PERCEPTION VERB COMPLEMENTS AND DIACHRONIC SYNTAX

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This article is devoted to the presentation of two different approaches to syntactic analysis of perception verb complements (henceforth PVCs) within the framework of autonomous syntax. The first approach presented in Akmajian (1977) is based on arguments from syntactic constituent structure tests and arguments from overall simplicity of the statement of transformational rules, and the second proposed by Chomsky (1981) in his theory of "core grammar" which resorts to the fundamental principles of UG. Finally, both approaches will be looked at from the point of view of their utility in the analysis of diachronic syntax.

Akmajian (1977) attempts to determine the underlying structure of PVCs with no reference to semantic information. Accordingly, the class of analyzed verbs in addition to verbs like *see*, *hear*, *feel* etc. contains the following verbs: *witness*, *spot*, *behold*, *perceive*, *record*, *photograph*, *film*, *tape*, *study*, *catch*, *discover*, *find* and *imitate* which are claimed to be substitutable for *see* and *hear* in the syntactic frame given below:

We [caught / found / painted] [taped / discovered / witnessed] her taking a bath.

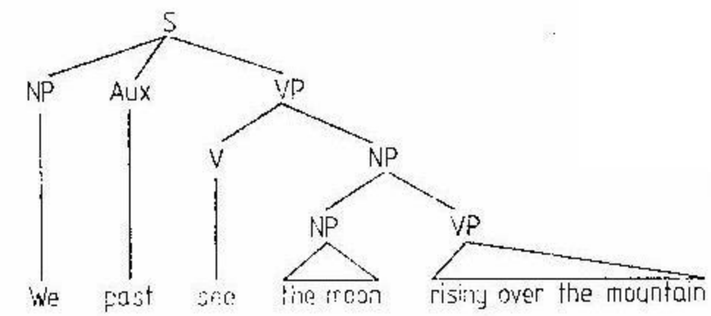
To begin with, Akmajian rules out several possible sources of PVSc i.e. relative clauses, gerunds, reduced while/when clauses, nominalizations. On the other hand, he argues that PVCs are single constituents on evidence from Pseudo-Clefts: What we saw was *the moon rising over the mountain*; Equative "Colon" Construction: We saw what we had all hoped to see: *the moon rising over the mountain*; and *Right Node Raising*: You can see but you certainly can't

hear, *the moon rising over the mountain*. The positions occupied by PVCs in the above constructions are assumed to contain only single constituents.

Further tests establish PVCs as single NP-constituents: Cleft Sentence: It was *the moon rising over the mountain that we saw*; Object Deletion: *The moon rising over the mountain was a* breathtaking sight to see; Passive: *The moon rising over the mountain* has been witnessed by many. Next, on the basis of (1) lack of auxiliary verbs; (2) lack of overt complementizer; (3) number agreement facts; and (4) extraposition of the VP from the head of the larger NP Akmajian argues that the NP-constituents of PVCs have the structure (A) not (B) as presented below:

(A)

Thus, he arrives at the following structure for PVCs:

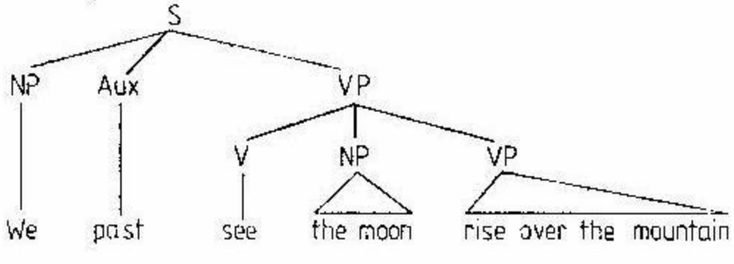


This structure entails a PS rule of the form NP→NP VP.

