (**assistive**) him/her to work'

Contact causation, mainly from intransitives, the factitive meaning only:

(10)   i-cin-i-s 'he/she laughs' → **a**-cin-**eb**-s 'he/she makes him/her laugh'
(11)   xar-ob-s 'he/she enjoys' → **a**-xar-**eb**-s 'he/she makes him/her rejoice'

St.-Petersburg school's model of derivations has however a restricted theoretical potential:
- it cannot be extended somewhere beyond the correspondence of semantic and syntactic arguments, i. e. regular or irregular phenomena of derivation and voice;
- neither it presents the verbal derivation as a part of general theoretical model of human languages' syntax and morphology.

3. Relational Grammar

Verbal derivation, among other facts of Georgian grammar, was approached in (Harris 1981) within the framework of **Relational Grammar** (RG; Perlmutter & Postal 1977 a.o.). RG assumes that the grammar of human languages is best represented by rules operating on grammatical relations. The grammatical relations (subject, object, indirect object…) are the best notional basis for stating universal generalizations across languages. The structure of a clause is a set of grammatical relations obtaining between the elements of a clause. For example, the passive voice can be best captured by a universal rule of Passivization that promotes direct objects to subjecthood, rather than e.g., in terms of constituent structure, a transformation which moves an NP that is a sister of a verb to a structurally higher position. The three major grammatical relations, **subject**, **direct object** and **indirect object**, are called **terms**.

(Harris 1981): a part of the grammar of Georgian is the rule of **Causative Clause Union** under which the complement clause and the matrix clause fuse to form a single clause. Two levels of representation are introduced, **initial** and **final**.

- The initial subject of the embedded intransitive verb becomes the direct object of the matrix verb;
- the initial subject of the embedded transitive becomes the indirect object of the matrix verb;
- the initial direct object becomes the direct object of the matrix verb, and
- the indirect object of the embedded transitive verb becomes the emeritus dependent of the united clause.

(12) a. mama-m   mi-s-c-a   vard-eb-i   deda-s
       Father-ERG   PRV-3SG.IO-give-3SG.AOR   rose-PL-NOM   mother-DAT
       'Father gave roses to Mother.'

    b. mama-m   mi-m-**a**-cem-**in**-a   vard-eb-i   ded-istvis
       Father-ERG   PRV-1SG.O-**CAUS**-give-**CAUS**-3SG.AOR   rose-PL-NOM   mother-for
       'Father had me give roses to Mother.' (69)

(13) **Initial level**:   Subject (P1) Subject (P2)   Direct Object (P2) Indirect Object (P2)
     Final (derived) level: Subject   Indirect Object Direct Object   Retired
                           mama-m   me   vard-eb-i   ded-istvis
                           Father-ERG   I   rose-PL-NOM   mother-for

In (Harris 1981), conclusive evidence was brought that the three terms at both levels display consistent syntactic characteristics across different constructions. E.g., initial terms have the same selection characteristics, no matter what final terms they make. In (14–15), çola 'lie' requires the initial subject to be animate:

(14) a. gela   çev-s   ṭaxṭ-ze
       Gela.NOM   lie-3SG.PRS   couch-on
       'Gela is lying on the couch.'

    b. *çign-i   çev-s   ṭaxṭ-ze
       book-NOM   lie-3SG.PRS   couch-on
       'The book is lying on the couch.'

(15) a. mama   gela-s   a-çv-en-s   ṭaxṭ-ze
       Father   Gela-DAT   CAUS-lie-CAUS-3SG.PRS   couch-on
       'Father makes Gela lie on the couch.'

b. *mama   çign-s   a-çv-en-s   ṭaxṭ-ze
   Father book-DAT   CAUS-lie-CAUS-3SG.PRS   couch-on
   'Father lays the book on the couch.'

The reflexive pronoun *tavisi tavi* 'self' cannot have a distant antecedent, but only one belonging to the same clause, which confirms the Clause Union analysis of the causative (77):

(16) ekim-ma   vano   a-laṗaraḳ-a   tavistav-ze
     doctor-ERG Vano.NOM   CAUS-speak-3SG.PRS   self-about
     'The doctor$_i$ got Vano$_j$ to talk about himself$_{i,j}$.'

