Other Kinds of Sentence Constructions

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Kaplan calls all constructions which are not [$_S$ NP VP] non-canonical. That's unusual parlance, but the constructions he discusses are interesting nonetheless. Of course, many of them have the subject 'moved' to a different place somehow.

1 General Mechanisms

1.1 Three options

To generate such constructions, two simple strategies seem to suggest themselves:

1. Use completely different phrase structure rules to generate, for example, questions and corresponding affirmative sentences.

2. Use the structures generated by the rules you have already and then apply **movement rules** to those structures, generating the 'odd' structure from the normal one.

A third (more complicated) option would be to assume that, for example, a passive verb and its corresponding active verb are **lexically different** (e.g., in having different θ grids), and that the lexical differences cause them to interact differently with other elements (e.g., NPs) by the aid of more general phrase structure rules which are more sensitive to the nature of the items they operate on.

Usually, people who think there is actually some kind of movement going on call the phenomenon 'movement', in other theories it's sometimes called '"movement"' (in quotes) or 'displacement'. Kaplan seems to follow the first strategy, I will basically give mixed arguments, not caring much about how we technically implement our solution.

1.2 Movement Rules

The problem with movement rules (as suggested from the 1950's on to the 1970's in Generative Grammar) is that you always have to mark some construction as basic. Usually, this will be the simple affirmative active sentence. Then, other constructions like the passive are generated from that structure. But who tells us that this is so? Why should the active be more basic than the passive?

Anyway, movement rules of the form $\alpha \Longrightarrow \beta$ take a structure α and rearrange it so as to produce β. As an example, behold a **passive transformation**:

(1) $[_{VP_S} [_{NP_i} \text{Mary}] [_{V'} [_{V_{tr}} \text{buys}] [_{NP_j} \text{the chocolate}]]]$. **active**

(2) $[_{AuxP} [_{NP_j} \text{The chocolate}] [_{Aux'} [_{Aux} \text{was}] [_{V'} [_{V'} [_{V_{itr}} \text{bought}]] [_{PP} \text{by} [_{NP_i} \text{Mary}]]]]]$. **passive**

The relevant rule(s) could be:

- *without by-phrase*

  $[_{VP_S} NP_i [_{V'} V_{tr} NP_j]] \overset{passive}{\Longrightarrow} [_{AuxP} NP_j [_{Aux'} [_{Aux} \text{was}] [_{V'} V_{itr}\textbf{+ed}]]]$

- *with by-phrase*

  $[_{VP_S} NP_i [_{V'} V_{tr} NP_j]] \overset{passive}{\Longrightarrow} [_{AuxP} NP_j [_{Aux'} [_{Aux} \text{was}] [_{V'} [_{V'} V_{itr}\textbf{+ed}] [_{PP} [_P \text{by}] NP_i]]]]$

- *in a simpler 'S→ NP VP' system*

  $[_S NP_i [_{VP} V_{tr} NP_j]] \overset{passive}{\Longrightarrow} [_S NP_j [_{VP} V_{tr}\textbf{+ed} ([_{PP} \text{by} NP_i])]$

I will, however, not give concrete rules through the rest of the handout.

2 Some Syntactic Phenomena

2.1 Passives

The rules above already show you what roughly happens in passives:

- The external (AGENT) θ role is taken away. The direct object (bearer of the internal θ role) becomes the subject, because all sentences need a subject. (In some theories, this is formulated in terms of NP movement to subject position.)

- Verbal morphology is affected: V occurs in the passive participle.

- The Aux *be* is required as the highest Aux.

- The former AGENT can appear as an **adjunct** *by*-PP. Notice that an adjunct never receives a θ role from a verb, so the AGENT θ role in this case must be assigned by the preposition. The preposition alone is responsible for its NP's interpretation as an AGENT.

2.2 *Do*-Support and Subject-Aux Inversion

In **negated** sentences and questions, English requires there to be an Aux. This Aux is either already there (such as perfect *have*), or *do* is inserted for purely syntactic reasons. This is called ***do*-support**.
To mark a sentence as a Yes-No-question, subject and auxiliary **invert** (SAI).

2.3 Displacement in Questions and Relatives Clauses

2.3.1 Questions

Another more obvious form of movement is ***wh*-movement** in questions. Consider so-called **in-situ questions** (where the question word is in the position where its corresponding non-question-elements would be) first:

(3) Peter bought **what**?

(4) Mary went **where**?

They can only be used in specific situations. Usually, they will be conceived as **echo question**, the *wh*-pronoun standing in as a placeholder for a word the asker didn't get:

(5) A: I didn't drive **to the station**.
   B: You didn't drive **where**?

In true *wh*-questions, the following happens:

- In case of subject *wh*-words, everything remains the same (except question intonation) (cf. 6).

- In case of object or adjunct questions, there is subject-Aux inversion (including *do* support if necessary) . . .

- . . . and the object or adjunct *wh*-word moves to the beginning of the sentence (***wh*-movement**) (cf. 7). Let's assume for the sake of simplicity that it adjoins to the S projection (cf. 8).

(6) Who opened the Box?

(7) Whom$_i$ did$_j$ you t$_j$ see t$_i$?

(8) [$_{AuxP_S}$ Whom$_i$ [$_{AuxP_S}$ did$_j$ [$_{AuxP_S}$ you [$_{Aux'}$ t$_j$ [$_{VP_U}$ see t$_i$]]]]]

Notice the **trace t$_i$**. For various reasons, the *wh*-element is thought to be related to its **base** position somehow. It is the position where it gets its θ role and its case maybe. The same kind of argumentation can be produced for the trace of the inverted Aux.