Infinitival PVCs (henceforward IPVCs) as exemplified in the following sentences:

We saw the moon *rise* over the mountain.
We heard the bells *ring* at sunset.

were determined by means of the same tests presented above, not to be constituents. Accordingly, Akmajian represents their structure as follows:



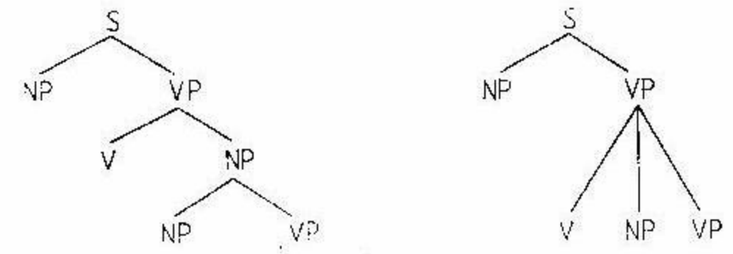
This analysis of both gerundial PVCs and infinitival PVCs was questioned by Gee (1977) and Chomsky. Gee remarks that there are several other possibilities concerning the structure of IPVCs which were not considered by Akmajian. Accordingly, IPVCs can be analyzed as (1) bare Ss; (2) object raising verbs; (3) $\bar{S}$ with a zero complementizer; (4) Equi-verbs. In conclusion Gee claims that PVCs behave in a dichotomous manner (i.e. in some ways they behave as sentences and in other ways as nonconstituents).

Chomsky questioned the status of Akmajian constituent structure tests (cf. Gee 1977: 479). Chomsky's claim is that complementizerless sentences cannot occur in focus position.

In addition to the critique levelled at Akmajian's analysis of PVCs by Gee and Chomsky there are some other points that should be made in this connection.

Firstly, Akmajian's claim that the structures proposed for GPVCs and IPVCs (i.e. A and B respectively):

(A) (B)



are supported by semantic facts (i.e. the difference of meaning between them is expressed by the difference in syntactic structure) does not seem to be well-justified in this case. What is the semantic difference between the following sentences?

(a) I saw the moon rising over the mountain.
(b) I saw the moon rise over the mountain.

It can be seen that the difference lies in the aspect of the PVC verb *rise*. In sentence *a* the category of aspect has to be marked as incomplete. On the other hand in sentence *b* the category of aspect of the verb *rise* seems to be clearly complete. Accordingly, one can conclude that the semantic feature [±Complete] of the aspectual category will in a natural way explain the difference between the discussed sentences. Unfortunately, Akmajian did not establish any necessary correlation between the semantic feature [−Complete] and the PS-rule NP→NP VP or the semantic feature [+Complete] and the PS-rule VP→V NP VP. The introduction of those rules into the base complicates the categorial component to a considerable degree. This fact contradicts one of two basic assumptions of the author, namely the criterion of simplicity. Further-

more, it is also in conflict with Wasow's (1977) distinction between lexical rules and transformations, as well as with some basic assumptions of "core grammar" (cf. Chomsky 1981).

Secondly, it seems that syntactic analysis in terms of constituent structure tests has a serious methodological defect, namely, it operates on derived structures (i.e. usually surface structures). As a consequence, the data analyzed by Akmajian may be disqualified by the claim that they are not "true" PVCs but derived structures. For example, sentences *a* in (1) and (2) may be claimed to be derived from *b* by relative reduction:

(1) (a) The moons of Jupiter rotating in their orbits are beautiful to watch.
    (b) The moons of Jupiter which are rotating in their orbits are beautiful to watch.

(2) (a) The moon rising over the mountain looks spectacular.
    (b) The moon which is rising over the mountain looks spectacular.

One is tempted to conclude that argumentation for deep representation (in this case PVCs) exclusively on the basis of derived structures is unjustified on logical grounds. (It is especially the case with *-ing* constructions in English which may be derived from several sources.)

Thirdly, the class of verbs analysed as requiring PVCs is a heterogeneous one. It consists of the verbs of perception (*see, hear, feel* etc.) as well as such verbs as: *find, discover, catch, tape, film, portray* and some other. It is no wonder that Akmajian cannot arrive at any adequate paraphrase of PVCs. Furthermore, some syntactic features of those verbs can be used as supporting arguments for an analysis and others as counter-examples; but this is the price that autonomous syntax has to pay for its autonomy.

Fourthly, it should be stated that one more logical error seems to be involved in the kind of approach to syntactic analysis proposed by Akmajian. The error is connected with the fallacy of the following proposition: If X behaves as Y then X is Y. This kind of logical reasoning is used in syntactic analysis when the linguist claims that GPVCs are NPs because they (sometimes) behave like NPs. The fallacy of this reasoning may be presented by means of the following example: *All fish swim.* Kopytko swims $\xrightarrow{\text{ergo}}$ Kopytko is a fish. Clearly, this kind of syntactic analysis appears to be insufficient to determine the underlying representations of a natural language exclusively on the basis of syntactic phenomena.

