



Semantic and Pragmatic Structures in Chomsky's Binding Theory

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Abstract

The central question that this paper attempts is to describe the conditions under which the anaphor can be determined grammatically or contextually. The issue at hand is whether anaphoric forms can be distinguished from indexical ones within Binding theory. The syntactic representation of bindees are characterized by the use of indices. But what role does the context play in assigning co-referential or non-coreferential properties to anaphors? Furthermore, ellipses are also context-bound. An elliptical structure is indexical, rather than anaphoric.

The study analyzes the syntactic structures of Chomsky's Binding theory within Bolinger's (1979) semantic model *Meaning and Form*. It seeks the support of other semanticists in order to fill possible semantic gaps in Binding theory.

Keywords: binding theory, elliptical structures, meaning and form model

1. Introduction

This study shows the complementary roles of syntax, semantics, and pragmatics. A linguistic structure encompasses an explicit reference to a semantic description and an implicit account of non-linguistic factor such as pragmatics. Chomsky's Binding theory (1986) describes the syntactic configurations of anaphors and pronominals without specifying their semantic and pragmatic significance. This study aims at analyzing those missing gaps in the theory by applying *Meaning and Form* (1979) model. This model premises that there exists a one-to-one correspondence between form and meaning and any divergence in formal structure can actuate a difference in the semantic interpretation of the sentence. It is the reaffirmation of Labov's (1972) assertion that a single semantic structure cannot find expression in two different formal



descriptions. The model, as Alto¹(1977) summarizes, reinforces the old linguistic principle that “the natural condition of a language is to preserve one form for one meaning, and one meaning for one form” (preface x).

The current study, however, focuses on those aspects of the model that provide a semantic description of the syntactic structure of Binding module. The model serves as a framework which help in understanding the semantic and pragmatic dimensions of the theory.

2. Literature Review

Binding theory has been the topic of extensive syntactic debate. For Haegeman (1994), Binding theory regulates not only the referential configurations of NPs, but also formulates their grammatical constraints. It essentially examines the relations between NPs in A-positions, it is, therefore, a theory of A-binding². Jackendoff (1972) recommends that a thematic hierarchy condition must replace a c-commanding requirement for understanding binder-bindee relationship. Sentence (1) is unacceptable because the antecedent “John” is lower in thematic hierarchy (theme) than the anaphor “himself” (agent).

1. *”John was killed by himself.”

Reuland and Everaert (2001) in “Deconstructing Binding” deconstruct the theory along empirical lines. Sentences (2) and (3), according to them, are clear violation of Condition A and B respectively because in (2) the bindee lacks a well-recognized antecedent while in (3) the anaphor “himself” receives Case from “expect” which is not in the local domain of the bindee.

2. “*[John i expected] [Mary j to hate himself i].”
3. “[John i expected] [himself i to be able to hate Mary].”

The complementary distribution of anaphors and pronominals is also violated in certain cases like (4).

4. “John i pulled the blanket over him i/himself i.”

¹ Quoted in Bolinger (1979) *Meaning and Form*, preface p. x.

² A-binding describes binding relations in argument positions, whereas in A'-binding the antecedent is not in an A-positions.



Fiengo and May (1994) refer to the possibility of imagining a natural language in which there is no reflexives. Principle (a) will assume a different dimension and the sentence (5) will be expressed as (6) in which personal pronominal will be construed as reflexive:

5. "John *i* admired himself *i*."
6. "John *i* admired him *i*."

For Carnie (2000), the theory delineates the syntactic restrictions of NPs in a sentence. An anaphor, for example, cannot be subjectivized in an English sentence.

7. "*Each other annoyed them."

3. Binding Theory

The standard formulation of this theory first originated in the work of Chomsky (1986). This theory characterizes the syntactic relation between nominal expressions and their antecedents. These nominals are categorized as: (i) anaphors, (ii) pronominals, and (iii) R-expressions. The formal identity of anaphora or bindees is captured by co-indexation. Numerals provide a convenient representational device for indices. These indices help to bring out linguistic distinctiveness in otherwise indistinguishable as linguistic forms. NPs are the same if they bear occurrences of the same index, different if they bear occurrences of different indices.