Notice further that in English, neither SAI, nor *do* support, nor *wh*-movement happen in complement clauses. They always have the canonical S-(Aux)-V-O form.

(9) Peter thinks that you saw whom?

(10) * Peter thinks that whom did you see?

If you move a *wh*-PP to the left, you usually have two options, illustrated in 11 and 12.

(11) [Which room]$_i$ did you stay [$_{PP}$ in t$_i$]?

(12) [$_{PP}$ In which room]$_i$ did you stay t$_i$?

The phenomenon in the first variant is called **preposition stranding**.

2.3.2 Relative Clauses

Just as a hint: Notice that in relative clauses, the relative pronoun is also always moved to the left. However, none of the SAI properties holds for relative clause formation. Also, the relative clause word order marks the relative clause as an embedded construction. So, why not assume that the relative pronoun is moved to the position of Comp and forming an S′, instead of being S-adjoined as in questions!? (cf. 13).

(13) the [$_{NP}$ man [$_{S'}$ whom$_i$ [$_{VP_S}$ Mary loves t$_i$]]]

2.4 Small Clauses

Consider the structure in 14.

(14) Natasha considers [$_?$ [$_{NP}$ Ivan] [$_{NP}$ a liar]].

It's the **fact** that *Ivan is liar* which is considered by Natasha. So, [Ivan a liar] should be the object constituent. None of the constituents we have encountered so far looks like it, however. One can form such constituents with APs, PPs, etc.

(15) Natasha considers [Ivan stupid].

(16) Natasha considers [Ivan over the top].

These clauses have been called **small clauses** (SCs). They contain a full **predication** (a predicate and an argument), something that could form a full sentence with the copula:

(17) [$_{NP}$ Ivan] is [$_{AP}$ stupid].

(18) [$_P$ Ivan] is [$_{PP}$ over the top].

They furthermore have the status of an S$'$, since they are in essence complement (object) clauses.

2.5 Expletive Constructions

An expletive (like *it* and *there*) can be defined as a pronoun which does not take a θ role. Look at the following sentences.

(19) It is raining. (**weather verbs**)

(20) It is clear [$_{S'}$ that Ivan is attractive]. (***it*-extraposition**)

(21) There is [$_{S'=SC}$ a dog in the garden]. (**existential there construction**)

The expletives seems to be there just to give the sentence a subject. In the case of weather verbs, there just is no real argument to become the subject, and in the other two cases, the subject argument seems to have moved to the right (*it*-extraposition) or stuck in a small clause (existential *there* example.

Expletives almost exclusively occur with verbs of existence or coming into existence like *be*, *exist*, *arise*, or *develop*. One exception is so-called **presentational *there*** in sentences such as

(22) There came a man.

2.6 Infinitives and ECM

We have already talked about PRO in infinitives: Infinitives cannot take real subjects, they take PRO which receives a θ role. Now let's look at a construction which seems to have subjects in infinitives: the so-called **exceptional case marking (ECM) construction**.

(23) Ivan believes [that she is a liar]. (normal complement clause)

(24) Ivan believes [her to be a liar]. (**ECM construction**)

In 23, the verb takes a S$'$ complement as expected. Within the S$'$ is embedded a full sentence. In 24, however, there is no Comp, and the embedded sentence has a real subject (*her*), although it is an infinitival sentence. To make things worse, the subject is in the accusative.

It has been assumed that in ECM cases, the embedded sentence is 'transparent' for case assignment from outside (maybe because there is not Comp to block accusative being assigned from the matrix verb to the embedded NP). So, in ECM sentences, the embedded subject gets its θ role from the embedded verb, and its object case from the embedding verb. The object is still the whole embedded clause, however. A very paradoxical but interesting construction.

2.7 Control vs. Raising and Tough Raising

Consider the following array of sentences.

(25) Masha is eager/wants to dance. (**control verb construction**)

(26) Masha seems to dance. (**raising verb construction**)

(27) Masha is tough to please. (***tough* movement construction**)

I will argue that the three sentences constitute three different constructions.

2.7.1 Control Verbs

First, control verbs are the classical PRO case we have talked about. In the example, *Masha* receives the subject role from *is eager/wants*, and the embedded PRO receives the subject role of *dance*. PRO is controlled by the matrix subject. Hence:

(28) Masha$_i$ is eager [PRO$_i$ to dance].

2.7.2 Raising Verbs

As for the raising construction, verbs like *seem* don't seem to assign a subject θ role. Hence, they typically appear with expletive subjects if they take a full S′ complement (29). Also, Also, *seem* + V′ structures take expletive subjects in the case of weather verbs (30) but normal subjects with normal verbs (31). This seems to hint that *seem* just passes up all subjecthood parameters from the embedded verb to its own subject position.

(29) It seems [that Masha is beautiful].

(30) It seems [to rain].

(31) Peter seems [to walk].

If we say the structure is 32, *Masha* will not receive a θ role, and we cannot account for the pass-up qualities of *seem* as in 29–31. We thus opt for 33 – a movement analysis.

(32) ! Masha$_i$ seems [PRO$_i$ to dance].

(33)   Masha$_i$ seems [t$_i$ to dance].

2.7.3 Tough Movement

The case is different for tough movement. Why can't it be control? Observe:

(34) a. Masha is tough [to please].
     b. It is tough [to please Masha].

(35) a. Masha is eager [to please].
     b. It is eager [to please Masha].

Obviously, in the *tough* construction, the matrix subject comes from the object position of the embedded clause. Also, the logical subject of the infinitive is arbitrary, it's **not** Masha in our examples. Leaving aside some technical problems, the analysis should be something like 36.

(36) Masha$_i$ is tough [PRO$_{arb}$ to please t$_i$].