Because its application for diachronic analysis does not seem to be very promising either (for discussion of that question see below) let us consider an alternative approach proposed by Chomsky (1981) applied in Kopytko (1983).

In this section we shall apply the principles of "core grammar" for the analysis of complement structure of the verbs of perception in ME. The first structure proposed by Chomsky for the analysis of infinitival complementation

is of the following form:

M—[$\bar{S}$ COMP [S NP INFL VP]]

The following sentences seem to exhibit the structure above:

(1) (a) He saw that the box was empty.
    (b) I saw that the moon was rising.
    (c) I could hear that Mary was dancing.

The category of tense [±Tense] in INFL for those sentences will take the value [+Tense] for the finite forms. The S-structure (identical with D- and LF-structure in this case) of (1) (a) may be represented as follows:

He INFL [$_{VP}$see] [$_{\bar{S}}$that [$_{S}$the box [+Tense] [$_{VP}$be empty]]]]

Sentences *b* and *c* in (1) may be represented in a similar way. The verbs used in the sentences are those of "indirect perception". The contrast between "direct" and "indirect perception" may be exemplified by means of the following two sentences:

(2) (a) I saw the moon.
    (b) I saw that the moon was rising.

When *see* occurs with a simple direct object as in (a) the interpretation is that of "direct perception". The sentence is true only if the "perceiver" actually saw the moon. On the other hand, when *see* occurs with a sentential complement as in (b) the interpretation is that of "indirect perception". The sentence is true even if the perceiver never saw the moon himself but inferred its presence by means of indirect evidence.

Can the sentences in (3) below be claimed to be derived from the structures underlying the indirect perception verbs?

(3) (a) I saw him open the safe.
    (b) I saw the moon rising over the mountain.

In the case of a positive answer to the question (3) (a) would have to be derived from the following underlying structure:

I saw[$_{\bar{S}}$Comp [$_{S}$him [$_{VP}$open [$_{NP}$the safe]]]]

The rule of $\bar{S}$-deletion (cf. Chomsky 1981: 66) would have to apply obligatorily to this structure because the Comp position in the sentence above cannot be filled by any complementizer. As a result, the following structure would be arrived at:

[$_{NP}$ I] [$_{VP}$ saw [$_{S}$ him [$_{VP}$ open [$_{NP}$ the safe]]]]

This structure, however, clearly violates the θ-criterion of the θ-theory. In accordance with the projection principle every syntactic representation of

LF, D- and S-structure should be a projection of the thematic structure and the properties of subcategorization of lexical items. The θ-criterion on the other hand, asserts that each argument bears one and only one θ-role and each θ-role is assigned to one and only one argument. Accordingly, the NP position filled by *him* in the structure above has to be assigned a double θ-role. The first one would be that of the subject of the embedded clause and the second one that of the object of the main clause. As a result, the θ-criterion marks that structure as ungrammatical.

Another possible source of the sentences in (3) may be the following structure:

(A) $\text{NP}\left[_{\text{VP}}\ \text{V}\left\{\begin{matrix}\text{NP}\\ \text{PP}\end{matrix}\right\}\ \bar{\text{S}}\right]$

Thus, (3a) might be represented as follows:

(B) I INFL [VP see [NP him [$\bar{\text{S}}$ Comp [S PRO open NP]]]

To justify the above structure arguments based on the projection principle, θ-role theory, government theory and control theory will be presented and some diachronic evidence will be adduced. Furthermore, it will be argued that the analysis of empty categories proposed by Chomsky (1981: 55) supports the structure in (B). The θ-criterion and θ-rule theory is not violated in (B). The object of the matrix sentence as well as the subject of the embedded clause may be assigned different thematic relations as follows:

(C) I saw [NP him] [$\bar{\text{S}}$ [S PRO open NP]]]
↓ ↓
θ-role$_1$ θ-role$_2$

In accordance with government theory the maximal projections NP and $\bar{\text{S}}$ are absolute barriers to government. This principle was modified (cf. Chomsky 1981: 300) by the assertion that the head of a maximal projection is accessible to an external governor but peripheral positions are not. Accordingly, the matrix verbs govern the Comp of the embedded $\bar{\text{S}}$. Thus the verb *see* in (C) governs the object but not PRO, which is consistent with the analysis of empty categories in Chomsky (1981: 55).