The theory includes the following three principles:

- a. "An anaphor is bound in a local domain."
- b. "A pronominal is free in a local domain."
- c. "An R-expression is free."

An expression is locally bound if the bindee is c-commanded by the binder; it is locally free if it is not locally bound. It is globally free if it is not c-commanded by a coindexed phrase in any dominating category.

NPs which come as R-expressions (Referring expressions) denote people, objects or ideas in the real or in an imaginary discourse context. Those which feature as anaphors like reflexives and reciprocals draw their meanings from other NPs in the sentence. Consider the following examples.



8. “John *i* hurt himself *i*.”

NP1 NP2

9. “They *i* defended one another *i*.”

NP1 NP2

NPs “himself” and “one another” in (8) and (9) are anaphors and that’s why the binders (NP1s) and the bindees (NP2s) have been coindexed with same indices (“*i*” in these cases).

3.1 Locality Constraint in Binding Theory

The effect of binding is sensitive to locality requirements. This can roughly be generalized as that anaphors must be bound by an antecedent that not only c-commands, but is also sufficiently local. Consider the following examples.

10. “John *i* said that Michael *j* admired himself *j*.”

11. “John *i* said that Michael *j* admired him *i*/**j*.”

12. “He *k* said that Michael *i* admired John *j*.”

In the first, the reflexive “himself” is co-referential with Michael because it falls in its local domain³. In the second, the personal pronoun cannot be co-referential with Michael⁴ though the possibility of its co-referentiality with “John” does exist because it is far enough to be c-commanded. In the third, neither Michael nor John can be the antecedent of the personal “he.”

Pronominals, on the other hand, do not follow binding domain restriction. “An r-expression must be free,” says Chomsky (1986, p. 79). This explains the ungrammaticality of the following sentence.

13. * “Michael *i* bopped him *i* on the head with the zucchini.”

Michael cannot be co-indexed with the pronominal “him” in (13) because it is free from binding restriction. Its binder must lie outside the binding domain.

Also consider (14) and (15):

³ Binding domain, to put in simple words, is clause-mate restriction. This restriction, however, does not apply in case of pronouns.

⁴ This restriction comes into effect because of locality domain.



14. “Harry *i* thinks John *j* admires him *i*.”

15. *“(Harry *i* thinks John *j* admires him *j*.”

In (14), a co-referential relationship exists between “Harry” and “him” but co-referentiality is not possible between “John” and “him” in (15) because of principle (c) of Binding theory. Moreover, nominals as r-expressions are not bound by binding domain as shown in the following examples.

16. “John *i* said that John *j* passed the test.”

17. *“(John *i* said that John *i* passed the test.”⁵

Binding theory further states that the binder must precede the bindee ⁶ as illustrated in the following example:

18. *“(John expects) [himself *i* to meet Harry *i*].”

The antecedent “Harry” and the anaphor “himself” are clause mates (non-finite clause), but the sentence is unacceptable on account of antecedent-anaphor order. This example does not only recognize the fact that the syntactic order of antecedent and the anaphor is very significant besides c-commanding and local domain but also that the subject of a non-finite clause is governed by the subject of the matrix clause--John in this case. So the bindee “himself” should rather be co-indexed with the antecedent John as in (19).

19. “[John *i* expects] [himself *i* to meet Harry *j*].”

