probably with the exception of (in)definitivization, are abandoned before they reveal their true theoretical significance, while others are sidestepped or relegated to the " wastebasket " of pragmatics. One of the crucial examples will be his treatment of uniqueness in literature. In order to cope with the uniqueness problem, we have to give up our attempt to theorize on literature in general terms, and the reverse seems to be also true. Take, for example, the problems like ambiguity or metaphor. We are not yet certain whether these phenomena in literature is qualitatively the same as those in ordinary usage, let alone the fact that no existing theory is capable of identifying the *significant* structures in a text. At least, it might be well to add that the ambiguity made much of in literary studies has little to do with the clear-cut, either-or ambiguities in linguistics.

From these considerations, we might safely conclude that van Dijk's is a premature attempt. And especially, a big question mark should be set against his theoretical framework for the study of literary texts. But it will be in the near future that text grammars reveal their manifold possibilities with respect to such important problem as paraphrase relations, dialogue structures, etc.

Ray S. Jackendoff: *Semantic Interpretation in Generative Grammar*

(Studies in Linguistics Series 2)

Cambridge, Mass.: The MIT Press, 1972.

Reviewed by Shosuke Haraguchi

Jackendoff's new book, which is presented as the second volume in the series Studies in Linguistics, is a welcome addition of the author's research on interpretive semantics. There seem to be at least three perspectives which will help make the theoretical implications of this work clear. First of all, if we compare this book with Rosenbaum's *The Grammar of English Predicate Complement Constructions*, we notice some interesting similarities and differences. In 1965, Chomsky published his celebrated book *Aspects of the Theory of Syntax*, and presented

the general framework for the syntactic theory of transformational grammar. Rosenbaum applied *Aspects* theory (which is now referred to as Standard Theory) to the description of English complementation. His book was published in 1967, and it has had a great influence on the later studies of syntactic problems. In 1972, Chomsky published his *Studies on Semantics in Generative Grammar* which includes three essays which have been published elsewhere: "Remarks on Nominalization," "Deep Structure, Surface Structure, and Semantic Interpretation," and "Some Empirical Issues in the Theory of Transformational Grammar." In this book, he developed what he calls the Extended Standard Theory. Jackendoff used the general framework of the EST in his study of semantics, and developed the theory of interpretive semantics. The result, the book under review, published in 1972, gives us a concrete picture of interpretive semantic theory. Looked at in this perspective, this work shows us clearly the rapid advancement of the theory in recent 2 years, the development of our insights into natural language, and the expansion of our interests into the domain of semantics.

Secondly, the book must be looked at in terms of the controversy between generative semanticists and interpretive semanticists. Throughout this work, the author is conscious of the opposing theory of semantics, and tries to justify his interpretive theory by showing new emprical evidence in favor of IS, or by pointing out the theoretical inadequacies of GS. Most of the arguments are fairly sound and convincing in the context of the empirical data presented in this work, though some of them are inconclusive.

Thirdly, it must be pointed out there are serious differences of opinions among the interpretive semanticists themselves. Thus Jackedoff is in agreement with Chomsky (1972) and proposes, for example, derived structure interpretive rules in addition to the projection rules which apply to deep structure. On the other hand Katz tries to defend the standard theory and argues that most of the examples presented by Chomsky and Jackendoff in support of the existence of the derived structure interpretive rules are actually related to the stylistics rather than to the semantics. In this connection, it seems worth while to point out that they also differ on such fundamental notions as presupposition, question vs. its natural answer, the range of semantics, etc. Some of these differences are real and interesting, and they deserve

careful examination. The readers interested in these topics are strongly recomended to read also Katz's *Semantic Theory* and to compare the different assertions made by the two leading interpretivists.

The above general survey gives some general idea of the theoretical setting of this book. However, the reviewer intentionally wishes to avoid discussing this book any further from these perspectives here, mainly because the time limit prevents him from doing so. Instead, he chooses to focus his attention on some remarkable proposals and on some empirical problems.