The derived term dependents are marked with whatever case is appropriate to the derived term relation it holds. The Causative Clause Union hypothesis stated in terms of grammatical relations easily captures the cross-language regularities of causative constructions.
Version (*kceva*) is a syntactic rule that creates a non-core indirect object. **Benefactive Advancement** rule promotes a benefactive non-term nominal to indirect-objecthood.

(17) gela-m   še-g-i-ḳer-a   axal-i   šarval-i   šen
     Gela-ERG PRV-2SG.O-V-sew-3SG.PRS   new-NOM   trousers-NOM you(sg.)
     'Gela made new trousers for you.'

(18) **Initial level**:   Subject   Direct Object   Non-Term Benefactive
     Final (derived) level: Subject   Direct Object   Indirect Object
                                gela-m   šarval-i   šen

Universal generalizations involved to accout for the verbal derivation in Georgian and elsewhere:

(19) **Stratal Uniqueness Law**: at each stage of derivation no more than one nominal may bear a given term relation (the "chess" principle that assumes that more than one element cannot occupy the same structural position, adopted also in the Generative Grammar, St.-Petersburg school and other theories).

(20) **Chômeur Law**: if a nominal assumes the term relation borne by another nominal, that another nominal becomes a **chômeur**, that is, a nominal which lacks the privileged grammatical characteristics like triggering verbal agreement, the ability to antecede reflexive pronouns etc.
Failure of the framework: for many languages, the adequacy of initial vs. final level distinction cannot be substantiated. Even in Georgian, e.g. ellipsis phenomena cannot be fully captured in the terms of the RG model.
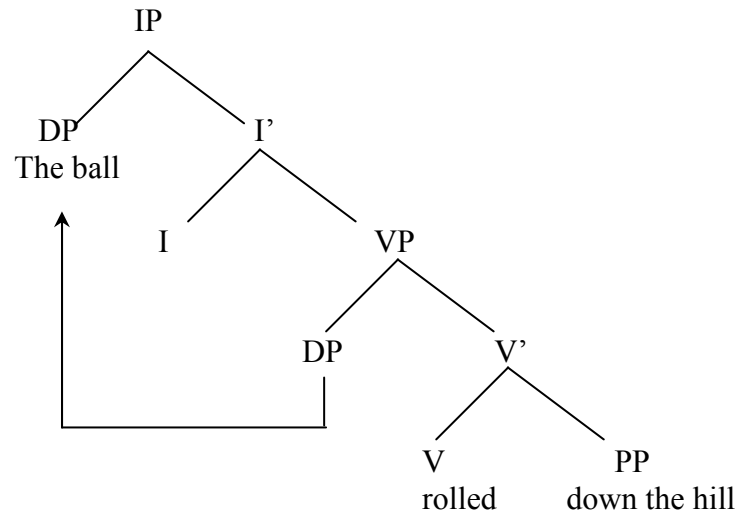
4. The vP structure

Constituent structure employed in Generative Grammar assumes consistent binary branching: any structurally complex element consists of exactly two immediate constituents (daughters) which can in their turn have complex structure.
In the traditional approach to the structure of VP (verb phrase), many regularities between transitive and intransitive counterparts cannot be captured.