3.2 C-Commands in Binding

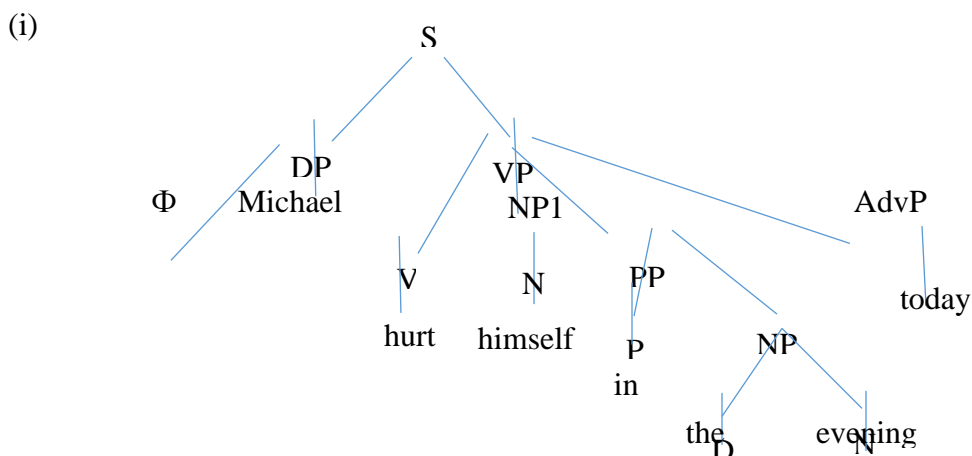
⁵ The sentence also violates the principle of Pronominalization which states that pronominalization must happen in the embedded clause in case of identical nominals. See John Ross (1967).

⁶ Jackendoff (1972, p. 118) terms it as forward pronominalization. “With the antecedent to the right (calls backward pronominalization), the pronoun must not command the antecedent.”

Binding theory recognizes a c-commanding relationship between the binder and bindee. The theory also specifies the nodes on the syntactic tree which develop a c-commanding relation⁷. Consider the following sentences.

- 20. “Michael_i hurt himself_i in the evening today.”
- 21. “Michael’_i s father_j hurt himself_j in the evening today.”
- 22. *“Michael_i’s father_j hurt himself_i in the evening today.”

In (20), “Michael” c-commands the anaphor “himself” as illustrated in figure (i):



However, in (21) and (22), the complement “father” of the D “Michael’s” can c-command the anaphor “himself,” not the D “Michael’s” as indicated in (22).

4. Semantic and Pragmatic Configurations in Binding Theory

Linguistic expressions contain open indexical (non-anaphoric) expressions whose values can only be determined contextually. This relation between sentences and contexts needs to be characterized wherein what is non-contextual is determined linguistically and what is grammatical is determined contextually. The sentence (23) can be interpreted as 23(a), 23(b) or 23(c).

- 23. “Mary kissed her daughter.”
- 23(a). “Mary kissed Alice’s daughter.”

⁷ The nodes that lead to a c-commanding relationship include sisters, or sisters and nieces but never mother and daughter etc.



23(b). “Mary kissed Charlotte’s daughter.”

23(c). “Mary i kissed Mary i’s daughter.”

This means that the pronoun “her” is an open indexical term and is an anaphoric, and hence linguistically closed, or indexical, and hence linguistically open⁸. Similarly, in (24) the name and the pronoun must be non-coreferential by grammatical rule because of the syntactic order of antecedent and pronominal as discussed in section (3.1). These examples also lend support to the view that pronouns are bereft of lexical contents which could otherwise distinguish one name from another i.e., John from Michael.

24. “John i hit Michael j and then BILL k hit him *i/j/*k.” (him= Michael)

25. “John i hit Michael j and then Bill k hit HIM i/*j/*k.” (him= John)

26. “He i is Oscar i.”

However, if the sentence is true, then they must be coreferential. In other words, the speaker utters this identity statement with the intention that the NPs flanking the copula co-refer. Structurally, however, and following Binding theory, the NPs in this case cannot be co-indexed. Grammar though precludes this co-referentiality, it, nevertheless, comports with the speaker’s intention in uttering it. The distinct NPs in this case will indexically co-refer. Negating the sentence, however, will lead to different syntactic relation and will make them non-coreferential.

27. “He i is not Oscar j.”

Imagine a situation that Max sees a man leaving the room but cannot see his face. On inquiry, he is told (28).

28. “He put on Oscar’s coat; you figure it out.”

⁸ Stress can also play a part in making one reading predominate over the other.



The speaker seeks to implicate that “Oscar” and “he” are co-referential, based on the assumption that people put on their own coats. Binding theory, however, carries no such implicatures. Sentence (28) has two indexical pronouns whose value is determined by means of coindexing for there are two occurrences of pronouns which attain co-referentiality or non-coreferentiality contextually.

Sentence (29) should only be understandable with non-coreference. The hearer will take the speaker as intending to state something which is characteristically false (29) and that is two different people are actually the same (30).

