DETACHED OBJECT CONSTRUCTIONS (II)

1. THE GENERALIZATION

In the last handout, it was concluded that in the double object frame of double object predicates, exemplified by sentences such as (1), the IO asymmetrically c-commands the DO:

(1) Abe gave Bill_{IO} a check_{DO}

Note that this finding carries over to object control verbs, where the object DP c-commands the object clause. Otherwise, the antecedent of PRO (Bill in (2)), which serves as the object of force, would not c-command PRO, in violation of one of the conditions on PRO licensing:

(2) I forced Bill_{Object,k} [CP PRO_k to eat]
(3) THE ANTECEDENT HAS TO C-COMMAND PRO:
   a. Ann_k managed PRO_k to pass the exam. (ex. (53), handout #4)
   b. *[Ann_k’s meticulous preparation for the finals] managed PRO_k to pass the exam.
   c. [Ann_k’s meticulous preparation for the finals] allowed her_k to pass the exam.

Thus, whatever structure is assigned to give can (by and large) also be given to force.

Next, it can be shown that in the PP-frame variant, the DO asymmetrically c-commands the PP. Thus, if the order of the two objects is reversed, so are the c-command relations:

(4) ANAPHOR LICENSING:
   a. I introduced the students_i to each other_i’s supervisors
      Meaning: I introduced student A to the supervisor of student B and
               I introduced student B to the supervisor of student A
   b. The students_i introduced each other_i’s supervisors to their parents
   c. *I introduced each other_i’s supervisors to the students_i

(5) NPI LICENSING:
   a. John gave nothing to any of the children.
   b. Nobody gave anything to the children.
   c. *John gave anything to none of the children.

This indicates that in ditransitive constructions, the c-command domain of a category is systematically related to its position w.r.t. other categories inside the VP. More precisely, the LINEAR ORDER of any two objects α and β matches the HIERARCHICAL ORDER between these objects1. If α precedes β, then α c-commands β. If α is on the other hand preceded by β, then β c-commands

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1 Precedence and dominance (i.e. hierarchical position) are the two basic properties of trees. If one knows for any category α (i) which other categories α precedes, and (ii) which categories dominate α, it is possible to determine the exact location of α in the tree.
α. In double object constructions, this correlation empirically manifests itself in form of the generalization in (6):

<table>
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<tr>
<th>ORDER - c-COMMAND GENERALIZATION</th>
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<tr>
<td>VP internal objects in the ditransitive construction observe the following conditions:</td>
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<tr>
<td>□ If the IO precedes the DO, then the IO c-commands the DO ('double object frame')</td>
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<tr>
<td>□ If the DO precedes the IO, then the DO c-commands the IO ('PP frame')</td>
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2. ANALYSIS OF DOUBLE OBJECT FRAME

GOALS: I. For each frame (double object and PP), find a structure that expresses the order - c-command generalization (6) isolated in section 1.

II. Determine whether the two frames are transformationally related or not.

2.1. LARSONIAN ANALYSIS

ASSUMPTIONS:

- In double object constructions, there is not only a single VP, but two VPs - V1P and V2P. These two VPs are referred to as (LARSONIAN) VP SHELLS (following Larson 1988).
- The subject is generated in SpecV1P.
- The IO is generated in SpecV2P.
- The DO is generated as the complement of V2.
- The verb starts out in the lower head position V2° and moves to the higher position V1°.

The ensemble of these assumptions leads to an analysis which captures the correlation between c-command and word order.

(8) LARSONIAN SHELL STRUCTURE FOR DOUBLE OBJECT FRAME (A LA LARSON 1988)

“Abe gave Bill a check”

```
     V1P —→ higher VP-shell
        ↑
       tSubject
              V1’
                    V1° —→ lower VP-shell
                           V2P —→ lower VP-shell
                                  gave DPIO V2’
                                         | Verb movement
                                             | Verb
                                             |  movement
                                             |  tverb
                                             | a check
              Bill V2° DPDO
```

V1P —→ higher VP-shell
        ↑
       tSubject
              V1’
                    V1° —→ lower VP-shell
                           V2P —→ lower VP-shell
                                  gave DPIO V2’
                                         | Verb movement
                                             | Verb
                                             |  movement
                                             |  tverb
                                             | a check
              Bill V2° DPDO
2.2. **Small Clause Analysis (Kayne 1984; Beck & Johnson 2004)**

The analysis sketched above essentially goes back to the influential contribution by Larson (Larson 1988). But there are also alternatives for capturing the order - c-command generalization (6), one of which - advocated in Beck & Johnson (2004) - is outlined below. Beck & Johnson (2004), following Kayne (1984), suggest to relate the double object frame to so called **small clauses**.

Small clauses are clauses that contain a subject and a predicate but seem to lack tense information. In all of the following examples, the subject (*her*) receives its Θ-role from the small clause predicate (*smart, off the ship and a winner, respectively*), but is assigned case by the ECM predicate (*consider, want*):

(9) I consider [AP *her* smart]  
(10) I want [PP *her* off the ship]  
(11) I consider [NP *her* a winner]  

Beck & Johnson (2004) assume (following Kayne 1984) that a sentence like (12)a has the underlying representation in (12)b. (12)b can be thought of as a more explicit paraphrase of what (12)a actually means.