In chapter 2, the author proposes to incorporate the notion " thematic relation," into the theory which notion is a development of Gruber's proposal. That is, the following hierarchy applies to thematic notions such as Agent, Location, Source, Goal, and Theme:

(1) (The Thematic Hierarchy)
1. Agent
2. Location, Source, Goal
3. Theme

He then proposes the following Thematic Hierarchy Conditions on the applicability of the passive transformation (p. 43) and on reflexives (Ch. 4, pp. 148):

(2) (Thematic Hierarcy Condition)
The passive *by*-phrase must be higher on the Thematic Hierarchy than the derived subject.

(3) (Thematic Hierarchy Condition on Reflexives)
A reflexive may not be higher on the Thematic Hierarchy than its antecedent.

The condition (2) explains, for example, the ill-formedness of the following sentence:

(4) * *Five Dollars* are cost by *the book*. (p. 44)
(Location on the scale of value) (Theme)

and the difference in the applicability of passive transformation to verbs like *strike* and *regard*:

(5) a. *Bill* strikes *Harry* as pompous.
(Theme) (Goal)
b. * *Harry* is struck by *Bill* as pompous. (p. 45)
(Goal) (Theme)

(6) a. *Harry* regards *Bill* as pompous.
(Agent) (Theme)
b. *Bill* is regarded by *Harry* as pompous. (p. 45)
(Theme) (Agent)

This condition (2) enables us to explain the ill-formedness of (4) and (5b) in which both *by*-phrases are Themes, and are lower than Location or Goal. The condition (3) explains the illformedness of the sentences:

(7) a. * *John* was shaved by *himself*. (p. 148)
(Theme) (Agent)
b. * I talked about *Thmug* to *himself*. (p. 152)
(Theme) (Goal)

which violate the condition (3). The examples such as (7) have been explained by Postal's Cross-over Principle. However, that kind of principle is incompatible with the theoretical framework of the present theory, in which the specification of coreferentiality is given by referring to the derived structure information. That is, at the time passive transformation is applied to the underlying structure of (7a), the information on coreferentiality is not assigned yet. Thus, so as not to devive the ill-formed sentence (7a), we must find another possibility. In other words, we are prohibited from using theɔ ross-over principle which refers to the identity of reference. In addition to this, the cross-over principle cannot, for example, explain the ill-formedness of the following examples which do not have cross-over violation:

(8) a. ?* I sold *the slave* to *himself*.
(Theme) (Goal)
b. ?* I bought *the slave* for *himself*. (p. 157)
(Theme) (Goal)

However, the ill-formedness of the examples (8) and (7) clearly is of the same nature, and must be explained by some mechanism. This same property can be captured by the expansion of the independently motivated condition (3) to this case (8). Thus, as the author claims, the notion itself and the conditions are justified.

It will be worthwhile to note, in relation to this important notion, that Hale (1973) also suggests the existence of a similar hierarchy. That is, in the discussion of the applicability of Subject-Object Inversion in Navajo, he suggests that "Navajo nouns can be ranked in terms of certain semantic properties which they possess," and that "animates

would naturally rank higher than inanimates . . ., and it is reasonable to expect that some inanimates would rank higher than others." The applicability of Subject-Object Inversion is, he suggests, dependent on whether the underlying object is occupied by the nouns higher in rank than the noun in the subject position. If this is the case, then we can say that we have an independent support for the notion.

In chapter 3, Jackedoff argues that the so-called sentence adverbials, manner adverbials, etc. are introduced by the base rules under the category *Adv* and that " there will be no structural indication such as *Adv Manner*. (p. 49)" He also argues that the difference in meaning will be explained by projection rules which will be applied at the derived structure. Basically, his proposal seems feasible, and much better than the transformational derivation of adverbs. However, problems remain to be solved. Consider, for example, the following sentences:

(9) Frankly, John {probably / surely} worded the letter carefully

Within Jackendoff's present framework, it is impossible to generate these sentences containing two sentential adverbs.