(21) a. We rolled the ball down the hill
      b. The ball rolled down the hill

(22) a. He broke the vase into pieces
      b. The vase broke into pieces

(23) a. The ball/the rock/!the theory/!sincerity rolled down the hill
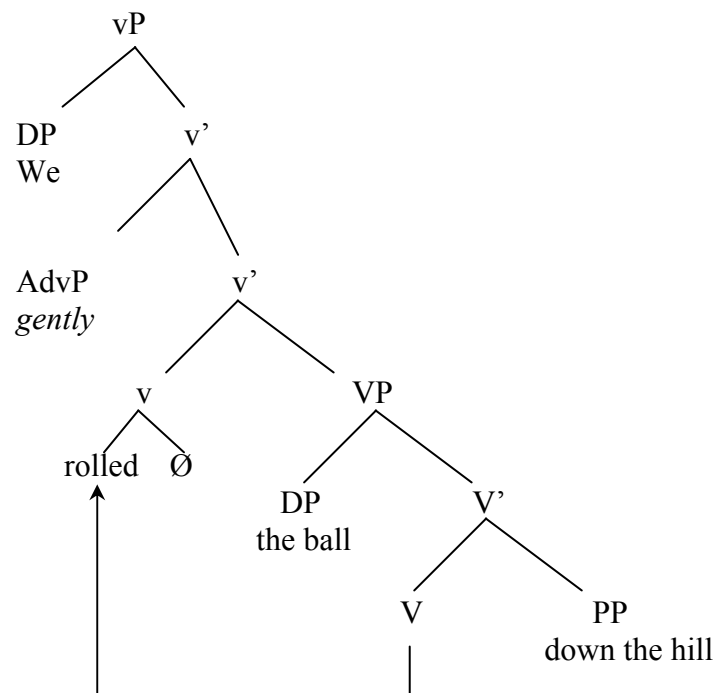   b. John rolled the ball/the rock/!the theory/!sincerity down the hill

(24)

```
                    IP
                 ／    ＼
              DP         I'
          The ball     ／  ＼
                      I       VP
                           ／    ＼
                        DP         V'
                                ／    ＼
                              V        PP
                           rolled   down the hill
```

(25)

```
                    vP
                 ／    ＼
              DP         v'
              We      ／    ＼
                    v          VP
                 ／  ＼      ／    ＼
             rolled  Ø     DP        V'
                         the ball  ／    ＼
                                 V        PP
                                      down the hill
```
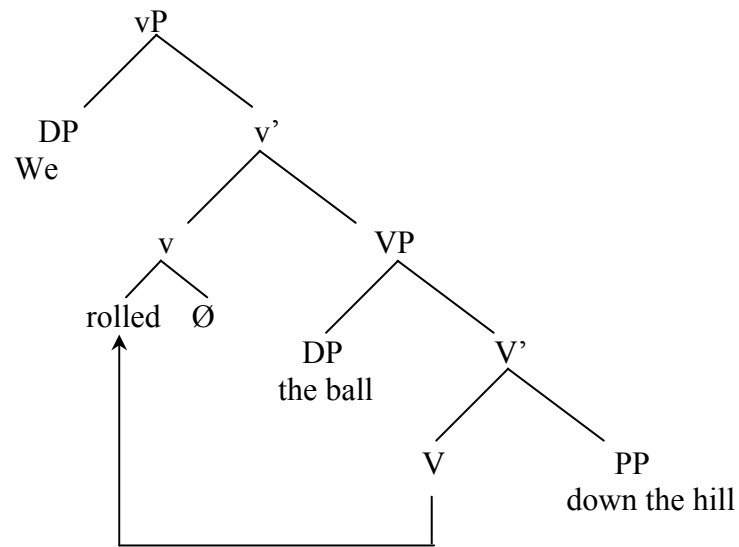
(26)   a. We *gently* rolled the ball down the hill
        b. We rolled the ball *gently* down the hill

(27)

```
                    vP
                 ／    ＼
              DP         v'
              We      ／    ＼
                    AdvP      v'
                   *gently* ／    ＼
                          v          VP
                       ／  ＼      ／    ＼
                   rolled  Ø     DP        V'
                               the ball  ／    ＼
                                       V        PP
                                            down the hill
```

(28)   a. He had *deliberately* rolled the ball *gently* down the hill
   b. *He had *gently* rolled the ball *deliberately* down the hill

(29) Georgian

čven	(??nel-nela)	urem-i	kvevit	(nel-nela)	ča-v-**a**-gor-e-t
we	**gently**	cart-NOM	downward	**gently**	PRV-1SG.SB-**CAUS**-roll-AOR-1PL

'We gently rolled the cart downward.' (both meanings)