(12) a. Abe gave Bill a check  
    b. Abe caused Bill to have a check

(14) provides a tree representation for this underlying representation, which encodes the following assumptions:

(13)  
**Assumptions:**

- The lower VP is headed by a small clause predicate **HAVE** (small caps font marks here abstract predicates, i.e. predicates that are not actually pronounced as “have”).
- IO and DO are arguments of the small clause
- The higher verbal head V1 is filled by an abstract predicate **CAUSE**
- Together, **HAVE** and **CAUSE** are pronounced as “give”

(14) **Small Clause Analysis for Double Object Frame**

```
V1°  V2°  
|       |       |       |
| CAUSE | DP_{IO} | | V2' |
|       | Bill V2° DP_{DO} | HAVE a check |
```

“Abe gave Bill a check”
(15) a. Underlying syntax: Abe caused Bill to have a check

\[
\text{CAUSE + HAVE} \rightarrow \text{“give”}
\]

b. Spelled out as: “Abe gave Bill a check”

**SUPPORTING EVIDENCE: SUBJECT PROPERTIES OF IO**

The analysis correctly predicts that in many ways, the IO behaves like a subject. To illustrate, observe e.g. that subjects and IOs form a natural class to the exclusion of DOs in that they are **ISLANDS FOR EXTRACTION** (i.e. nothing can be moved out of these categories).

- Subjects differ from objects in that they are islands for extraction:

(16) a. [A friend of Sam] met Bill

b. *Who\(\_k\) did [a friend of t\(\_k\)] meet Bill

(17) a. Bill met [a friend of Sam]

b. Who\(\_k\) did Bill meet [a friend of t\(\_k\)]

- Small clause subject share this property, they equally resist extraction.

(18) *Who did you believe [a friend of t] satisfied

- Crucially, the IO, but not the DO, is an island for extraction in the double object frame:

(19) a. You sent [a friend of Sam]\(\_\text{IO}\) a picture

b. *Who\(\_k\) did you send [a friend of t\(\_k\)]\(\_\text{IO}\) a picture

(20) a. You sent a friend [a picture of Bill]\(\_\text{DO}\)

b. Who\(\_k\) did you send a friend [a picture of t\(\_k\)]\(\_\text{DO}\)


### 3. ALTERNATION OR BASE GENERATION?

**GOAL II.** Determine whether double object and PP-frame are transformationally related or not.

- Possible strategies for deriving one frame from the other by movement:

(21) a. A gave B\(\_\text{IO}\), C\(\_\text{DO}\)  \(\Rightarrow\) movement of DO to the left of IO  \(\Rightarrow\)

b. A gave C\(\_\text{DO}\) to B\(\_\text{IO}\)\(\_\text{tDO}\)

(22) a. A gave C\(\_\text{DO}\) to B\(\_\text{IO}\)  \(\Rightarrow\) movement of IO to the left of DO  \(\Rightarrow\)

b. A gave B\(\_\text{IO}\), C\(\_\text{DO}\) t\(\_\text{IO}\)
There are various problems for the assumption that double object and PP-frame are transformationally related, though.

**PROBLEM I. MEANING DIFFERENCES (OEHRLE 1976)**

- The PP frame lacks the idiomatic reading of the double object frame:

  (23) a. Mailer gave Nixon a book  $\Rightarrow$ may be read as: "Mailer wrote a book for Nixon"
b. Mailer gave a book to Nixon  $\Rightarrow$ only action reading

- The PP frame lacks the *exhaustive* reading of the double object frame (facts disputed in literature)

  (24) a. Mary taught Bill French  $\Rightarrow$ implies that Bill learned French
    b. Mary taught French to Bill  $\Rightarrow$ doesn't imply that Bill learned French

  $\Rightarrow$ The PP frame and the double object frame are not related by a movement operation, because movement should not affect idiosynractic aspects of meaning.

**PROBLEM II. THETA ROLE OF IO (GREEN 1974)**

The IO in the double object frame needs to be animate. This restriction does not apply to the prepositional IO in the PP-frame:

(25) a. I sent the book to France$_{io}$
    b. *I sent France$_{io}$ the book
    c. I sent Bill$_{io}$ the book

  $\Rightarrow$ The PP receives a locative $\Theta$-role, while the IO in the double object frame is assigned a goal/recipient $\Theta$-role.