In section 3. 10, he suggests that the unacceptability of (10):

(10) a. * Did Frank probably beat all his opponents? (p. 84)
b. * Who carefully finished eating dinner?

appears to come from the application of Subject-Aux Inversion. In addition to this, he also suggests that the dubious acceptability of (11):

(11) a. ??Never has Bill apparently seen anything to compare with that.
b. ??So fast did Tom probably run that he got to Texas in ten minutes. (p. 85)

is related to the inversion. Thus he continues to argue that " inversion would introduce some semantic factor not present in noninverted forms, and this factor would be incompatible with the readings of S adverbs. (p. 86)" However, this is simply a misinterpretation of the facts. The relative unacceptability of (11) is no doubt irrelevant to Subject-Aux Inversion; which is clear from (12)

(12) a. * Never Bill apparently has seen anything to compare with that.
b. * So fast Tom probably ran that he got to Texas in ten minutes. (p. 86)

Thus the reason why (11) is relatively unacceptable must be explained in some other way. Consider the following sentences:

(13) a. Never has Bill seen anything to compare with that.
b. So fast did Tom run that he got to Texas in ten minutes.

Clearly these two sentences have the emphasis imposed by the speaker. That is, the speaker is quite confident on the truth of the propositions. Thus the very meaning of (13) is incompatible with the meaning of such sentence adverbs as *apparently* and *probably*. In the same vein, we can see that the unacceptability of (10) is irrelevant to Subject-Aux Inversion. The reason is this: since the function of interrogative sentences is to ask for the addressee's judgement, the intrinsic meaning of question is incompatible with the speaker-oriented sentence adverbs, the function of which is to express the speaker's judgement. Thus we can now explain the reason why the interrogative sentence (10b) to which Subject-Aux Inversion has not applied is ill-formed.

Before we go on to the next chapter, it seems advisable to examine one more problem: In section 3. 12, Jackedoff argues that " generating the parenthetical clauses as sentence adverbials immediately solves the syntactic problem of accounting for the derived structure (3. 234) [i.e., John is, I think, a fink]. (p. 97) " However, to do so will raise some new problems. As an indication of this, consider the following examples:

(14) Did John eat beans?
(i) a. Yes, evidently.
b. * Yes, I think.
c. Yes, I think so.
(ii) a. No, evidently not.
b. * No, I think.
c. No, I {think not. / don't think so.}

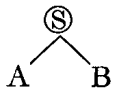
In (14), (ia), (ic), (iia), and (iic) are possible answers to the question, while (ib) and (iib) are not. To explain this discrepancy in use between sentence adverbs and parenthetical expressions, some kind of modification in his theory seems inevitable.

In chapter 4, the author discusses pronouns and reflexives, and proposes a coreference assignment rule, which places pronominalization and

reflexivization into one schema. This is an interesting and feasible generalization because pronouns and reflexives show complementary distribution in terms of syntactic and semantic environments. During the discussion of the proforms, he proposes a new definition of " command ", replacing " the term " S " in the definition of command with " node that defines a cycle ". " Thus, he extends the notion to NP's, which, as Chomsky argued, define a cycle. In this connection, it seems worth while to point out that he also extends the definition of the same notion in p. 312, arguing as follows:

> " Under the standard definition of " command," a node *A* commands a node *B* if the lowest S node dominating *A* also dominates *B*. . . . However, there seems to be nothing in the established uses of command that conflicts with an extension of the definition, allowing *A* also to command the lowest *S* dominating it."

That is to say, by this new definition we can say that *A* commands also



the circled S which has been considered not to be commanded by *A*.