29. “Mary’s husband *i* is Mary’s husband *j*.”

30. “Mary’s husband *i* is Mary’s husband *i*.”

(29) will mean that John who is a pianist and John who is a statesman were considered two different persons. It, however, was discovered that the pianist and the statesman are one and the same person.

The negative of sentence (29) as in (31) carries only non-coreference implicature and the sentence will necessarily be taken as true, that two different people are different.

31. “Mary’s husband *i* is not Mary’s husband *j*.”

Similar observations can be made about “masked ball”⁹ circumstances. An attendee at a masked ball hears someone claim that Oscar is crazy. The attendee reports it as (32).

32. “He *i* thinks Oscar *i* is crazy.”

Upon unmasking, it turns out that the person was Oscar himself. The attendee was intended to use “He” and “Oscar” as non-coreferential which, in fact, turns out to co-referential. Following principle (b) of Binding theory, the binder and the bindee must be non-coreferential. Nevertheless, what the attendee said was true irrespective of the syntactic constraints. Also consider (33):

33. “Bill liked his cat and Charley did too.”

The underlying deep level of the sentence is 33 (a) and 33 (b).

33(a). “Bill liked his cat.”

⁹ Quoted in *The Handbook of Contemporary Semantic Theory* (1996, p. 119)



(b). "Charley liked his cat."

The S- structures of the sentence are 34-37.

34. "Bill_i liked Bill's_i cat and Charley liked Bill's_i cat."
 35. "Bill_i liked Bill's_i cat and Charley_j liked Charley's_j cat."
 36. "Bill_i liked Michael's_k cat and Charley_j liked Michael's_k cat."
 37. "Bill_i liked Charley's_j cat and Charley_j liked Bill's_i cat."
 38. "*Bill liked Charley's cat, and that Charley liked Bill's cat."

The interpretation of "his," according to Reuland and Everaert (2001), will depend on the referent of the first conjunct--Bill, Charley, or some other person. The sentence may be interpreted as Charley liked Bill's cat, Charley liked his own cat, or that he liked some other person's cat. However, it cannot have a semantic structure of (38). The elided VP "did too" can also be interpreted as they liked their own cats. In this case the S-structure of (33) will be (39).

39. "Bill_i liked Bill_i cat and Charley_j liked Charley_j cat."

These choices are not enforced by any property of syntax. Rather these are purely pragmatic in nature.

The following example is also worth consideration here.

40. "If everyone admires Oscar, then he admires Oscar."

Following Binding theory, we can coindexed or non-coindexed the sentence as in 40 (a) and 40(b):

- 40 (a). "If everyone_i admires Oscar_k, then he_i admires Oscar_k."
 40 (b). "If everyone_i admires Oscar_k, then he_k admires Oscar_k."

If the pronoun "he" refers to anybody, it follows that no one can be excluded from those admire Oscar including Oscar himself. Example 40 (b), on the other hand, appears to have a non-coreference implicature:

41. "If Max admires Oscar, then he admires Oscar."

(41) can find indexical representation either as 41 (a) or 41(b):

- 41 (a). "If Max_i admires Oscar_k, then he_i admires Oscar_k."
 41 (b). "If Max_i admires Oscar_k, then j admires Oscar_k."



If the speaker intends to emphasize the pickiness of Max who if admires anyone, then everyone does, then, in this case, co-referential implicature will be cancelled in favour of non-coreference. Similar observations can be made about (42) wherein the pronoun “it” will be interpreted either as indexical or anaphoric.

42. “Everyone who owns a donkey beats it.”

Co-indexiation or non-coindexiation of (42) can be formulated as

42 (a). “Everyone *i* who owns a donkey beats it *i*.”

42 (b). “Everyone *i* who owns a donkey beats it *j*.”

5. Pragmatic Considerations in Pronominals

Principle (b) of the theory validates the deictic nature of pronominals. Bolinger (1980, p. 92) also asserts the sensitivity of pronominals to context. The pronoun “we” in (43) is most probably a man while (44) is uttered by a woman.

43. “We should take care of our women.”

44. “We should take care of our men.”