According to Chomsky the empty category PRO has the following properties:

(a) PRO is ungoverned
(b) its antecedent (if there is one) has an independent θ-role
(c) PRO does not satisfy subjacency

PRO in (C) clearly exhibits these properties.

Control theory proposed by Lasnik and Chomsky (1977) and Chomsky (1981) determines the reference of empty categories. The structure in (C) is

an example of "object control", i.e. PRO is controlled by the complement of the matrix verb. The type of control in (C) defined in Zabrocki (1981) as *lexical control* (analyzed as involving an Equi-NP rule) clearly violates the locality condition (cf. Zabrocki 1981: 44) as it operates over the $\bar{\text{S}}$ boundary.

The ungrammaticality of the following sentences seems to indicate that the subcategorization rule: *see* — NP — $\bar{\text{S}}$ is not present in the lexicon of Modern English:

(1) (a) *I saw the moon that it was rising
(b) *I saw the woman that she was pretty
(c) *He saw Mary how she was doing it
(d) *I saw John what he did

There is, however, some attested evidence in ME indicating that the subcategorization rule: *see* — NP — $\bar{\text{S}}$ was present in the lexicon of ME. The ME data are the following:

(2) (a) Egipciens sawen *the woman that she* was ful fayre. 1382 Wyclif Gen. 14
(b) Se ȝe þe ȝonder þore *womman how at she* is pined withe twynlenges two. 1430. Chev. Assigne 26
(c) þe knyghtis of Rome saw Vaspasyan at he was a noble man and a redy to counceil. 1440 Alphabet of Tales 427

(2) (a) may be represented as follows:

Egipciens INFL [VP see [NP the womman] [$\bar{\text{S}}$ that [S she was ful fayre]]]

(2) (b) and (c) exhibit the same structure.

The following ME PVCs may be claimed to be derived from clausal complements on the basis of the projection principle:

(3) (a) That now, on Monday last, I *sough* him wirche. I — 3429/30
(b) He *herde hem speke*. (I-952/3)
(c) The grete tounes se we wane and wende. (I-3025)
(d) þe scruantis hirde hire Lord[illegible]. Gesta Rom. II. 6

(3) (b) may be analyzed D- and S- structure as follows:

He INFL [VP herde [NP hem [$\bar{\text{S}}$ [S PRO [VP speke]]]]

Sentences (3) (a, c, d) represent the same structure.

The clausal complements in (2) attested for ME seem to indicate that PVCs in (3) may be claimed to derive from the complements of the following form: *see* — NP — $\bar{\text{S}}$ by means of the projection principle. The rule introducing S into the base, i.e. $\bar{\text{S}}$→COMP S has to be reanalyzed as $\bar{\text{S}}$→(COMP) S (cf. Chomsky 1981: 304) to account for the lack of a complementizer in PVCs

or a Comp-deletion transformation has to be postulated to accomplish the same task.

Finally, we would like to give an answer to the question which of the two approaches to autonomous syntax presented above would be more fruitful for the analysis of diachronic syntax.

The constituent structure approach to diachronic syntax (regardless of the defects of the constituent structure analysis presented above) is of no value for languages with no written records preserved. For documented languages like OE and ME its application also seems to be insignificant. This is so because most of the syntactic data adduced by Akmajian for Modern English would not be avoidable for a diachronic linguist attempting to analyze the same syntactic problem (i.e. PVCs) for OE or ME. Thus evidence from Clefts, Pseudo-Clefts, Equative Colon, Right Node Raising etc. would probably be unavoidable for the diachronic analyst. Owing to the paucity of data the syntactic analysis may be inconclusive and unjustified. When all the defects of a synchronic linguistic theory are uncritically transferred to a diachronic analysis, failure often results (as was the case with the applications of TGG to diachronic studies). It seems that a synchronic linguistic theory defined in terms of general linguistic principles, rules, linguistic universals etc. and their interdependencies, equipped with a Projection Principle is better suited for diachronic analysis than the earlier versions of TGG which heavily depended on intuitions, accessibility of linguistic data and constituent structure tests. In other words diachronic research in terms of "projections", universal syntactic implications etc. may prove to be more fruitful than other approaches.

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