This chapter also contains many interesting factual observations. To pick up just one, he points out that the condition on reflexivization depends on some semantic property of verbs:

(15) a. I hate the story about { *him / himself / me / *myself } that John always tells.

b. I told the story about { *him / *himself / *me / myself } that John likes to hear. (p. 166)

In (15a), *himself* and *me* can occur after *about*, but in (15b) only *myself* is permitted. This difference in the distribution of pronouns and reflexives, he argues, " may have something to do with the subject's being marked with the semantic relation Agent by the verb: *tell* certainly has an Agent subject, whereas *hate* and *like to hear* do not. (p. 167) "

In section 4. 13, he suggests that *each other* and reflexives share vir-

tually identical environments, and suggests also that *each other* is a kind of reflexive pronoun. However, there are some syntactic and semantic differences between reflexives and *each other*. For example, reciprocals can occur as genitives, while reflexives cannot. Compare the following examples:

(16) a. They looked at each other's face
b. * They looked at themselves's face.

Consider also the following examples:

(17) a. They embraced each other.
b. * They embraced themselves.

The reciprocal expression can occupy the object position of some verbs, while reflexives cannot. If we regard *each other* as a kind of reflexive, then the proposed coreference assignment rule must be reformulated to cover the facts (16) and (17), and *each other* must have, as pointed out by the author himself, some special semantic interpretation mechanism to explain the semantic difference between reflexives and reciprocals.

In chapters 5 and 6, the author extends his interpretive analysis to the phenomena treated thus far by complement subject deletion transformation, and to VP anaphora and to the sentential pronoun *it*. If his analysiz were correct, there would be some theoretical consequences, since we would be able to eliminate from our theory all deletions under identity. Thus we could impose a significant restriction on linguistic theory. However, there seem to be some difficulties in this line of extension. Consider, first, the following exsample:

(18) Walt is tough to get along with, but Vera isn't. (p. 269)

The deep structure of this sentence will be:

(19) $[_{S_1}$(for)Δ to get along with Walt] is tough, but $[_{S_2}$(for)$[_{NP}\Delta]$ $[_{V}\Delta$ Vera] isn't $[_{Adj}\Delta]]$ (p. 269)

Since no lexical item is inserted in $[_{Adj}\Delta]$ in (19), we don't know whether it is permissible to apply *Tough* Movement in S_2 cycle, nor can we tell whether $[_{Adj}\Delta]$ $[_{V}\Delta]$ and $[_{NP}\Delta]$ satisfy selectional restrictions. Only after the application of the semantic interpretation on the last cycle, do we know that they do not violate their selectional restrictions. In other words, the well-formedness of the sentence will be defined in terms of

derived structure. This is a drastic change in the theory of selectional. restriction.

The parallel argument also applies to coreferential subject deletion. Consider the following sentences:

(20) a. John expected [Δ marry Tom]
b. * John expected to marry Tom.

At the stage of the underlying structure (a), we don't know whether this sentence satisfies the selectional restriction given to the verb *marry*. We can tell only at the last cycle that it violates the restriction. However, if the selectional restriction could be specified at the derived structures, then how can we define the notion in an interesting way? Unfortunately, the author does not discuss this matter at all.

Secondly, Jackendoff proposes, accepting Akmajian's suggestion, that "the anaphoric expression receives the semantic interpretation of the *presupposition* of the first clause. (p. 272)" Though this is a very interesting assumption, there are also some difficulties. Consider, for example, the sentence (21):

(21) a. THE MAN expects to win the first prize.
b. THE MAN expects [Δ win the first prize]

Though *THE MAN* in (21) is focus, Δ receives its semantic interpretation, which is clearly at variance with the assumption. Similarly, consider the following sentences:

(22) JOHN kissed MARY, but Tom doesn't believe *it*.
(23) John killed even his son, but his wife didn't know *it*.

In (22) the presupposition of the first clause is, according to the author, *X kissed Y*. However, *it* must receive the semantic interpretation of *JOHN kissed MARY*, which clearly involves foci. In (23), the NP with *even* must be focus according to the author (for this discussion, see p. 249). However, the semantic interpretation of *it* will be *John killed even his son*, and not the corresponding presupposition *John killed even X*.