Context is significant to unraveling the co-referentiality or non-coreferentiality of pronominals “his, her,” and “her” in (45)

45. “His wife told her husband that her father was angry.”

The S-representations of 45 can be 45 (a), (b) or (c).

45(a). “John’s wife *i* told John’s wife’s *i* husband that John’s wife’s *i* father was angry.”

45(b). John’s wife *i* told Mary’s husband *j* that Mary’s father *j* was angry.”

45 (c). “John’s wife *i* told Mary’s husband *j* that John’s wife’s *i* father was angry.”

Only context can determine the possible semantic structure of (45).

This also helps in the assigning gender to nominals. It is to be recognized that a gender neutral NP is marked as masculine in the corresponding pronominal form. So there is nothing odd about (46).

45. “Everyone should take care of his health.”



(47), however, will sound odd because with “the nurse,” the dominant image is that of a woman.

47. *“The nurse put on his hat.” (Bolinger, 1980, p. 94)

(47) can take plural pronominal provided that the binder is indefinite:

48. “Everybody will choose their partner.”

This pattern can be observed in tag question as in (49).

49. “Nobody is blaming you, are they?”

(46), however, cannot be written with plural pronominal when the binder is definite:

50. *“A man or a woman should take care of their health.”

A double pronoun “he/she” is considered clumsy:

51. “A person should take care of his or her health.”

The deictic “it” co-refers to non-human antecedents. It, however, can be used as a derogatory referent for human antecedent as evident in sentence (52) wherein it has indexical relation with a passing motorist who drives recklessly and splashes water on someone passing nearby:

52. “I didn’t know *it* was human.”

A pronominal “he” or “she”, however, replaces the deictic “it” when non-humans are humanized as in (53) or when they are recognized as proper nouns as Chafe (1970, p.140) illustrates in (55).

53. “I saw a squirrel climbing a tree with his mouth full of building materials.”

54. “The elephant broke its leg.”

But

55. “Jumbo broke his leg.”

The genderized use of pronominals also happens in case of certain inanimate nouns like “ships, cars” and “airplanes” which are conventionally marked as “she.” While the genderized representations of “car” and “airplane” involve the elements of emotions usually associated with



women¹⁰, “ship”, according to Bolinger (1980, p. 96), marks the biased representation of women as workhorse. The crew, dominantly men, viewed it as a household working for them and toward whom they had great love and affection. This usage also finds expression in other contrivances pictured as workhorse:

56. “Look at my baby car. Isn’t she lovely?”

On the contrary, if the object is seen as capable of containing intelligence, it is masculinized as in (57):

57. “He can sometimes play quite well.”

The binder of “he” in (57) can be a computer playing a game intelligently.

58. “Look at my new powerful mower i; ain’t she i a beauty?”

The co-referentiality between “mower” and “she” illustrates the feminine gender of the antecedent “mower.”

5.1 The Optionality of “that” in Complement Clause

Binding theory has also not conclusively accounted for the optionality of complementizer “that” in complement clauses. Carnie (2000), p. 16) considers the inclusion of “that” optional in interrogative structures when the wh- word “who” features as an object in the matrix clause as shown in 59-62.

59. “Who do you think that John will meet first?”

60. “Who do you think John will meet first?”

61. “Who do you think will John meet first?”

62. *“Who do you think that will John meet first?”

In sentence (61), “who” appears as a subject because in the corresponding declarative form, it will feature as a subject: “Michael will meet John,” not “John will meet Michael” which will be the possible paraphrase of it when “who” takes the object slot. This makes the exclusion of “that” obligatory in (62).

¹⁰ “Car”, for instance, is treated as feminine when the speaker views it with affection.



Bolinger (1979, p. 11) considers the complementizer “that” a semantic maker. Its inclusion sounds odd when a person provides unsolicited information. Hence, if Bill comes and volunteers information about weather forecast, he will utter (64), not (65) which will be uttered when he is solicited for the forecast in the form of (63):

- 63. “What’s the weather for tomorrow?”
- 64. “The forecast says it’s going to rain.”
- 65. “The forecast says that it’s going to rain.”

