

A Rule of Semantic Interpretation and Conditions on Rules of Grammar

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ある意味解釈規則と文法の規則に課せられる条件

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There is a well-motivated rule of semantic interpretation which appears to violate some of the general conditions on rules of sentence-grammar proposed in Chomsky (1971, 1973, 1976a, 1976b). In the course of further refinement and modification of those conditions on rules of grammar, the phenomena involving the interpretive rule in question must be kept in mind.

It is obvious that some relationship must be established between, for example, (a) and (b) in (1) :

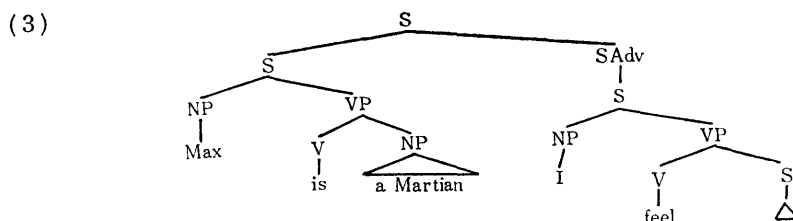
- (1) a. I feel that Max is a Martian.
- b. Max is a Martian, I feel.

In order to account for the relatedness, I have proposed a rule of semantic interpretation elsewhere.¹⁾

- (2) Fill the missing argument of the parenthetical which has no complementizer with the reading of the main clause, and add a parenthetical reading to the parenthetical.

In this paper, I will show that the parenthetical rule violates certain general conditions on rules of sentence-grammar proposed in Chomsky (1971, 1973, 1976a, 1976b).

Before I show this, a few assumptions should be mentioned. I assume that the parenthetical is base-generated as a sentence-adverbial. Thus the P-marker underlying, for example, (1b) is (3) :



Next, I assume that the parenthetical rule is a rule of sentence-grammar, for it fills the missing argument of the parenthetical with the reading of the main clause, which is the lowest sentence that dominates the parenthetical. Thus consider the sentence (4) :

- (4) Worthy describes these two types of endeavor as self-paced and reactive. Self-paced tasks, he explains, are those over which the individual has a certain amount of control, because he can perform them in his own time. (*Newsweek*, November 19, 1973)

What he explains in (4) is that self-paced tasks are those over which the individual has a certain amount of control, because he can perform them in his own time.

Notice that, in the case of direct speech, the rule of semantic interpretation appears to extend beyond sentence-grammar. Thus in the discourse below, she says, "If I find myself a commercial success, I'll probably go into a state of shock. If I get out of this underground thing and become commercial, I don't know what I'll do."

- (5) The only thing that bothers her is--what else?--success. "If I find myself a commercial success, I'll probably go into a state of shock," she says. "If I get out of this underground thing and become commercial, I don't know what I'll do." (*Time*, May 15, 1972)

The fact that the discourses (6)–(8) are ill-formed, since the second of the two independent clauses are ungrammatical, seems to be in favor of the assumption that the parenthetical rule is a rule of sentence-grammar.²³

- (6) The lamp broke. It turns out.

- (7) Harry won again. It seems.

- (8) She looked at the photograph with much interest. The inspector thought.

Incidentally, pro-sententialization,³⁰ which determines the antecedent of *so*, is in contrast with the parenthetical rule in that it is not a rule of sentence-grammar. Thus consider the sentences (9) and (10) :

- (9) Harry won again. So it seems.

- (10) She looked at the photograph with much interest. So the inspector thought.

In the sentences above, pro-sententialization associates *so* with the first of the two successive independent clauses. Thus it extends beyond sentence-grammar in its scope.⁴³

Let us now turn to the problem of how the parenthetical rule violates some of the

general conditions on rules of sentence-grammar.

First of all, application of the parenthetical rule violates the tensed-S condition, which states that

- (11) no rule can involve X , Y (X superior to Y) in the structure

$\dots X \dots [\alpha \dots Z \dots WYV] \dots$

where Y is not in COMP and α is a tensed S.

To see this, consider the sentence (1b) :

- (1b) Max is a Martian, I feel.

The parenthetical rule involves X and Y in (11) when it fills the missing argument of the parenthetical, which occupies the position Y in (11), with the reading of the main clause, which occupies the position X in (11).

One might argue that it is a sentence raising transformation that relates (a) and (b) in (1),⁵⁹ and that the sentence raising transformation, being cyclic, moves the original subordinate clause to the COMP position of the original main clause in which it appears. Then it would be no wonder that the sentence (1b) is grammatical, since the sentence raising transformation no longer violates the tensed-S condition. This approach, however, is untenable. Consider the following sentences :