  $\Rightarrow$ The PP frame and the double object frame are not related by a movement operation, because movement should not affect $\Theta$-role assignment

**PROBLEM III. SELECTIONAL RESTRICTIONS ON SUBJECT (PESETSKY 1995)**

The double object frame, but not the PP-frame, is compatible with a non-animate subject. This is so because the PP-frame requires an ‘action’ interpretation (see also the contrast in (23)):

(26) a. This book taught Mary French.  inanimate subject
    b. *This book taught French to Mary.  inanimate subject
    c. I taught French to Mary.  animate subject

(27) a. Your article showed Henry a problem.  inanimate subject
    b. *Your article showed a problem to Henry.  inanimate subject
    c. You showed a problem to Henry.  animate subject

(28) a. The manual told Susan everything.  inanimate subject
    b. *The manual told everything to Susan.  inanimate subject
    c. We told everything to Susan.  animate subject

(29) a. The TV gave Gary the bad news.  inanimate subject
    b. *The TV gave the bad news to Gary.  inanimate subject
    c. They gave the bad news to Gary.  animate subject
The subject in the double object frame and in the PP frame need to satisfy different selectional restrictions.

The PP frame and the double object frame are not related by a movement operation, because movement should not affect selectional restrictions.

**PROBLEM IV. PRODUCTIVITY**

While movement alternations are usually fully **PRODUCTIVE** (i.e. the movement operation can apply to the tree irrespective of its *lexical* content), the double object alternation is not.

- Not all verbs that subcategorize for two objects take part in the alternation (examples from Johnson 2004):
  - *donate* only combines with a DO and a PP (PP-frame)
  - *spare* only supports the double object frame (IO-DO):

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| (30) | a. She donated her cat to the charity.  
|   | b. *She donated the charity her cat.  
|   | *spare* only supports the double object frame (IO-DO):  
| (31) | a. *She spared the ordeal to Fluffy.  
|   | b. She spared Fluffy the ordeal.  

This is expected if the two frames are not transformationally related, but unexpected if one of the two constructions is derived from the other.

**RESUME:**

The PP frame and the double object frame vary in at least the following properties.

- Aspects of interpretation (idiomatic reading, exhaustive reading)
- Θ-role assigned to IO
- Selectional restrictions on subject
- Productivity

**CONCLUSION**

- The PP frame and the double object frame are not related by a movement operation.
- Each frame is generated by a separate lexical entry. There is e.g. a verb *give* for the PP frame and a homophonous verb *give* for the double object frame.


Johnson, Kyle 2004: Introduction to syntax. Ms, University of Massachusetts/Amherst.


4. **Analysis of PP-frame**

In section 2, we encountered two different analyses for the double object frame. The first one (Larsonian shells with verb movement; (8)) was seen to be able to derive the c-command order generalization. Still, in the end the small clause analysis (14) offered additional advantages, such as the islandhood of IO for extraction.

As it turns out, both analyses of section 2 are correct, but they are correct for different frames. More specifically, the final analyses to be adopted are depicted in the table below:

<table>
<thead>
<tr>
<th>Analysis of ditransitives</th>
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<tbody>
<tr>
<td>PP frame (<em>I sent a letter to Bill</em>)</td>
</tr>
<tr>
<td>Double object frame (<em>I sent Bill a letter</em>)</td>
</tr>
</tbody>
</table>

As for the PP-frame, the assumptions necessary for its generation are summarized in (32):

(32) **Assumptions:**

- The DO is generated in SpecV1P, where it receives a Theme Θ-role.
- The PP-IO is generated as the complement of V2, where it receives a Locative role.
- Unlike the double object frame, the PP-frame does not involve a small clause or abstract CAUSE and HAVE.

(33) “Abe gave a check to Bill”

\[
\begin{array}{c}
\text{V1P} \\
\text{t_{Subject}} \\
\text{V1' } \\
\text{V1°} \\
\text{V2P } \\
\text{V2'} \\
\text{gave} \\
\text{DP_{DO}} \\
\text{a check} \\
\text{Verb movement} \\
\text{t_{verb}} \\
\text{to Bill} \\
\end{array}
\]

As the DO is not the subject of a small clause, it is correctly predicted to be transparent for extraction:

(34) a. You sent [a picture of Bill] to Sam
    b. Who did you send [a picture of t] to Sam

(35) a. You sent [a friend of Sam] a picture
    b. *Who did you sent [a friend of t] a picture
4. ECM revisited

Recall that for the analysis of ECM constructions, it was necessary to assume that the verb moves short distance from V° to T° (see handout #4, tree (26)).

(36) She wanted them to win

V-to-T movement was not very well motivated, though, as main verbs in English are assumed to surface in a position below T°. The analysis of double object constructions in terms of Larsonian shell’s and verb movement in (33) makes it possible to envision a plausible slight modification of the analysis of ECM constructions, though:

Suppose that in ECM contexts, the verb does not move to T°, as in the tree (26) of handout #4, but is generated inside a VP-shell structure, as expressed by the assumptions in (37):

(37) **ASSUMPTIONS:**
- ECM constructions involve two VP shells as well as AgrOP.
- AgrOP is located inbetween the two VP shells.
- The ECM verb originates in the lower verbal head V2° and moves to V1°
- The ECM subject originates in the lower clause (SpecTP) and moves to SpecAgrOP

On this view, the verb does not move to T°, as in handout #4, but only raises to V1. Given that AgrOP is inbetween V1 and V2 this step will derive the correct word order:

(38) She... V1P → higher VP-shell