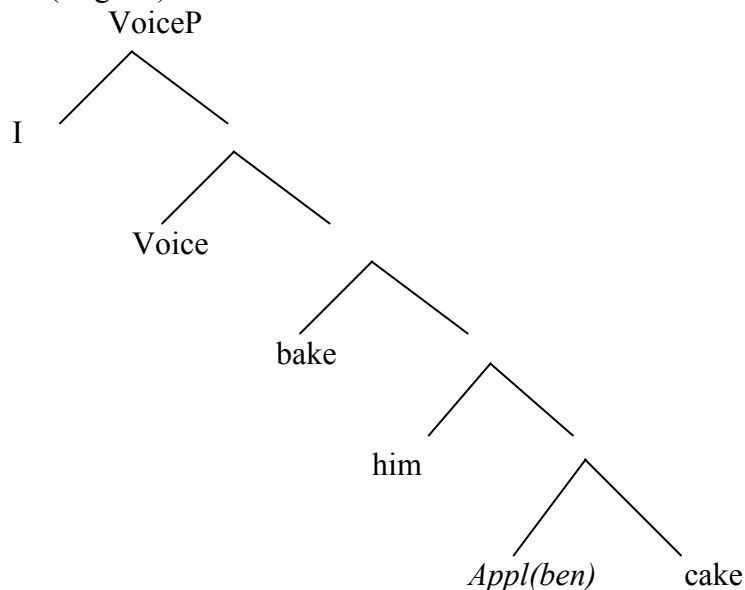## 5. Pylkkänen 2008: Introducing Arguments

- What grammatical elements are responsible for allowing non-core arguments to appear in argument structures?
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high vs. **low** applicatives

(30) High applicative (Chaga, Bantu)
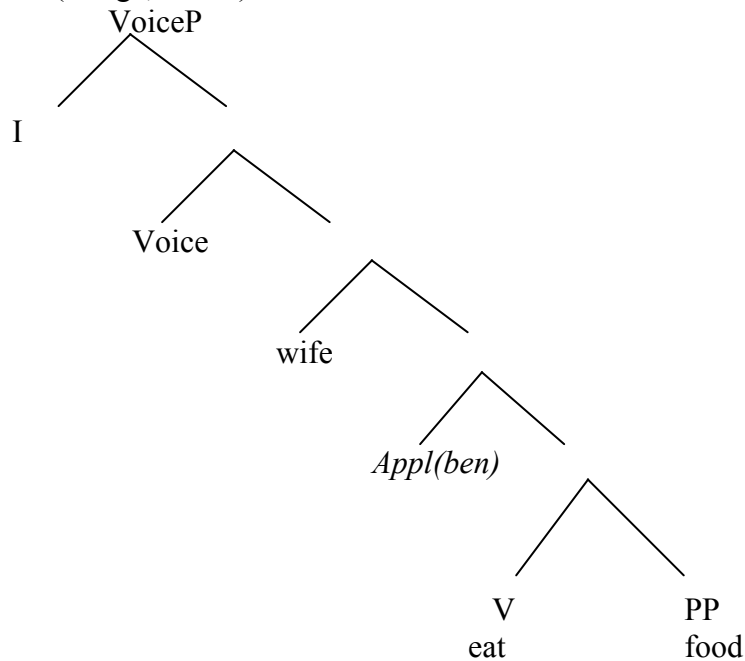
(31) Low applicative (English)

With Georgian applicatives, like with "core" trivalent verbs, the direct object may be higher: Semantic binding requires syntactic binding (coindexing + c-command):

(32)   elene-m   arc   ert   stumar-s$_i$ ar
          Elene-ERG   not   one   guest-DAT   not

          mi-s-c-a//da-**u**-brun-a   tavis-i$_i$ gasaɣeb-i
          PRV-3SG.O-give-3SG.AOR//PRV-**BEN**-return-3SG.AOR   self-NOM   key-NOM
          'Elene did'n give (back) his/her$_i$ key to any guest$_i$.'

(33)   elene-m   arc   ert-i   txzuleba   ar   da-**u**-brun-a//   mi-s-c-a
          Elene-ERG   not   one-NOM work   not   PRV-3SG.O.**BEN** return-AOR.3SG//give-AOR
          tavis   avtor-s
          SELF.PSS   author-DAT
          'Elene did not give (back) any work$_i$ to its$_i$ author.'