The inclusion of “that” in (65) substantiates its indexical nature and its exclusion implies that it is a trace copy of the constituent in the interrogative structure—“weather” in the present case¹¹.

Similar observations hold for “that” as a relative pronoun. The relativized clause in (67) has been marked ungrammatical because “that” as a relative pronoun is incompatible when some new information is introduced in the discourse context. This can be shown with the word “incidentally.” Sentence (66), on the other hand, does not show any fresh information. The word “remember” points to something already referred to in the discourse.

- 66. “This letter that came yesterday, that you remember had no stamps on it, was postmarked four weeks ago.”
- 67. *“(This letter that came yesterday, that incidentally had no stamps on it, was postmarked four weeks ago.)”

¹¹ The inclusion of “that” as a complementizer is also done in indirect speech when the speaker responds to a question asked in the discourse.

- 68. (Michael): “What did John say today?”
- 69. (Bill): “John said that he would eat zucchini today.”



The relativization of sentence (66) with “which” is a syntactic possibility. This, however, will change the semantic consideration of the sentence and will imply that the person intends to refresh the listener’s memory by bringing up the topic anew.

6. Semantic Implications of the Syntactic Order of Anaphors and Pronominals

The anaphors (reflexives) observe a strict syntactic placement as the complements of the VP. They are, however, more free in their placement when they feature as adjuncts (emphasizers). Owing to this syntactic restriction, they cannot attain a subject slot in a finite clause. Consider sentences (70) and (71).

70. “She_i hurt herself_i”.

71. *“Herself_i she_i hurt.”

As emphasizees, according to Carnie (2000), anaphors may be placed as preposed or postposed constituents of the sentence as given below.

72. “She_i opened the door herself_i.”

73. “She_i herself_i opened the door.”

74. “Herself_i she_i opened the door.”

The preposed structure, according Fabb (2002, p. 100), topicalizes the anaphor and is preferred in a discourse context when the anaphor is recognized as more important than the comments

Likewise, pronominals can also undergo syntactic reordering. Binding theory does not provide any conclusive account of pronominal reordering.

Quirk, Greenbaum, Leech and Svartvik (1972, p. 499) trace this ordering along the paradigm of conventional politeness. The second person pronominal precedes the first in syntactic ordering and the third precedes the first while it follows the second as illustrated in (75):

75. “You, he and I admire ourselves.”

The anaphor “ourselves” is governed by first person pronominal. This means that an indexical relation exists between “I” and the anaphor “ourselves.”

76. “You, he and I_i admire ourselves_i.”



7. Elliptical Structures and Pragmatic Considerations

The interpretation of elided structures, contends Lappin (1994), raise a few important questions in linguistic theory. How do the speakers assign meanings to these fragments and what formal representations are given to incomplete constituents in order to interpret them systematically? This will involve an interaction between syntactic structure and semantic interpretation. Syntactic structures do constrain semantic configurations of the phrases which are partially realized by lexical elements. Ellipsis manifests the same occurrences of syntactic configuration as does anaphor. Context determines the missing verb phrase in the elliptical structure. Moreover, as Johnson (2001) contends, an ellipsis site is derivationally related to a full syntactic version of the phrase whose meaning is recovered. Consider (77):

77. “John collects antiques, and Max does, too.”

The underlying deep structure of (77) can be expressed as (78).

78. “John collects antiques and Max collects antiques.”

Sentence (78) shows that the missing VP in (77) is “collect antiques.” It also testifies that this understanding cannot be the result of syntactic theory like Binding. Rather, it is the context that adds to the understanding of such code structures as Palmer (1979) calls them. This means that auxiliary has a significant role in elision. Johnson (2001) also believes that auxiliary licenses VP ellipsis. So infinitival “to” and the sentential negator “not” may also be considered members of auxiliary when they cause ellipsis as illustrated below:

79. “John wants to read Michael’s story and I also want to.”

80. “John is leaving but Mary is not.”

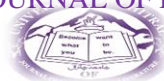
The elided VPs is “read Michael’s story” in (79) and “leaving” in (80) respectively.

There can be the ellipsis of multiple phrases as in (81).

81. “I swim and I play tennis, and John does, too.”

(81) will take the form (82) once the elided VPs are overt.