Thirdly, as was pointed out by Grinder and Postal (1971), there seems to be some evidence which shows the necessity of deletion rules under identity.

These observations suggest not only that the extension of the theory

of coreference to deletion phenomena is rather controvesial, but also that at least some parts of the author's theory need serious reconsideration.

In section 6. 7, Jackendoff discusses the relation of the notion " focus-presupposition " and the notion " topic-comment ". Thus he puts forward the interesting suggestion that Topic will be defined as " the B-accented focus," and the comment will be the remaining parts, i.e., presupposition (with A-accented focus).

In chapter 7, the author points out the ambiguity caused by the optional semantic rule, the existence of which has been neglected thus far. He also points out that from the observation that the sentence:

(24) Bill asked a man for a cigar. (p. 280)

is ambiguous in six ways, the semantic description which simply marks the NP's as [±specific] lacks both descriptive and explanatory adequacy. Then he goes on to propound the theory of modal structure, introducing " a class of semantic markers called *modeal operators*, (p. 292) " and some modal projection rules.

The author extends this proposal to the explanation of negation in chapter 8. Though this approach to negation seems to be correct in essence, some of the specific explanations seem controversial. For example, in p. 367 he suggests a projection rule for inverted S's:

> A sentance containing the configulation Aux-NP-VP receives the semantic marker *X* in its semantic interpretation (presumably in the modal structure).

This proposal is based partly on an erroneous conception of Subject-Aux Inversion which has already been pointed out above. In addition, " the semantic marker *X* " is too vague and meaningless. These considerations clearly suggest the whole description of this section need serious revision.

In summary, this book, filled with remarkable ideas and proposals, as well as some inadequacies, will be very helpful for those who are interested in semantics and the theory of generative grammar. This book has a significant impact on the theory, since it is a milestone for (i) the " reductions in the power of the transformational component " and (ii) the consequent possibility of " a much less abstract conception of deep structure." This seems to be, basically, a correct and sound line of development of the theory.

REFERENCES

Chomsky, N. (1972) *Studies on Semantics in Generative Grammar.* The Hague: Mouton.

Grinder, J., and P. M. Postal (1971) " Missing Antecedent," *Linguistic Inquiry* 2: 3.269–312.

Gruber, J. S. (1965) *Studies in Lexical Relations.* Ph. D. dissertation. Bloomington: Indiana University Linguistic Club.

Hale, K. (1973) "A Note on Subject-Object Inversion in Navajo," *Issues in Lingustics: Papers in Honor of Henry and Renée Kahane.* Ed. by B. B. Kachru, *et. al.* Urbana: University of Illinois Press.

Postal, P. M. (1971) *Crossover Phenomena.* New York: Holt, Rinehart, and Winston.

Rosenbaum, P. S. (1957) *The Grammar of English Predicate Complement Constructions.* Cambridge: MIT Press.

Makkai, Adam & David G. Lockwood: *Readings in stratificational linguistics.* University, Alabama: The University of Alabama Press, 1973, 331 pp.

Reviewed by Heinz Balkenhol, Sophia University, Tokyo

When in 1965 Sidney M. Lamb told his students at Yale University that after the appearance of his new version of ' Outline of stratificational grammar ', transformational grammar would be done away with, everybody pricked up his ears and began waiting for things to come. The new outline finally appeared in 1966, but transformational grammar did not disintegrate. On the contrary, it continued its conquering march all over the world. Stratificational approaches remained an object of discussion in a handful of linguistic circles. But the conclusion some transformationalists drew, that the advance of Lamb and his guard had ended in a complete failure, was overhasty. Quite a few linguists who were already familiar with the ideas of a stratificational approach, or who picked up them now, tested and refined the system under various aspects on an extensive amount of data. Today, stratificational grammar has gained a firm stand among linguistic theories, while, on the other hand, some principles of transformational grammar, for some years considered as infallible dogmas, have been called into question.