Variables cannot be bound from within an adjunct:

(34)   gela   ar   saubrob-s   arc   ert   avtor-tan$_i$ tavis$_{*i/j}$ cign-ze
          gela   not   speak-3SG.PRS not   one-to   author-to his   book-about
          'Gela$_i$ does not speak with any author$_j$ about his$_{i/*j}$ book.'

(Pylkkänen 2008): with low applicatives, the direct object cannot be provided with a depictive nominal:

(35)   John washed the shirt clean.
(36)   John washed him the shirt.
(37)   *John washed him the shirt clean.

(Bondarenko 2015) applies this test to detect high applicatives in Georgian:

(38)   man   me   namcxvar-i damçvar-i   gamo-m-i-cxo
          he.ERG I   cake-NOM   burnt-NOM   PRV-1SG.IO-BEN-bake
          '(S)he baked me a cake that burnt.' (lit.: "(S)he baked me a cake burnt").

However, there seem to be no depictives in Georgian, so they are not indicative in uncovering the hierarchy. Instead, there is a free right dislocation of any modifier:

(39)   a. iman   me pul-i   ukanasknel-ma mo-m-c-a
             he/she.**ERG** I   money-NOM last-**ERG**   PRV-1SG.O-give-AOR.3SG
          '(S)he was the last one to give me money.'

        b. iman   me   pul-i   ukanasknel-s   mo-m-c-a
             he/she.ERG I(**DAT**) money-**NOM** last-**DAT**   PRV-1SG.O-give-AOR.3SG
          'I was the last person (s)he gave money to.'

     c. iman   me   pul-i   ukanasknel-i   mo-m-c-a
            he/she.ERG I   money-NOM last-**NOM**   PRV-1SG.O-give-AOR.3SG
          'Money was the last thing (s)he gave me.'

Transitive + Benefactive:

(40) a. iman   me   çeril-i   uķanasķnel-ma   gamo-m-**i**-gzavn-a
         he/she.**ERG** I   letter-NOM   last-**ERG**   PRV-1SG.O-**BEN**-send-AOR.3SG
         '(S)he was the last one to give me money.'

      b. iman   me   çeril-i   uķanasķnel-s   gamo-m-**i**-gzavn-a
         he/she.ERG   I(**DAT**) letter-NOM   last-**DAT**   PRV-1SG.O-**BEN**-send-AOR.3SG
         'I was the last person (s)he gave money to.'

      c. iman   me   çeril-i   uķanasķnel-i   gamo-m-**i**-gzavn-a
         he/she.ERG   I   letter-**NOM**   last-**NOM**   PRV-1SG.O-**BEN**-send-AOR.3SG
         'Money was the last thing (s)he gave me.'

Bondarenko (2015: 40) concludes that the dative object + direct object form a constituent because the string may undergo ellipsis (41a). However, other strings like the direct object + verb (41b), and the indirect object + verb (42c) may also undergo ellipsis as well:

(41) a. šota-m   da-s   satamašo   mi-s-c-a,
         Shota-ERG   sister-DAT   toy.NOM   PRV-3SG.IO-give-AOR.3SG

         givi-m   ķi   moṗar-a
         Givi-ERG   and   steal-AOR.3SG
         'Shota gave the toy to his sister, and Givi stole it.'

      b. šota-m   da-s   satamašo   mi-s-c-a,
         Shota-ERG   sister-DAT   toy.NOM   PRV-3SG.IO-give-AOR.3SG

         givi-m   ķi   çign-i
         Givi-ERG   and   book-NOM
         'Shota gave the toy to his sister, and Givi gave her the book.'

      c. šota-m   da-s   satamašo   mi-s-c-a,
         Shota-ERG   sister-DAT   toy.NOM   PRV-3SG.IO-give-AOR.3SG

         givi-m   ķi   ʒma-s
         Givi-ERG   and   brother-DAT
         'Shota gave the toy to his sister, and Givi gave it to his brother.'

      To sum up:

- the hierarchy proposed in (Harris 1981):

  subject > direct object, indirect object > non-terms

  holds its value with newer tests (not employed by Harris) as well;

- no conclusive evidence has been found to date to discriminate between the two privileged objects in terms of binary branching structure and functional categories (or otherwise).

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