- (12) What is stranger is that Chomsky would, I believe, classify many of the most interesting phenomena currently being studied by linguists as performance. (George Lakoff, "Interview with Herman Parret")
- (13) Part of the difficulty is the fact that the adjectives here are, I think, actually irregular forms of *ly* adverbials,.... (Paul M. Postal, *Cross-Over Phenomena*)
- (14) But 'art museum' is not an expression that a British writer, I think, would be likely to use. (Albert H. Marckwardt and Randolph Quirk, *A Common Language*)
- (15) And this is also a product of this early mystique of education which somehow, I think, also got translated to the frontier. (Albert H. Marckwardt and Randolph Quirk, *A Common Language*)
- (16) Why should the Soviets wish to aid the destruction of Israel, which is, I believe, their aim? (*Reader's Digest*, September 1970)
- (17) The methods and concerns of linguists and philosophers are similar in so many respects that it would be folly, I believe, to insist on a sharp separation of these disciplines,.... (Noam Chomsky, *Language and Mind*)
- (18) Oh yes, there is a historical reason for this, you know, in that it was the solicitor, I think, that operated in equity where the barrister operated in common law. (Albert H. Markwardt and Randolph Quirk, *A Common Language*)
- (19) Bill thinks that he is taller than Jane, it seems to me, has ever been. (John Robert Ross and David M. Perlmutter, "A Non-Source for Comparatives")

The COMP positions of the original main clauses are filled by the complementizer *that*,

a *wh*-phrase, or *than* in the sentences cited above.⁶³

Moreover, it is usually the case that the clause which occupies the COMP position retains the complementizer *that* or *whether*. Thus topicalized clauses, which are assumed to fill the COMP position, retain the complementizer *that* or *whether*,

(20) That we knew them they didn't realize. (John Robert Ross, "Doubl-ing")

(21) Whether he recognized the crowning achievement of his life, no one could say.

Therefore, it cannot be that the original subordinate clause fills the COMP position of the original main clause in which it appears.

Furthermore, the following sentences more strongly argue that the parenthetical rule violates the tensed-S condition.⁷⁰

(22) Frogs have souls, I realize that Osbert feels. (Ross (1973))

(23) There were numerous large cardboard cartons in there, I believe you said? (Erle Stanley Gardner, *The Case of the Phantom Fortune*)

(24) Thus there are, I think it is clear, general grounds for supposing that quantifiers are interpreted at least in part in terms of surface position.... (Chomsky (1973))

(25) ... most of them, he says he was told, were college students there for summer training. (*Newsweek*, October 12, 1970)

(26) The semantic representation, it is reasonable to hope, is very tightly integrated into the cognitive system of the human mind. (Jackendoff (1972))

Secondly, the parenthetical rule violates the specified subject condition, which states that

(27) no rule can involve *X*, *Y* in the structure

...*X* ... [*α*...*Z*...*WYV*...]...

where *Z* is the subject of *WYV* and is not controlled by a category containing *X*.

Consider the following examples :

(1 b) Max is a Martian, I feel.

(28) This, you may remember, is what Mark Twain said about the length of German sentences. (*Newsweek*, April 29, 1974)

(29) The common market may turn out not to be the main instrument of unity, he concedes. (*Time*, March 12, 1973)

When the parenthetical rule fills the missing arguments of the parentheticals with the readings of the main clauses, it involves *X* and *Y* in (27), the dummy symbols of the parentheticals being *Y*, the main clauses being *X*, and *I*, *you*, and *he* being the specified subjects.

Furthermore, the sentences (22)—(26) all are cases in which the parenthetical rule violates the specified subject condition.

Thirdly, the parenthetical rule violates the subadjacency condition, which states that

(30) no rule can involve *X*, *Y*, *X* superior to *Y*, if *Y* is not subjacent to *X*.

Consider the structure underlying the sentence (22) :

- (31) [_S Frogs have souls [_S [_{SAdv} I realize [_S that Osbert feels *J*]]]].

The parenthetical rule involves X and Y in (30) when it applies to (31), since it fills the missing argument of the parenthetical, which occupies the position Y in (30), with the reading of the main clause, which occupies the position X in (30).

The sentence (32) is, a fortiori, a case in which the parenthetical rule violates the subadjacency condition.

- (32) Linguists, who are certainly interested in communication, I think it is fair to say, have been more interested in describing the rules of language rather than the consequences of language, particularly across cultures.

In the structure underlying the sentence (32), three cyclic nodes, each of which is S, intervene between the dummy symbol of the parenthetical and the main clause.

Thus it has become evident that the parenthetical rule violates the tensed-S condition, the specified subject condition, and the subadjacency condition.

Incidentally, some of the general conditions on application of transformations proposed in Ross (1967) *mutatis mutandis* appear to apply to the parenthetical rule.

In the first place, the parenthetical rule appears to observe the Complex NP Constraint. Consider the sentence (33):⁸³

- (33) *The incessant rain, John ridiculed the claim, was causing the accidents.

It seems that the ungrammaticality of (33) has something to do with the Complex NP Constraint. The fact that the sentence (34) is grammatical should be expected, since *wh*-movement, for example, extracts a *wh*-phrase from the complement to the phrase *make the claim*, violating the constraint but deriving no ungrammatical sentence.

- (34) The incessant rain, John made the claim, was causing the accidents.

- (35) a. What did John make the claim the rain was causing ?
b. The rain that John made the claim caused the accidents lasted for hours.