82. “I swim and I play tennis, and John swims and plays tennis.”



Utterances like these offer the speaker a choice to produce a redundant structure like (82) or to economize on his words and verbalize it in form (81) instead. Equi-NP Deletion¹² principle, however, will recommend the truncated form of the sentence. Regardless of whether the speakers expresses the VP or elides it, the sentence in any case will be the same.

Ellipsis may apparently be indexical as the sentence (83) illustrates, where no prior utterance of the sort “sit down” exists. The indexical occurrences of ellipsis in this case weigh on the context which is uttered when a person who has walked into the room should sit down. The utterance is uttered in a situation in which the speaker wishes to politely indicate that the standing visitor take a seat. Syntax does not evaluate examples like this other than as elliptical structures as highlighted in Empty Category¹³. Yet the speaker’s utterance is understood as meaning (85) appropriately.

83. Please sit down.

If the person asks a question like (84), he gets (85) as an answer.

84. Should I sit down?

85. Please do.

The conclusion that can be derived is that even with “please do,” the elided VP has a covert VP which has a prior occurrence in discourse and hence is not indexical. This further supports the analysis that a syntactic structure can be augmented by context.

Consider the following examples.

86. “John read the paper before Bill did.”

87. “Michael gave flowers to Alice and chocolates too.”

88. “No student arrived, except John.”

(86) is an example of VP ellipsis, where the VP “read the paper” has been replaced with a pro-word “did.” The S-structure of (86) will be (89).

¹² This principle states that elements under identity are deleted. See Chomsky (1986, p. 70).

¹³ See Radford, A., Atkinson, M., Britain, D., Clahsen, H., & Spencer, A. (2009). *Linguistics: An*

Introduction. (2nd ed.)



89. “John read the paper before Bill read the paper.”

(87) is an ellipsis of the VP “gave to Alice” and this has been realized by the pro-word “too.” (88) is elliptical because an NP “John” is without a corresponding V “arrived.”

Hornstein (1994)¹⁴ cites the following examples.

90. “John wanted to talk to everyone that Bill did.”

91. “John wanted to word every question as I did.”

The elided VP in (9) can be either “wanted to talk” or “talked to.” The same ambiguity cannot be observed in (91) wherein only the VP “wanted to word” serves as the antecedent of the elided VP. The S-structure of (90) can be (92):

92. “[NP John [VP [V wanted [IP to talk [PP to everyone]] [S’ [C that [VP Bill did]].”

Similarly the elided VP in (93) can take PP1 or PP2 as its antecedent.

93. “John applied [PP1to study] [PP2at every university] that Bill did.”

Applying locality condition which requires that the elided VP take local argument as a complement, the realized constituent will be the PP2, not PP1. Similar observations hold true for (94).

94. “John promised to read everything which Michael did.”

The apparent constituent of the pro-word “did” can be the matrix verb “promised” or the complement verb “read.” However, if the constituent of the elided VP is realized in the relative clause, it can only be the complement verb “read” due to locality condition. Lappin (1994), however, claims that the complex verb “promised to read” cannot be ruled out the possible antecedent of the elided VP. Structures like these can be disambiguated through a contextual reading only. Pragmatic considerations do play a significant role in interpreting the elided VP in structures like (95).

95. “John and Mary want to go out but Mary can’t, because her father disapproves of John.”

¹⁴ Quoted by Shalom Lappin in *The Handbook of Contemporary Semantic Theory* (1996, p. 170)



The elided VP is understood to be “go out with John.” This is pragmatically implied in the antecedent clause.

Ellipsis is also possible in non-restrictive relative clauses. Consider (96):

96. “John trusts Rosa, who Bill does too.”

The elided VP in this case is “trust Rosa.”

8. Conclusion

Binding theory describes the syntactic configurations of binder and bindee. It provides a formal description of co-referential and non-referential relation between the antecedent and anaphor which can assume indexical or grammatical form. The theory, however, assigns a peripheral significance to such relations and, since a linguistic structure must contain a semantic structure, the theory must be described within a formalism that may provide accurate description of semantic structures. No doubt, pragmatic considerations cannot be sidelined for accurate understanding of these structures.

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