Secondly, the parenthetical rule appears to observe the Sentential Subject Constraint. Thus compare the paired cases of (36):

- (36) a. The semantic representation, it is reasonable to hope, is very tightly integrated into the cognitive system of the human mind.
b. *The semantic representation, to hope is reasonable, is very tightly integrated into the cognitive system of the human mind.

It seems that the fact that (36a) is grammatical, but (36b) is not has something to do with the Sentential Subject Constraint.

Chomsky would account for the ungrammaticality of examples like (36b) by formulating the Subject Condition :

- (37) No rule can involve X, Y in the structure
...X...[α...Y...]...

where α is a subject phrase properly containing the minimal major category containing Y .

Thirdly, the parenthetical rule appears to obey the Coordinate Structure Constraint.

Consider the sentences (38)—(40):

- (38) Then I advance a tentative opinion as to which it is of the various possibilities, and let me tell you that that is what is called diagnosis.
- (39) Then I advance a tentative opinion as to which it is of the various possibilities, and that, let me tell you, is what is called diagnosis. (Agatha Christie, *Hallowe'en Party*)
- (40) *That is what is called diagnosis then I advance a tentative opinion as to which it is of the various possibilities, and let me tell you.

The relationship that holds between (a) and (b) in (1) holds between (38) and (39), but not between (38) and (40). It appears that the fact that (39) is grammatical, but (40) is not has something to do with the Coordinate Structure Constraint.

Here, again, the parenthetical rule is in contrast with rules of anaphora in that it appears to observe the Complex NP Constraint, the Sentential Subject Constraint, and the Coordinate Structure Constraint.

Let it be noted that it is not necessarily the case that the parenthetical rule is a transformational rule because it seems to observe those constraints. There is no a priori reason that rules of semantic interpretation should in principle be exempt from the general conditions on transformations. It may be empirically proved that what have been supposed to be conditions on transformations are actually those on rules in general (i.e., transformations and interpretive rules), or conditions on rules in general which are more general than those on transformations currently advocated in the literature may be discovered.

Returning to the theme, Chomsky (1976a, 1976b) claims that rules of sentence-grammar are subject to the tensed-S condition, the specified subject condition, the subadjacency condition, etc., except that interpretive rules may violate the subadjacency condition. But as we have seen, the parenthetical rule, which is an interpretive rule and a rule of sentence-grammar, violates the tensed-S condition, the specified subject condition, and the subadjacency condition.⁹ This fact must be kept in mind in the course of further refinement and modification of those conditions on rules of grammar.¹⁰

FOOTNOTES

- 1) For example, in Okada (1976b).
- 2) Of course, the sentence (8) is grammatical, if the verb *think* in the second of the two successive independent clauses is interpreted as an intransitive verb.
- 3) See Anderson (1972) for discussion of this rule.
- 4) This fact may be a counterexample to the analysis, proposed in Emonds (1976), that sentences containing parentheticals are derived from two successive independent clauses concatenated without a coordinating conjunction, the second of which contains a proform referring back to the first, via a proform deletion rule.

It seems that the analysis involving the proform deletion rule is untenable at least in another respect as well. It would have no grammatical sources to apply to to derive grammatical sentences in some cases. Thus compare the paired cases of (i):

- (i) (a) Many young people do not seem to value freedom; it is true so.
 (a') Many young people, it is true, do not seem to value freedom.
- (b) This is an absolutely indispensable condition of the continued existence of a world possessed of scientific skill; it seems plain so.
 (b') This, it seems plain, is an absolutely indispensable condition of the continued existence of a world possessed of scientific skill. (Bertrand Russell, *Has Man a Future?*)
- (c) How much did he want; so asked Wieselth.
- (c') How much, asked Wieselth, did he want? (*Playboy*, October 1971)

The second of the two successive independent clauses of the examples (a), (b), and (c) are ungrammatical. Nevertheless, the examples (a'), (b'), and (c') are grammatical. Therefore, (a'), (b'), and (c') would have no grammatical sources.

- 5) Cf. Kajita (1968), Ross (1973), and Rardin (1975).
- 6) Bresnan (1972) claims that *than* fills the COMP position.
- 7) Let it be noted that parentheticals may appear in initial, medial, and final positions of sentences. Cf. Kajita (1968).
- 8) Cf. Emonds (1970).
- 9) The parenthetical rule appears to violate the A-over-A Condition. Thus consider the following examples:
 - (i) I realize that Osbert feels that frogs have souls.
 - (ii) Osbert feels that frogs have souls, I realize.
 - (iii) Frogs have souls, I realize that Osbert feels.

If the parenthetical rule were a transformation and observed the A-over-A Condition, it would only derive (ii) from (i). It could derive (iii) from (i) only if it violated the condition. Cf. Chomsky (1968, 1973) for discussion of this condition.

- 10) If the parenthetical rule turned out to be no rule of sentence-grammar at all, the phenomena involving it would be only compatible with Chomsky's claim. But then the fact that the parenthetical rule appears to be subject to the Complex NP Constraint, the Sentential Subject Constraint, and the Coordinate Structure Constraint, while rules of anaphora are not, remains yet to be accounted for.

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